UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-	K

	O SECTION 13 OR 15(d) OF THE SECUR	RITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 20		
	OR	
For the transition period from	IT TO SECTION 13 OR 15(d) OF THE SE to	CURITIES EXCHANGE ACT OF 1934
	Commission File No. 1-11442	
	CHART INDUSTRIES,	INC.
	(Exact name of registrant as specified in its ch	arter)
Delaware		34-1712937
State or other jurisdiction incorporation or organization	on of cation	(I.R.S. Employer Identification No.)
2200	Airport Industrial Drive, Suite 100, Ball Groun (Address of principal executive offices) (Zip	
Re	gistrant's telephone number, including area code:	(770) 721-8800
	Securities registered pursuant to Section 12(b) of	
Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.01	GTLS	New York Stock Exchange
Depositary shares, each representing 1/20th interest a share of 6.75% Series B Mandatory Convertible Preferred Stock, par value \$0.01	t in GTLS.PRB	New York Stock Exchange
	Securities registered pursuant to Section 12(g) of None	of the Act:
Indicate by check mark if the registrant is a well-known	seasoned issuer, as defined in Rule 405 of the Securities	Act Yes ⊠ No □
•	o file reports pursuant to Section 13 or Section 15(d) of the	
Indicate by check mark whether the registrant: (1) has	s filed all reports required to be filed by Section 13 or	15(d) of the Securities Exchange Act of 1934 during the precede to such filing requirements for the past 90 days. Yes ☑ No
		to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.40)
this chapter) during the preceding 12 months (or for suc	h shorter period that the registrant was required to submi	t such files). Yes ℤ No □
Indicate by check mark whether the registrant is a large See the definitions of "large accelerated filer," "accelerated"	e accelerated filer, an accelerated filer, a non-accelerated ated filer," "smaller reporting company," and "emerging s	filer, a smaller reporting company, or an emerging growth compargrowth company" in Rule 12b-2 of the Exchange Act.
Large accelerated filer		Accelerated filer
Non-accelerated filer □		Smaller reporting company
		Emerging growth company \Box
If an emerging growth company, indicate by check m accounting standards provided pursuant to Section 13(a)		d transition period for complying with any new or revised finan
	a report on and attestation to its management's assessm S.C. 7262(b)) by the registered public accounting firm that	ent of the effectiveness of its internal control over financial report at prepared or issued its audit report.
If securities are registered pursuant to Section 12(b) of t an error to previously issued financial statements. $\hfill\Box$	he Act, indicate by check mark whether the financial stat	rements of the registrant included in the filing reflect the correction
Indicate by check mark whether any of those error corre executive officers during the relevant recovery period p		of incentive-based compensation received by any of the registrant'
Indicate by check mark whether the registrant is a shell	company (as defined in Rule 12b-2 of the Act). Yes □	No 🗷

As of February 20, 2024, there were 42,277,870 outstanding shares of the Company's common stock, par value \$0.01 per share.

The aggregate market value of the voting common equity held by non-affiliates computed by reference to the price of \$159.79 per share at which the common equity was last sold, as

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the following document are incorporated by reference into Part III of this Annual Report on Form 10-K: the definitive Proxy Statement to be used in connection with the Registrant's Annual Meeting of Stockholders to be held on May 21, 2024 (the "2024 Proxy Statement").

Except as otherwise stated, the information contained in this Annual Report on Form 10-K is as of December 31, 2023.

of the last business day of the registrant's most recently completed second fiscal quarter, was \$6,798,628,114.

CHART INDUSTRIES, INC.

TABLE OF CONTENTS

PART I	Page
Item 1. Business	3
Item 1A. Risk Factors	10
Item 1B. Unresolved Staff Comments	20
Item 1C. Cybersecurity	21
Item 2. Properties	22
Item 3. Legal Proceedings	22
Item 4. Mine Safety Disclosures	22
PART II	
Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	23
Item 6. [Reserved]	24
Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations	25
Item 7A. Quantitative and Qualitative Disclosures About Market Risk	45
Item 8. Financial Statements and Supplementary Data	47
Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure	47
Item 9A. Controls and Procedures	47
Item 9B. Other Information	48
Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections PART III	48
Item 10. Directors, Executive Officers and Corporate Governance	49
Item 11. Executive Compensation	51
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	51
Item 13. Certain Relationships and Related Transactions, and Director Independence	51
Item 14. Principal Accounting Fees and Services	51
PART IV	
Item 15. Exhibits, Financial Statement Schedules	52
Item 16. Form 10–K Summary	52
SIGNATURES	53
INDEX TO FINANCIAL STATEMENTS	54
REPORTS OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM	F-1
SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS	F-69
INDEX TO EXHIBITS	E-1

THE COMPANY

Overview

Chart Industries, Inc., a Delaware corporation incorporated in 1992 (the "Company," "Chart," "we," "us," or "our" as used herein refers to Chart Industries, Inc. and our consolidated subsidiaries, unless the context indicates otherwise), is an independent global leader in the design, engineering, and manufacturing of process technologies and equipment for gas and liquid molecule handling for the Nexus of Clean[™] − clean power, clean water, clean food, and clean industrials, regardless of molecule. The Company's unique product and solution portfolio across stationary and rotating equipment is used in every phase of the liquid gas supply chain, including engineering, service and repair from installation to preventive maintenance and digital monitoring. Chart is a leading provider of technology, equipment and services related to liquefied natural gas, hydrogen, biogas and carbon capture among other applications. Chart is committed to excellence in environmental, social and corporate governance ("ESG") issues both for its company as well as its customers. With 64 global manufacturing locations and over 50 service centers from the United States to Asia, Australia, India, Europe and South America, we maintain accountability and transparency to our team members, suppliers, customers and communities.

Our primary customers are large, multinational producers and distributors of hydrocarbon, hydrogen and industrial gases and their end-users. We sell our products and services to more than 7,000 customers worldwide, having developed long-standing relationships with leading companies in the gas production, distribution and processing industries as well as those involved in liquefied natural gas (LNG), chemicals and industrial gases. Our well-established relationships extend to truck manufacturers in addition to those in other clean energy industries such as biofuels, hydrogen, water and carbon capture. Our customers include: Linde, Air Liquide, Air Products, ExxonMobil, Baker Hughes, Wison, Kathairos, Chick-fil-A, Samsung, United Launch Alliance, and Blue Origin, some of whom have been purchasing our products for over 30 years.

We have achieved this competitive position by capitalizing on our technical expertise, broad product and service offering, reputation for a high quality global manufacturing footprint, and by focusing on attractive, growth markets. We have an established sales and customer support presence across the globe with manufacturing operations in the United States, Asia, India, Africa and Europe. For the years ended December 31, 2023, 2022 and 2021, we generated sales of \$3.4 billion, \$1.6 billion, and \$1.3 billion, respectively.

On March 17, 2023, we completed the acquisition of Howden ("Howden") from affiliates of KPS Capital Partners (the "Acquisition"). The acquisition purchase price was \$4.4 billion. We financed the purchase price for the Howden Acquisition with proceeds from borrowings under our senior secured revolving credit facility and term loans due March 2030, common and preferred stock issuance and a private offering of secured notes and unsecured notes. Howden, headquartered in the United Kingdom, is a leading global provider of mission critical air and gas handling products providing service and support to customers around the world in highly diversified end markets and geographies. The combination of Chart and Howden is complementary and furthers our global leadership position in highly engineered process technologies and products serving the Nexus of Clean TM – clean power, clean water, clean food and clean industrials.

Segments, Applications and Products

Our reportable segments, which are also our operating segments, are currently as follows: Cryo Tank Solutions, Heat Transfer Systems, Specialty Products and Repair, Service & Leasing.

Our Cryo Tank Solutions segment, which has principal operations in the United States, Europe and Asia, serves geographic regions around the globe, supplying bulk, microbulk and mobile equipment used in the storage, distribution, vaporization, and application of industrial gases and certain hydrocarbons. Our Heat Transfer Systems segment, with principal operations in the United States and Europe, also serves geographic regions globally, supplying mission critical engineered equipment and systems used in the separation, liquefaction, and purification of hydrocarbon and industrial gases that span gasto-liquid applications. Operating globally, our Specialty Products segment supplies products used in specialty end-market applications including hydrogen, LNG, biofuels, carbon capture, food and beverage, aerospace, lasers and water treatment, among others. Our Heat Transfer Systems, Specialty Products and Cryo Tank Solutions segments also include products from the Howden Acquisition such as compressors, blowers and fans, rotary heaters and steam turbines. Our Repair, Service & Leasing segment provides installation, service, repair, maintenance, and refurbishment of products globally in addition to providing equipment leasing solutions as well as expanded aftermarket products, services and service locations related to the Howden Acquisition.

Further information about these segments is located in Note 4, "Segment and Geographic Information," of our consolidated financial statements included under Item 15, "Exhibits and Financial Statement Schedules" of this Annual Report on Form 10-K.

Cryo Tank Solutions

Cryo Tank Solutions (19.0% of consolidated sales for the year ended December 31, 2023) designs and manufactures cryogenic solutions for the storage and delivery of cryogenic liquids used in industrial gas and LNG applications. With operations in the United States, Latin America, Europe and Asia, our Cryo Tank Solutions segment serves customers globally.

Industrial Gas Applications

We design and manufacture bulk and packaged gas cryogenic solutions for the storage, distribution, vaporization, and application of industrial gases. Our products span the entire spectrum of industrial gas demand from small customers requiring cryogenic packaged gases to large users requiring custom engineered cryogenic storage systems in both mobile and stationary applications. Using sophisticated vacuum insulation technology, our cryogenic storage systems are able to store and transport liquefied industrial gases and hydrocarbon gases at temperatures from 0° Fahrenheit to temperatures nearing absolute zero. Industrial gas applications include any end-use of the major elements of air (nitrogen, oxygen, and argon), including manufacturing, welding, electronics and medical. Principal customers for industrial applications are global industrial gas producers and distributors. Other end-users of our equipment include chemical producers, manufacturers of electrical components, health care organizations and companies in the oil and natural gas industries.

Demand for industrial gas applications is driven primarily by the significant installed base of users of molecules, as well as new applications and distribution technologies for cryogenic liquids. Our competitors tend to be regionally focused while we supply a broad range of systems on a worldwide basis. We also compete with several suppliers owned by the global industrial gas producers and in some cases they are also our customer. From a technology perspective, we compete with compressed gas alternatives or on-site generated gas supply.

LNG Applications

We supply cryogenic solutions for the storage, distribution, regasification, and use of LNG. LNG may be utilized as an alternative to other fossil fuels such as diesel, propane, or fuel oil in transportation or off pipeline applications. Examples include transit bus transportation, locomotive propulsion, marine, and power generation in remote areas. We refer to our LNG distribution products as a "Virtual Pipeline," as the traditional natural gas pipeline is replaced with cryogenic distribution to deliver the gas to the end-user. We supply cryogenic trailers, ISO containers, bulk storage tanks, loading facilities, and regasification equipment specially configured for delivering LNG into Virtual Pipeline applications. We sell LNG applications around the world from various Eastern and Western Hemisphere facilities to numerous end-users, energy companies, and gas distributors. Additionally, we supply large vacuum insulated storage tanks as equipment for purchasers of standard liquefaction plants sold by our Heat Transfer Systems segment.

Demand for LNG applications is driven by diesel displacement initiatives, environmental and energy security considerations, and the associated cost of equipment. Our competitors tend to be regionally focused or product-specific, while we supply a broad range of solutions required by LNG applications.

Heat Transfer Systems

Heat Transfer Systems (26.4% of consolidated sales for the year ended December 31, 2023) facilitates major natural gas, petrochemical processing, petroleum refining, power generation and industrial gas companies in the production or processing of their products. With primary manufacturing capabilities in the United States and Europe, Heat Transfer Systems serves customers globally. This segment supplies mission critical engineered equipment and technology-driven process systems used in the separation, liquefaction, and purification of hydrocarbon and industrial gases that span most gas-to-liquid applications.

Natural Gas Processing (including Petrochemical) Applications

We provide natural gas processing solutions that facilitate the progressive cooling and liquefaction of hydrocarbon mixtures for the subsequent recovery or purification of component gases. Primary products used in these applications include brazed aluminum heat exchangers, cold boxes, pressure vessels, Core-in-Kettle® and air cooled heat exchangers. Our brazed aluminum heat exchangers allow producers to obtain purified hydrocarbon by-products, such as methane, ethane, propane, and ethylene, which are commercially marketable for various industrial or residential uses. Our cold boxes are highly engineered systems that incorporate brazed aluminum heat exchangers, pressure vessels, and interconnecting piping used to significantly reduce the temperature of gas mixtures to liquefy component gases so that they can be separated and purified for further use in

multiple energy, industrial, scientific, and commercial applications. Chart's air cooled heat exchangers are used to cool or condense fluids to allow for further processing and for cooling gas compression equipment. Our process technology includes standard and modular plant solutions and comprises detailed mechanical design, Chart manufactured proprietary equipment and all other plant items required to liquefy pipeline quality natural gas. Customers for our natural gas processing applications include large companies in the hydrocarbon processing industry, as well as engineering, procurement and construction ("EPC") contractors.

Demand for these applications is primarily driven by the growth in the natural gas liquids (or NGLs) separation and other natural gas segments of the hydrocarbon processing industries, including LNG. In the future, management believes that continuing efforts by petroleum producing countries to better utilize stranded natural gas and associated gases which historically had been flared, present a promising source of demand. We have several competitors for our heat exchangers and fans, including many smaller fabrication-only facilities around the world. Competition with respect to our more specialized brazed aluminum heat exchangers includes a small number of global (European and Asian) manufacturers.

LNG Applications

We provide process technology, liquefaction capabilities, and independent mission critical equipment for the liquefaction of natural gas (LNG), including small to mid-scale facilities, floating LNG applications, and large base-load export facilities. We are a leading supplier to EPC firms where we provide equipment and process technology, providing an integrated and optimized approach to the project. These "Concept-to-Reality" process systems incorporate many of Chart's core products, including brazed aluminum heat exchangers, Core-in-Kettle® heat exchangers, cold boxes, air cooled heat exchangers, pressure vessels, and pipe work. These systems are used in global LNG projects, for both local LNG production as well as LNG export terminals. Our proprietary IPSMR® (Integrated Pre-cooled Single Mixed Refrigerant) and IPSMR+® liquefaction process technology offers lower capital expenditure requirements than competing processes measured on a per ton of LNG produced basis, along with very competitive operating costs.

Demand for LNG applications is primarily driven by increased use and global trade in natural gas (transported as LNG) since natural gas offers significant cost and environmental advantages over other fossil fuels. Demand for LNG for fuel applications is also driven by diesel displacement and continuing efforts by petroleum producing countries to better utilize stranded natural gas and previously flared gases. We have several competitors for these applications, including leading industrial gas companies, other brazed aluminum heat exchanger manufacturers, and other equipment fabricators to whom we also act as a supplier of equipment, including heat exchangers and cold boxes.

HVAC, Power and Refining Applications

Our air cooled heat exchangers and axial cooling fans are used in HVAC, power and refining applications. Demand for HVAC is driven by growing construction activities and demand for energy efficient devices, and there is also positive impact from growing industrial production. Refining demand continues to be driven by United States shale production, benefiting from low cost shale oil, natural gas liquids and gas resulting in high utilization and increased investment. Our air cooled heat exchangers are used in each phase of the refining process to condense and cool gases and fluids. Worldwide power use is projected to grow 50% through 2050. This growth is focused in regions where strong economic growth is driving demand, particularly in Asia.

Specialty Products

Specialty Products (24.2% of consolidated sales for the year ended December 31, 2023) supplies highly-engineered equipment and process technologies used in specialty end-market applications for hydrogen, LNG, biofuels, carbon capture, food and beverage, aerospace, space exploration, lasers, helium and water treatment, among others. Leveraging our global manufacturing presence, Specialty Products serves customers globally. We have made a number of acquisitions over the past three years to capitalize on clean power, clean industrials, clean water and clean food, beverages and agriculture market opportunities within this segment. These include the acquisitions of Howden, BlueInGreen, LLC, Sustainable Energy Solutions, Inc., Cryogenic Gas Technologies, Inc., L.A. Turbine, AdEdge Holdings, LLC and Earthly Labs Inc.

We supply a wide range of solutions used in the production, storage, distribution and end-use of hydrogen, including liquefaction technology and equipment and compression equipment. We also provide highly-specialized mobility and transportation equipment for use with both hydrogen and LNG, including onboard vehicle tanks and fueling stations. More specifically, our horizontal LNG vehicle tanks are widely used onboard heavy-duty trucks and buses while our recently-released liquid hydrogen vehicle tank enjoys many of the same characteristics. Chart also manufactures specialized cryogenic railcars used to transport not only LNG, but a number of other gaseous and liquid molecules. Additionally, we design and manufacture nitrogen dosing products and other equipment used in packaging as well as the food and beverage industry. These applications include processing, preservation and beverage carbonation.

Our water treatment technology is also offered through the Specialty Products segment. Serving both municipal and industrial end markets globally, our water treatment process technology utilizes Chart's cryogenic storage and vaporization equipment to efficiently deliver dissolved oxygen, carbon dioxide and ozone into water. Our technology is used for oxygenation, pH adjustment, oxidation and odor control with modular and mobile solution options. Additional water treatment capabilities include but are not limited to adsorption, filtration, ion exchange, reverse osmosis and flow reversal processes, to name a few. Our expanded solution set effectively addresses a wide range of organic and inorganic contaminants including arsenic and per- and polyfluorinated alkylated substances (PFAS), often referred to as "forever chemicals." Other equipment and technology offered through Specialty Products have applications in carbon capture and space industries. We also offer cryogenic components, including turboexpanders, vacuum insulated pipe ("VIP"), specialty liquid nitrogen, or LN2, end-use equipment and cryogenic flow meters.

We design and manufacture solutions for the liquefaction, storage, distribution, regasification and use of hydrogen as both a liquid and a gas. We have over 57 years of experience in manufacturing hydrogen-related equipment. There are a number of commercial uses for hydrogen including applications in the chemical, refining and space industries. More recently, hydrogen is increasingly being used as an alternative fuel for the power transportation sectors, with both onshore and marine applications. Given the global movement towards a lower carbon footprint, there are also a number of other potential uses for hydrogen on the horizon including power generation. To help enable this transition, we supply ISO containers and transport trailers for both gaseous and liquid hydrogen, in addition to fuel stations and other fueling solutions. We also manufacture various types of heat exchangers for hydrogen applications including brazed aluminum, air cooled and shell & tube varieties.

Howden VentsimTM DESIGN is the world's bestselling mine ventilation software, used and trusted by over 2,500 mines, universities, consultants, government and research organizations. VentsimTM DESIGN is a complete integrated mine and tunnel ventilation software package for the design and testing of ventilation circuits including airflow, pressure, heat, gases, power, radon, fire and many other types of ventilation information. VentsimTM CONTROL utilizes intelligent software connected to hardware devices to remotely monitor, control and automate airflow, heating and cooling to deliver safer, more productive and lower cost ventilation for mines.

Demand for many of our specialty applications including hydrogen is primarily driven by the global, public and private sector movement towards a lower-carbon footprint, reduced greenhouse gas emissions and overall sustainability trends. These efforts are being guided not only by government policies and related global climate goals, but also by social and environmental actions by various stakeholders. Management believes hydrogen in particular will play an ever-increasing role in the energy transition, given its zero emission characteristics and naturally abundant supply. Similarly, management believes other equipment offered by Chart's Specialty Products segment will be required to achieve global greenhouse gas reduction targets and other environmental-related goals, including our carbon capture and biofuel technology, water treatment offerings and specialty packaging equipment. Demand for LNG is also likely to continue benefiting from the ongoing energy transition given its environmental advantages over other fossil fuels. While we have competitors in a portion of these applications, many of our specialty product markets have limited competition.

Repair, Service & Leasing

Our Repair, Service & Leasing segment (30.4% of consolidated sales for the year ended December 31, 2023) provides installation, service, repair, maintenance, and refurbishment of our products globally in addition to providing equipment leasing solutions. With primary operations in the United States and Europe, our Repair, Service & Leasing segment serves customers globally. We have made a number of acquisitions over the years to expand our global footprint including Howden, CSC Cryogenic Service Center AB, Skaff, LLC and VCT Vogel GmbH.

To support the products and solutions we sell, our Repair, Service & Leasing segment offers services through the entire lifecycle of our products, which is unique and unparalleled in the markets we serve. Our focus is to build relationships with plant stakeholders, from process and mechanical engineers to operations and maintenance personnel, focusing on the optimized performance and lifespan of Chart proprietary equipment. Aftermarket services include extended warranties, plant start-up, parts, 24/7 support, monitoring and process optimization, as well as repair, maintenance, and upgrades. We perform plant services on equipment, including brazed aluminum heat exchangers, cold boxes, etc.

We also install, service, maintain and refurbish bulk and packaged gas cryogenic solutions for the storage, distribution, vaporization, and application of industrial gases. With multiple service locations in the Americas, Europe and Asia, we not only service Chart products, we also service numerous other manufacturers including many of our competitors. We provide services for storage vessels, VIP, reconfiguration, relocation, trailers, ISO containers, vaporizers, and other gas to liquid equipment.

Additionally, we offer a variety of leasing options on certain types of Chart equipment, providing our customers with the flexibility to quickly respond to seasonal or sudden increases in demand with similar flexibility when existing equipment is

being repaired or refurbished. We offer short and long-term operating leases as well as lease to own options with up to a tenyear term. Typical equipment we offer with leasing options are standard trailers, bulk and micro bulk storage systems, vaporizers and delivery tankers. Chart also offers Treatment-as-a-Service options for water treatment customers in addition to remote monitoring services.

The Howden Acquisition expanded our offerings in the areas of spare parts, retrofits, service and software. Howden Uptime is a digital platform that seamlessly integrates data related to rotating equipment's performance. The system combines active inputs, such as temperature, pressure and vibration, with reference parameters from manuals, specifications and maintenance reports. When the data is analyzed, it provides a unique foundation for maintaining and enhancing operational excellence.

Demand for services provided by this segment is being driven by our substantial existing and growing install base, exceptional reputation for high-quality service, breadth of services offered and expanded geographic footprint. Additionally, this segment is benefiting from new long-term agreements being executed that incorporate parts, repair and aftermarket service components not included in prior agreements. Our competitors tend to be regionally focused while we supply a broader array of services on a worldwide basis.

Engineering and Product Development

Our engineering and product development activities are focused primarily on developing new and improved technologies, solutions and equipment for the users of molecules, hydrocarbons and industrial gases across all industries served. Our engineering, technical, and commercial employees actively assist customers in specifying their needs and in determining appropriate products to meet those needs. Portions of our engineering expenditures typically are charged to customers, either as separate items or as components of product cost.

Competition

We believe we can compete effectively around the world and that we are a leading competitor in the industries we serve. Competition is based primarily on performance and the ability to provide the design, engineering, and manufacturing capabilities required in a timely and cost-efficient manner. Contracts are usually awarded on a competitive bid basis. Quality, technical expertise, and timeliness of delivery are the principal competitive factors within the industries we serve. Price and terms of sale are also important competitive factors. Although we believe we rank among the leaders in each of the markets we serve and because our equipment is specialized and independent third-party prepared market share data is not available, it is difficult to know for certain our exact position in our markets. We base our statements about industry and market positions on our reviews of annual reports and published investor presentations of our competitors and augment this data with information received by marketing consultants conducting competition interviews and our sales force and field contacts. For information concerning competition within a specific segment of our business, see the descriptions provided under segment captions in this Annual Report on Form 10-K.

Marketing

We market our products and services in each of our segments throughout the world primarily through direct sales personnel and independent sales representatives as well as distributors. The technical and custom design nature of our products requires a professional, highly trained sales force. We use independent sales representatives and distributors to market our products and services in certain foreign countries and in certain North American regions. These independent sales representatives supplement our direct sales force in dealing with language and cultural matters. Our domestic and foreign independent sales representatives earn commissions on sales, which vary by product type.

Backlog

For information about our backlog, including backlog by business segment, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Customers

We sell our products primarily to gas producers, distributors, and end-users across energy, industrial, power, HVAC and refining applications in countries throughout the world. We capture clean power, clean water, clean food and clean industrials as our unique offering for the Nexus of CleanTM. Sales to our top ten customers accounted for 25%, 38%, and 39% of consolidated sales in 2023, 2022 and 2021, respectively.

Our sales to particular customers fluctuate from period to period, but the global producers and distributors of hydrocarbon and industrial gases as well as their suppliers tend to be a consistently large source of revenue for us. Our supply contracts are generally contracts for "requirements" only. Also, generally our contracts may be canceled at any time, subject to possible cancellation charges. To minimize credit risk from trade receivables, we review the financial condition of potential customers in relation to established credit requirements before sales credit is extended and we monitor the financial condition of customers to help ensure timely collections and to minimize losses. In addition, for certain domestic and foreign customers, we require advance payments, letters of credit, bankers' acceptances, and other such guarantees of payment. Certain customers also require us to issue letters of credit or performance bonds, particularly in instances where advance payments are involved, as a condition to placing the order.

Intellectual Property

Although we have a number of patents, trademarks, and licenses related to our business, no one of them or related group of them is considered by us to be of such importance that its expiration or termination would have a material adverse effect on our business. In general, we depend upon technological capabilities, manufacturing quality control, and application of knowhow, rather than patents or other proprietary rights, in the conduct of our business.

Raw Materials and Suppliers

We manufacture most of the products we sell. The raw materials used in manufacturing include aluminum products (including sheets, bars, plate, and piping), stainless steel products (including sheets, plates, heads, and piping), palladium oxide, carbon steel products (including sheets, plates, and heads), valves and gauges, and fabricated metal components. Most raw materials are available from multiple sources of supply, although shortages and delays to certain materials have been experienced during the past three years, as a result of market disruptions caused by macroeconomic conditions such as inflation and supply chain disruptions. We have long-term relationships with our raw material suppliers and other vendors. Commodity components of our raw material (aluminum, stainless steel and carbon steel) could experience additional levels of volatility during 2024 and may have a relational impact on raw material pricing. Subject to certain short-term risks related to our suppliers as discussed under Item 1A. "Risk Factors," we foresee no acute shortages of any raw materials that would have a material adverse effect on our operations.

Human Capital Resources

As of January 31, 2024, we had 11,637 employees, including 3,717 domestic employees and 7,920 international employees.

We are party to one collective bargaining agreement with the International Association of Machinists and Aerospace Workers ("IAM") covering 350 employees at our La Crosse, Wisconsin heat exchanger facility. Effective February 7, 2021, we entered into a five-year agreement with the IAM which expires on February 6, 2026. Certain international employees are part of trade unions or work councils across Europe, the Americas, Asia and Africa. We have proactive engagement and believe we have positive relations with our employees, including those represented by trade unions and work councils. We have had no material work stoppages.

Chart is committed to attracting and retaining the best talent. Therefore, investing, developing, and maintaining human capital is critical to our success. As a global manufacturing company, a meaningful number of our employees are engineers or trained trade or technical workers focusing on advanced manufacturing. Chart prioritizes several measures and objectives in managing its human capital assets, including, among others, employee safety and wellness, talent acquisition and retention, employee engagement, development, and training, diversity and inclusion, and compensation and pay equity. In 2023, we did not experience any employee-generated work stoppages or disruptions.

Our key human capital measures include employee safety, turnover, absenteeism, recruitment and productivity. We frequently benchmark our compensation practices and benefits programs against those of comparable industries and in the geographic areas where our facilities are located. We believe that our compensation and employee benefits are competitive and allow us to attract and retain skilled and unskilled labor throughout our organization. Our notable health, welfare and retirement benefits include company-subsidized health insurance, 401(k) plan with company matching contributions, tuition assistance program and paid time off.

Employee Safety and Wellness

The safety and well-being of our employees and their families has been a top priority as we continue to serve our customers. Chart has ongoing communications about safety performance at all levels of the organization. Our head of global environmental, health and safety (EHS) coordinates all EHS matters with our sites, regularly updates our executive staff on our

EHS matters and coordinates with our Global Safety Council, which meets monthly to discuss accidents, injuries, near misses, trends and lessons learned. Council members or executive management present metrics and other safety information at every executive staff and Board of Directors meeting. The cross-functional Global Safety Council is dedicated to reaching our target of zero accidents. All Chart employees have Stop Work Authority and are expected to use it if there is concern that any task or procedure could be unsafe. Each site recognizes and rewards employees based on local and global objectives such as achieving safety performance milestones and completing regular audits. All Chart sites implement our Occupational Health and Safety Program Requirements for training, reporting, accident investigation, auditing, implementation, and compliance. The policy encourages employee involvement, a crucial element of a successful safety program, by requiring each site to create a safety committee and safety suggestion program.

Employee Engagement, Development and Training

Chart strives to recruit, hire, develop and promote a diverse workforce. It is our goal to provide each employee a challenging and rewarding experience that allows for personal and professional development. We encourage and support the growth and development of our employees and, wherever possible, seek to fill positions by promotion and transfer from within the organization. We advance continual learning and career development through ongoing performance and development conversations or evaluations with employees, internally and externally developed training programs, and educational reimbursement programs. In connection with the latter, reimbursement is available to employees enrolled in pre-approved degree or certification programs at accredited institutions that teach skills or knowledge relative to our business or otherwise to the development of the employee's skill set or knowledge base. In addition, we routinely invest in seminar, conference and other training or continuing education events for our employees. We believe education empowers our people to identify and adopt best practices that will enhance our sustainability. Our university relations program includes recruitment, co-operative programs and internships. To train a local workforce, our manufacturing facilities forge relationships with community colleges and trade schools and pay their employees based on the job and level of skill.

Other examples of Chart employee development programs include our Emerging Leaders program, Welding Council, Rotational Engineering program, Engineering Fellows, Key Experts program, and Operations Leaders Program, in addition to the aforementioned Global Safety Council. Chart's Emerging Leaders accelerated development program assigns immersive, high-impact projects to high-potential employees across the organization to prepare them for advancement to executive roles. Engineering Fellows are long-tenured employees who are recognized externally and internally as having contributed to our success in unique ways while our Key Experts are widely recognized within Chart for their engineering expertise and contributions to the field. Together, Fellows and Key Experts manage the rotational engineering program to mentor and develop our early-career engineers.

We have several employee resource groups including our Network of Women and Chart Pride, which were started to help create a more equitable workplace and offer career advancement opportunities across Chart. Chart has also partnered with Historically Black Colleges and Universities (HBCUs) to drive a more diverse and inclusive workforce. Our Chief Executive Officer and President, Jillian Evanko, has also signed the CEO Action for Diversity & InclusionTM pledge, and our Global Diversity & Inclusion Committee is working with our 11,637 team members to ensure all of our key themes and priorities work seamlessly together in our culture for the best employee experience.

We strive to maintain an inclusive environment free from discrimination of any kind, including sexual or other discriminatory harassment. All employees are expected to follow our Code of Ethics, related policies, laws, rules and regulations in all countries where we operate. In addition, employees have a duty to report violations and have multiple avenues available through which inappropriate behavior can be reported, such as supervisors, managers, ethics representatives or the confidential, anonymous Chart Ethics Hotline. Designated ethics representatives are always available for employees who have questions or need guidance on compliance. All reports of inappropriate behavior are promptly investigated with appropriate action taken to stop such behavior. Chart investigates alleged incidents and communicates the resolution to the person who reported it. We prohibit retaliation and threats of retaliation against anyone who reports a possible violation or misconduct in good faith and protect employees with our Whistleblower Policy.

Environmental Matters

We monitor and review our procedures and policies for compliance with environmental laws and regulations. Our management is familiar with these regulations and supports an ongoing program to maintain our adherence to required standards. Our operations have historically included and currently include the handling and use of hazardous and other regulated substances, such as various cleaning fluids used to remove grease from metal that are subject to federal, state, local, and foreign environmental laws and regulations. These regulations impose limitations on the discharge of pollutants into the soil, air, and water and establish standards for their handling, management, use, storage, and disposal.

We are involved with environmental compliance, investigation, monitoring, and remediation activities at certain of our owned or formerly owned manufacturing facilities and at one owned facility that is leased to a third party. We believe that we are currently in substantial compliance with all known environmental regulations. We accrue for certain environmental remediation-related activities for which commitments or remediation plans have been developed or for which costs can be reasonably estimated. These estimates are determined based upon currently available facts regarding each facility. Actual costs incurred may vary from these estimates due to the inherent uncertainties involved. Future expenditures relating to these environmental remediation efforts are expected to be made over the coming years as ongoing costs of remediation programs. We do not believe that these regulatory requirements have had a material effect on our capital expenditures, earnings, or competitive position. We are not anticipating any material capital expenditures in 2024 relating to our existing business that are directly related to regulatory compliance matters. Although we believe we have adequately provided for the cost of all known environmental conditions, additional contamination, the outcome of disputed matters, or changes in regulatory posture could result in more costly remediation measures than budgeted, or those we believe are adequate or required by existing law. We believe that any additional liability in excess of amounts accrued which may result from the resolution of such matters will not have a material adverse effect on our financial position, liquidity, cash flows, or results of operations.

Available Information

Additional information about the Company is available at www.chartindustries.com. On the Investor Relations page of the website, the public may obtain free copies of our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable following the time that they are filed with, or furnished to, the Securities and Exchange Commission ("SEC"). Additionally, we have posted our Code of Ethical Business Conduct and Officer Code of Ethics on our website, which are also available free of charge to any shareholder interested in obtaining a copy. References to our website do not constitute incorporation by reference of the information contained on such website, and such information is not part of this Form 10-K.

Item 1A. Risk Factors

Investing in our common stock involves risk. You should carefully consider the risks described below, as well as the other information contained in this Annual Report on Form 10-K in evaluating your investment in us. If any of the following risks actually occur, our business, financial condition, operating results, or cash flows could be harmed materially. Additional risks, uncertainties, and other factors that are not currently known to us or that we believe are not currently material may also adversely affect our business, financial condition, operating results or cash flows. In any of these cases, you may lose all or part of your investment in us.

Risks Related to Our Business

The markets we serve are subject to cyclical demand and vulnerable to economic downturn, which could harm our business and make it difficult to project long-term performance.

Demand for our products depends to a significant extent upon the level of capital and maintenance expenditures by many of our customers and end-users, in particular those customers in the global hydrocarbon and industrial gas markets. These customers' expenditures historically have been cyclical in nature and vulnerable to economic downturns. Decreased capital and maintenance spending by these customers could have a material adverse effect on the demand for our products and our business, financial condition, and results of operations. In addition, this historically cyclical demand limits our ability to make accurate long-term predictions about the performance of our company.

The loss of, or significant reduction or delay in, purchases by our largest customers could reduce our sales and profitability.

While we sell to more than 7,000 customers, sales to our top ten customers accounted for 25%, 38%, and 39% of consolidated sales in 2023, 2022 and 2021, respectively. While our sales to particular customers fluctuate from period to period, sales to large customers, including the global producers, distributors and users of energy and industrial gases and their suppliers, tend to be a consistently large source of our sales.

The loss of any of our major customers, consolidation of our customers, or a decrease or delay in orders or anticipated spending by such customers could materially reduce our sales and profitability. Although order activity in 2023 increased year over year, we continued to experience energy price volatility and our customers' adjusted project timing.

We may fail to successfully integrate companies that provide complementary products or technologies.

An important component of our recent business strategy has been the acquisition of businesses that complement our existing products and services. Such a strategy involves the potential risks inherent in assessing the value, strengths, weaknesses, contingent or other liabilities, and potential profitability of acquisition candidates and in integrating the operations of acquired companies. In addition, any acquisitions of businesses with foreign operations or sales may increase our exposure to risks inherent in doing business outside the United States.

As part of this acquisition strategy, we have closed on several acquisitions in the past three years including the Howden Acquisition. These acquisitions included new businesses that are complementary to our existing LNG and gas technologies. The failure to achieve the anticipated cost savings or commercial synergies of our recent significant acquisitions or recognize the anticipated market opportunities or integration from our acquisitions could have a material adverse effect on our business, financial condition, and results of operations. Our ability to realize the expected cost savings and commercial synergies depend on factors such as operating difficulties, increased operating costs, competitors and customers, delays in implementing initiatives and general economic or industry conditions. We may be required to make significant cash expenditures to achieve such cost savings and commercial synergies and we cannot be assured that these expenditures will not be higher than anticipated. Furthermore, there can be no assurances that such cost savings measures will not cause disruptions or other negative impacts to our operations, business or revenues.

There can be no assurances that these acquisitions, including Howden, will be successful or that we will realize the expected benefits currently anticipated. For example, we may not be able to maintain the levels of revenue, earnings or operating efficiency that we and Howden have achieved or might have achieved separately. The business and financial performance of us and Howden are subject to certain risks and uncertainties, including the risk of the loss of, or changes to, our and its relationships with customers. We may be unable to achieve the same growth, revenues and profitability that we and Howden have achieved in the past.

Potential acquisition opportunities become available to us from time to time, and we periodically engage in discussions or negotiations relating to potential acquisitions, including acquisitions that may be material in size or scope to our business. Any acquisition may or may not occur and, if an acquisition does occur, it may not be successful in enhancing our business.

If we are unable to successfully control our costs and efficiently manage our operations, it may lead to increased costs and reduced profitability.

We have implemented cost savings initiatives to align our business with current and expected economic conditions. Our ability to operate our business successfully and implement our strategies depends, in part, on our ability to allocate our resources optimally in each of our facilities in order to maintain efficient operations. If we are unable to align our cost structure in response to prevailing economic conditions on a timely basis, or if implementation or failure to implement any cost structure adjustments has an adverse impact on our business or prospects, then our financial condition, results of operations, and cash flows may be negatively affected.

It is critical that we appropriately manage our planned capital expenditures. If we fail to manage the projects related to these capital expenditures in an effective and timely manner, we may lose the opportunity to obtain some new customer orders or the ability to operate our business efficiently. Even if we effectively implement the projects, the orders needed to support the capital expenditures or increased capacity may not be obtained, may be delayed, or may be less than expected, which may result in sales or profitability at lower levels than expected.

Our results of operations could materially suffer if we are unable to obtain sufficient pricing for our products and services to meet our profitability expectations.

If we are unable to obtain favorable pricing for our products and services in a timely manner, our revenues and profitability could materially suffer. Furthermore, the prices we are able to charge for our products and services are affected by a number of other factors, including:

- general economic and political conditions;
- our customers' desire to reduce their costs;
- the competitive environment;
- our ability to accurately estimate our costs, including our ability to estimate the impact of inflation on our costs over long-term contracts; and
- the procurement practices of our customers.

Our inability to pass increased prices along to our customers in a timely manner could have a material adverse effect on our business, financial condition or results of operations.

We depend on the availability of certain key suppliers; if we experience difficulty with a supplier, we may have difficulty finding alternative sources of supply.

The cost, quality, and availability of raw materials, certain specialty metals and specialized components used to manufacture our products are critical to our success. The materials and components we use to manufacture our products are sometimes custom made and may be available only from a few suppliers, and the lead times required to obtain these materials and components can often be significant. We rely on a limited number of suppliers for some of these materials, including special grades of aluminum used in our brazed aluminum heat exchangers and compressors included in some of our product offerings. If our vendors for these materials and components are unable to meet our requirements, fail to make shipments in a timely manner, or ship defective materials or components, we could experience a shortage or delay in supply or fail to meet our contractual requirements, which would adversely affect our results of operations and negatively impact our cash flow and profitability.

We carry goodwill and indefinite-lived intangible assets on our balance sheet, which are subject to impairment testing and could subject us to significant non-cash charges to earnings in the future if impairment occurs.

As of December 31, 2023, we had goodwill and indefinite-lived intangible assets of \$3,516.9 million, which represented approximately 38.6% of our total assets. Goodwill and indefinite-lived intangible assets are not amortized but are tested for impairment annually in the fourth quarter or more often if events or changes in circumstances indicate a potential impairment may exist. Factors that could indicate that our goodwill or indefinite-lived intangible assets are impaired include a decline in our stock price and market capitalization, lower than projected operating results and cash flows, and slower growth rates in our industry. Our stock price historically has shown volatility and often fluctuates significantly in response to market and other factors. Declines in our stock price, lower operating results and any decline in industry conditions in the future could increase the risk of impairment. Impairment testing incorporates our estimates of future operating results and cash flows, estimates of allocations of certain assets and cash flows among reporting segments, estimates of future growth rates, and our judgment regarding the applicable discount rates used on estimated operating results and cash flows. If we determine at a future time that an impairment exists, it may result in a significant non-cash charge to earnings and lower stockholders' equity.

A public health crisis could cause disruptions to our operations which could adversely affect our business in the future.

A significant public health crisis could cause disruptions to our operations similar to the effects of the Covid-19 pandemic. It affected our business due to the impact on the global economy, including its effects on transportation networks, raw material availability, production efforts and customer demand for our products. Our ability to predict and respond to future changes resulting from a potential health crisis is uncertain. Even after a public health crisis subsides, there may be long-term effects on our business practices and customers in economies in which we operate that could severely disrupt our operations and could have a material adverse effect on our business, results of operations, cash flows and financial condition.

Our backlog is subject to modification, termination or reduction of orders, which could negatively impact our sales.

Our backlog is comprised of the portion of firm signed purchase orders or other written contractual commitments received from customers that we have not recognized as sales. The dollar amount of backlog as of December 31, 2023 was \$4,278.8 million. Our backlog can be significantly affected by the timing of orders for large projects, and the amount of our backlog at December 31, 2023 is not necessarily indicative of future backlog levels or the rate at which backlog will be recognized as sales. Although modifications and terminations of our orders may be fully or partially offset by cancellation fees, customers can, and sometimes do, terminate or modify these orders. We cannot predict whether cancellations will accelerate or diminish in the future. Cancellations of purchase orders, indications that the customers will not perform or reductions of product quantities in existing contracts could substantially and materially reduce our backlog and, consequently, our future sales. Our failure to replace canceled orders could negatively impact our sales and results of operations. We did not have any significant cancellations in 2023, 2022 and 2021.

Due to the nature of our business and products, we may be liable for damages based on product liability and warranty claims.

Due to the high pressures and low temperatures at which many of our products are used, the inherent risks associated with concentrated industrial and hydrocarbon gases, and the fact that some of our products are relied upon by our customers or end users in their facilities or operations or are manufactured for relatively broad industrial, transportation, or consumer use, we face an inherent risk of exposure to claims (which we have been subject to from time to time and some of which were substantial including the cryobiological storage tank lawsuits as discussed in Item 3. "Legal Proceedings" relating to our since divested

Cryobiological business, but for which we retained and settled certain liabilities) in the event that the failure, use, or misuse of our products results, or is alleged to result, in death, bodily injury, property damage, or economic loss. We believe that we meet or exceed existing professional specification standards recognized or required in the industries in which we operate. Although we currently maintain product liability coverage, which has generally been adequate for existing product liability claims and for the continued operation of our business, it includes customary exclusions and conditions, it may not cover certain specialized applications such as aerospace-related applications, and it generally does not cover warranty claims. Additionally, such insurance may become difficult to obtain or be unobtainable in the future on terms acceptable to us. We had net out-of-pocket exposure with respect to the March 2023 settlement related to the Cryobiological business in the amount of \$73.0 million. A successful product liability claim or series of claims against us, including one or more consumer claims purporting to constitute class actions or claims resulting from extraordinary loss events, in excess of or outside our insurance coverage, or a significant warranty claim or series of claims against us, could materially decrease our liquidity, impair our financial condition, and adversely affect our results of operations.

Energy policies could change or expected changes could fail to materialize which could adversely affect our business or prospects.

Energy policy can develop rapidly in the global markets we serve. Within the last few years, significant developments have taken place, primarily in international markets that we serve with respect to energy policy and related regulations. We anticipate that energy policy will continue to be an important regulatory priority globally, as well as on a national, state, and local level. As energy policy continues to evolve, the existing rules and incentives that impact the energy-related segments of our business may change. It is difficult, if not impossible, to predict what changes in energy policy might occur in the future and the timing of potential changes and their impact on our business.

Our exposure to fixed pricing on certain long-term customer contracts and performance guarantees, could negatively impact our financial results.

A portion of our sales has historically been derived from long-term contracts which may involve long-term fixed price commitments to customers or guarantees of equipment or process performance and which are sometimes difficult to execute. To the extent that any of our contracts are delayed, we fail to satisfy a performance guarantee, our subcontractors fail to perform, contract counterparties successfully assert claims against us, the original cost estimates in these or other contracts prove to be inaccurate or the contracts do not permit us to pass increased costs on to our customers, profitability from a particular contract may decrease or project losses may be incurred, which, in turn, could decrease our sales and overall profitability.

Fluctuations in currency exchange or interest rates may adversely affect our financial condition and operating results.

A significant portion of our revenue and expense is incurred outside of the United States. We must translate revenues, income and expenses, as well as assets and liabilities into U.S. dollars using exchange rates during or at the end of each period. Fluctuations in currency exchange rates have had and will continue to have an impact on our financial condition, operating results, and cash flow. While we monitor and manage our foreign currency exposure with use of derivative financial instruments to mitigate these exposures, fluctuations in currency exchange rates may materially impact our financial and operational results.

In addition, we are exposed to changes in interest rates. While our senior secured and senior unsecured notes have a fixed cash coupon, other instruments, primarily borrowings under our senior secured revolving credit facility due October 2026 are exposed to variable interest rates. Our convertible notes contain cumulative dividends that can be paid in cash or equity shares, in certain circumstances. The impact of a 100 basis point increase in interest rates to our senior secured revolving credit facility is discussed in the "Quantitative and Qualitative Disclosures About Market Risk" section of this Annual Report. We also have increased interest rate exposure with respect to certain indebtedness incurred in connection with the Howden Acquisition.

As a global business, we are exposed to economic, political, and other risks in different countries which could materially reduce our sales, profitability or cash flows, or materially increase our liabilities.

Since we manufacture and sell our products worldwide, our business is subject to risks associated with doing business internationally. In 2023, 2022 and 2021, 59%, 42%, and 56%, respectively, of our sales occurred in international markets. Our future results could be harmed by a variety of factors, including:

- changes in foreign currency exchange rates;
- exchange controls and currency restrictions;
- changes in a specific country's or region's political, social or economic conditions, particularly in emerging markets;

- civil unrest, the threat of or actual military conflict between nations, other turmoil or outbreak of disease or illness, such as Covid-19, in any of the countries in which we sell our products or in which we or our suppliers operate;
- tariffs, other trade protection measures, as discussed in more detail below, and import or export licensing requirements;
- potential adverse changes in trade agreements between the United States and foreign countries, including the recently enacted United States-Mexico-Canada Agreement (USMCA), among the United States, Canada and Mexico;
- potentially negative consequences from changes in U.S. and international tax laws;
- difficulty in staffing and managing geographically widespread operations;
- differing labor regulations;
- requirements relating to withholding taxes on remittances and other payments by subsidiaries;
- different regulatory regimes controlling the protection of our intellectual property;
- restrictions on our ability to own or operate subsidiaries, make investments or acquire new businesses in these jurisdictions;
- restrictions on our ability to repatriate dividends from our foreign subsidiaries;
- difficulty in enforcement of contractual obligations under non-U.S. law;
- transportation delays or interruptions;
- · changes in regulatory requirements; and
- the burden of complying with multiple and potentially conflicting laws.

Our international operations and sales also expose us to different local political and business risks and challenges. In addition, at times some of our sales are to suppliers that perform work for foreign governments, and as a result we may be subject to the political risks associated with foreign government projects. For example, certain foreign governments may require suppliers for a project to obtain products solely from local manufacturers or may prohibit the use of products manufactured in certain countries.

Our operations in markets such as Asia, Australia, India, Europe, and South America, may cause us difficulty due to greater regulatory barriers than in the United States, the necessity of adapting to new regulatory systems, problems related to entering new markets with different economic, social and political systems and conditions, and significant competition from the primary participants in these markets, some of which may have substantially greater resources than us. In addition, unstable political conditions or civil unrest, including political instability or threatened military actions could negatively impact our order levels and sales in a region or our ability to collect receivables from customers or operate or execute projects in a region.

Changes in U.S. trade policy, tariff and import/export regulations may have a material adverse effect on our business, financial condition and results of operations.

Our international operations and transactions also depend upon favorable trade relations between the United States and the foreign countries in which our customers and suppliers have operations. Changes in U.S. or international social, political, regulatory and economic conditions or in laws and policies governing foreign trade, manufacturing, development and investment in the territories or countries where we currently sell our products or conduct our business, as well as any negative sentiment toward the United States as a result of such changes, could adversely affect our business.

U.S. government policy changes and proposals may result in greater restrictions and economic disincentives on international trade. The implementation of new tariffs and other changes in U.S. trade policy could trigger retaliatory actions by affected countries, and certain foreign governments have instituted or have been considering imposing trade sanctions on certain U.S. goods. We do business that could be impacted by changes to the trade policies of the United States and foreign countries (including governmental action related to tariffs, international trade agreements, or economic sanctions). Such changes have the potential to adversely impact the U.S. economy or certain sectors thereof, our industry and the global demand for our products. We may not succeed in developing and implementing policies and strategies to counter the foregoing factors effectively in each location where we do business and the foregoing factors may cause a reduction in our sales, profitability or cash flows, or cause an increase in our liabilities.

Data privacy and data security considerations could impact our business.

The interpretation and application of data protection laws are uncertain and evolving. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our data security practices. Complying with these various laws is

difficult and could cause us to incur substantial costs or require us to change our business practices in a manner adverse to our business.

Despite our efforts to protect sensitive information and confidential and personal data, comply with applicable laws, rules and regulations and implement data security measures, our facilities and systems may be vulnerable to security breaches and other data loss, including cyber-attacks. In addition, it is not possible to predict the impact on our business of the future loss, alteration or misappropriation of information in our possession related to us, our employees, former employees, customers, suppliers or others. This could lead to negative publicity, legal claims, theft, modification or destruction of proprietary information or key information, damage to or inaccessibility of critical systems, manufacture of defective products, production downtimes, operational disruptions and other significant costs, which could adversely affect our reputation, financial condition and results of operations.

We are subject to potential insolvency or financial distress of third parties.

We are exposed to the risk that third parties to various arrangements who owe us money or goods and services, or who purchase goods and services from us, will not be able to perform their obligations or continue to place orders due to insolvency or financial distress. If third parties fail to perform their obligations under arrangements with us, we may be forced to replace the underlying commitment at current or above market prices or on other terms that are less favorable to us or we may have to write off receivables in the case of customer failures to pay. If this happens, whether as a result of the insolvency or financial distress of a third party or otherwise, we may incur losses, or our results of operations, financial position or liquidity could otherwise be adversely affected.

Failure to protect our intellectual property and know-how could reduce or eliminate any competitive advantage and reduce our sales and profitability, and the cost of protecting our intellectual property may be significant.

We rely on a combination of internal procedures, nondisclosure agreements and intellectual property rights assignment agreements, as well as licenses, patents, trademarks and copyright law to protect our intellectual property and know-how. Our intellectual property rights may not be successfully asserted in the future or may be invalidated, circumvented or challenged. For example, we frequently explore and evaluate potential relationships and projects with other parties, which often require that we provide the potential partner with confidential technical information. While confidentiality agreements are typically put in place, there is a risk the potential partner could violate the confidentiality agreement and use our technical information for its own benefit or the benefit of others or compromise the confidentiality. In addition, the laws of certain foreign countries in which our products may be sold or manufactured do not protect our intellectual property rights to the same extent as the laws of the United States. In addition, the United States has transitioned from a "first-to-invent" to a "first-to-file" patent system, which means that between two identical, pending patent applications, the first inventor no longer receives priority on the patent to the invention. As a result, the Leahy-Smith America Invents Act may require us to incur significant additional expense and effort to protect our intellectual property. Failure or inability to protect our proprietary information could result in a decrease in our sales or profitability.

We have obtained and applied for some U.S. and foreign trademark and patent registrations and will continue to evaluate the registration of additional trademarks and patents, as appropriate. We cannot guarantee that any of our pending applications will be approved. Moreover, even if the applications are approved, third parties may seek to oppose or otherwise challenge them. A failure to obtain registrations in the United States or elsewhere could limit our ability to protect our trademarks and technologies and could impede our business. Further, the protection of our intellectual property may require expensive investment in protracted litigation and the investment of substantial management time and there is no assurance we ultimately would prevail or that a successful outcome would lead to an economic benefit that is greater than the investment in the litigation. The patents in our patent portfolio are scheduled to expire from 2024 to 2042.

In addition, we may be unable to prevent third parties from using our intellectual property rights and know-how without our authorization or from independently developing intellectual property that is the same as or similar to ours, particularly in those countries where the laws do not protect our intellectual property rights as fully as in the United States. We compete in a number of industries (e.g., heat exchangers and cryogenic storage) that are small or specialized, which makes it easier for a competitor to monitor our activities and increases the risk that ideas will be stolen. The unauthorized use of our know-how by third parties could reduce or eliminate any competitive advantage we have developed, cause us to lose sales or otherwise harm our business or increase our expenses as we attempt to enforce our rights.

We may be required to make expenditures in order to comply with environmental, health and safety laws and climate change regulations, or incur additional liabilities under these laws and regulations.

We are subject to numerous environmental, health and safety laws and regulations that impose various environmental controls on us or otherwise relate to environmental protection and various health and safety matters, including the discharge of

pollutants in the air and water, the handling, use, treatment, storage and clean-up of solid and hazardous materials and wastes, the investigation and remediation of soil and groundwater affected by hazardous substances and the requirement to obtain and maintain permits and licenses. These laws and regulations often impose strict, retroactive and joint and several liability for the costs and damages resulting from cleaning up our or our predecessors' facilities and third-party disposal sites. Compliance with these laws generally increases the costs of transportation and storage of raw materials and finished products, as well as the costs of storing and disposing waste, and could decrease our liquidity and profitability and increase our liabilities. If we are found to have violated any of these laws, we may become subject to corrective action orders and fines or penalties, and incur substantial costs, including substantial remediation costs and commercial liability to our customers. Further, we also could be subject to future liability resulting from conditions that are currently unknown to us that could be discovered in the future.

We are currently remediating or developing work plans for remediation of environmental conditions involving certain current facilities. We have also been subject to environmental liabilities for other sites where we formerly operated or at locations where we or our predecessors did or are alleged to have operated. To date, our environmental remediation expenditures and costs for otherwise complying with environmental laws and regulations have not been material, but the uncertainties associated with the investigation and remediation of contamination and the fact that such laws or regulations change frequently makes predicting the cost or impact of such laws and regulations on our future operations uncertain. Stricter environmental, safety and health laws, regulations or enforcement policies could result in substantial costs and liabilities to us and could subject us to more rigorous scrutiny. Consequently, compliance with these laws could result in significant expenditures, as well as other costs and liabilities that could decrease our liquidity and profitability and increase our liabilities.

There is a growing political and scientific consensus that emissions of greenhouse gases alter the composition of the global atmosphere in ways that are affecting the global climate. Various stakeholders, including legislators and regulators, stockholders and non-governmental organizations, as well as companies in many business sectors, are considering ways to reduce greenhouse gas emissions. New regulations could result in product standard requirements for our global businesses but because any impact is dependent on the design of the mandate or standard, we are unable to predict its significance at this time. Furthermore, the potential physical impacts of climate change on our customers, and therefore on our operations, are speculative and highly uncertain, and would be particular to the circumstances developing in various geographical regions. These may include changes in weather patterns (including drought and rainfall levels), water availability, storm patterns and intensities, and temperature levels. These potential physical effects may adversely impact the cost, production, sales and financial performance of our operations.

We could be obligated to make significant contributions to our pension plans, some of which are underfunded, and we contribute to a multi-employer plan for collective bargaining U.S. employees, which is underfunded.

Certain U.S. hourly and salaried employees are covered by our Chart defined benefit pension plan. The defined benefit pension plan has been frozen since February 2006. As of December 31, 2023, the projected benefit obligation under our pension plan was \$48.1 million, and the value of the assets of the plan was \$54.0 million. Although our Chart pension plan was fully funded as of December 31, 2023, the performance of assets in the plan and other related factors beyond our control have the potential to adversely affect the funding status of our pension plan in the future.

As part of the Howden Acquisition, we assumed responsibility for ten additional defined benefit plans outside of the United States, which are predominantly in Germany, covering certain employees of Howden. As of December 31, 2023, the aggregate projected benefit obligation of the Howden pension plans was \$43.0 million, and the aggregate value of the assets of the Howden pension plans was \$41.8 million, resulting in the Howden pension plans being underfunded by \$1.2 million in the aggregate.

We are also a participant in a multi-employer plan, which is underfunded. Among other risks associated with multi-employer plans, contributions and unfunded obligations of the multi-employer plan are shared by the plan participants and we may inherit unfunded obligations if other plan participants withdraw from the plan or cease to participate. Additionally, if we elect to stop participating in the multi-employer plan, we may be required to pay amounts related to withdrawal liabilities associated with the underfunded status of the plan. If the performance of the assets in our Chart pension plan, the Howden pension plans or the multi-employer plan does not meet expectations or if other actuarial assumptions are modified, our required pension contributions for future years could be higher than we expect, which may negatively impact our results of operations, cash flows and financial condition.

We operate in many different jurisdictions, and we could be adversely affected by violations of the U.S. Foreign Corrupt Practices Act and similar worldwide anti-corruption laws.

The U.S. Foreign Corrupt Practices Act ("FCPA") and similar worldwide anti-corruption laws generally prohibit companies and their intermediaries from making improper payments for the purpose of obtaining or retaining business. Our internal policies mandate compliance with these anti-corruption laws. We operate in many parts of the world that have

experienced corruption to some degree, and in certain circumstances, strict compliance with anti-corruption laws may conflict with local customs and practices. Despite our training and compliance programs, we cannot assure you that our internal control policies and procedures always will protect us from reckless or criminal acts committed by our employees or agents. Our continued expansion outside the United States, including in developing countries, could increase the risk of such violations in the future. Violations of these laws, or allegations of such violations, could disrupt our business and result in a material adverse effect on our results of operations or financial condition.

Our operations could be impacted by the effects of severe weather.

Some of our operations, including our operations in the U.S. Gulf Coast, are located in geographic regions and physical locations that are susceptible to physical damage and longer-term economic disruption from severe weather. We also could make significant future capital expenditures in hurricane-susceptible or other severe weather locations from time to time. These weather events can disrupt our operations, result in damage to our properties and negatively affect the local economy in which these facilities operate. Severe weather may cause production or delivery delays as a result of the physical damage to the facilities, the unavailability of employees and temporary workers, the shortage of or delay in receiving certain raw materials or manufacturing supplies and the diminished availability or delay of transportation for customer shipments, any of which may have an adverse effect on our sales and profitability. Although we maintain insurance subject to certain deductibles, which may cover some of our losses, that insurance may become unavailable or prove to be inadequate.

We are subject to regulations governing the export of our products.

Our export activities are subject to regulation, including the U.S. Treasury Department's Office of Foreign Assets Control's regulations. We believe we are in compliance with these regulations and maintain robust programs intended to maintain compliance. However, unintentional lapses in our compliance or uncertainties associated with changing regulatory requirements could result in future violations (or alleged violations) of these regulations. Any violations may subject us to government scrutiny, investigation and civil and criminal penalties and may limit our ability to export our products.

As a provider of products to the U.S. government, we are subject to certain federal rules, regulations, audits and investigations, the violation or failure of which could adversely affect our business.

From time to time, certain of our products and services may be provided to the U.S. government; and, therefore, we must comply with and are affected by laws and regulations governing purchases by the U.S. government. Although we are not subject to all contractor requirements, the generally more extensive requirements governing "Government contract laws and regulations" affect how we do business with our government customers and, in some instances, impose added costs on our business. For example, a violation of specific laws and regulations could result in the imposition of fines and penalties or the termination of our contracts or debarment from bidding on contracts. In some instances, these laws and regulations impose terms or rights that are more favorable to the government than those typically available to commercial parties in negotiated transactions.

Tax rules are subject to change, and unanticipated changes in our effective tax rate could adversely affect our future results.

Our future results of operations could be affected by changes in the effective tax rate as a result of changes in tax laws, regulations and judicial rulings. In December 2017, the Tax Cuts and Jobs Act of 2017 was signed into law in the United States, which among other things, lowered the federal corporate income tax rate from 35% to 21% and moved the country towards a territorial tax system with a one-time mandatory tax on previously deferred foreign earnings of foreign subsidiaries. As of December 31, 2023, provisions of the law as currently constructed are expected to change for future tax years. Although our effective tax rate decreased during 2018, there can be no assurances that any expected benefit from the Tax Cuts and Jobs Act will be maintained long-term given political and other uncertainties.

The Organisation for Economic Co-operation and Development (OECD)'s base erosion and profit shifting (BEPS) project is an area we continue to monitor due to its global reach. The OECD, which represents a coalition of member countries, has issued recommendations that, in some cases, would make substantial changes to numerous long-standing tax positions and principles. As countries, in which we operate, continue to pass laws to adopt the tenants of the BEPS Framework (tiered adoption over multiple years), we will continue to monitor potential impacts to the Company's tax stature. These contemplated changes have begun adoption by various countries during 2023, could increase tax uncertainty and may adversely affect our provision for income taxes. We will continue to monitor developments and impacts to our provision for income taxes.

Our effective tax rate could also be adversely affected by changes in the mix of earnings and losses in countries with differing statutory tax rates, certain non-deductible expenses arising from share-based compensation, the valuation of deferred

tax assets and liabilities and changes in accounting principles. In addition, we are subject to income tax audits by many tax jurisdictions throughout the world. Although we believe our income tax liabilities are reasonably estimated and accounted for in accordance with applicable laws and principles, an adverse resolution of one or more uncertain tax positions in any period could have a material impact on the results of operations for that period.

Dividend requirements associated with the Series B Mandatory Convertible Preferred Stock that Chart issued to fund a portion of the Howden Acquisition subject it to certain risks.

In December 2022, we issued 8,050,000 depositary shares, each representing a 1/20th interest in a share of Chart's Series B Mandatory Convertible Preferred Stock (the "Mandatory Convertible Preferred Stock"). Any future payments of cash dividends, and the amount of any cash dividends we pay, on the Mandatory Convertible Preferred Stock will depend on, among other things, business condition, our financial condition, earnings and liquidity, as well as other factors that our board of directors (or an authorized committee thereof) may consider relevant. Dividends will accumulate from the initial issue date and, to the extent that we are legally permitted to pay dividends and our board of directors, or an authorized committee thereof, declares a dividend payable with respect to the Mandatory Convertible Preferred Stock, we will pay such dividends in cash, or subject to certain limitations, by delivery of shares of our common stock or through any combination of cash and shares of our common stock, as determined by our board of directors in its sole discretion. Any unpaid dividends will continue to accumulate.

The terms of the Mandatory Convertible Preferred Stock further provide that if dividends have not been declared and paid for six or more dividend periods whether or not for consecutive dividend periods, the holders of such shares of Mandatory Convertible Preferred Stock, voting together as a single class with holders of all other preferred stock of equal rank having similar voting rights, will be entitled at our next annual or special meeting of stockholders to vote for the election of a total of two additional members of our board of directors, subject to certain limitations.

Risks Related to Our Leverage

Our leverage and future debt service obligations could adversely affect our business, financial condition, and results of operations and our ability to meet our payment obligations under our debt.

We are leveraged and have future debt service obligations. As of December 31, 2023, our total indebtedness was \$3,963.9 million. In addition, at that date, under our senior secured revolving credit facility, we had \$272.0 million of letters of credit and bank guarantees outstanding and borrowing capacity of approximately \$625.2 million. Through separate facilities, our subsidiaries had \$134.3 million of letters of credit and bank guarantees outstanding at December 31, 2023.

Our level of indebtedness could have significant consequences, including:

- reduced availability of cash for our operations and other business activities;
- difficulty in obtaining financing in the future;
- exposure to risk of increased interest rates on variable rate indebtedness under our senior secured revolving credit facility and term loans;
- vulnerability to general economic downturns and adverse industry conditions;
- increased competitive disadvantage compared to our competitors that have less debt or are less leveraged;
- adverse customer reaction to our debt levels;
- inability to comply with covenants in, and potential for default under, our debt instruments; and
- failure to refinance any of our debt. See Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations Liquidity and Capital Resources."

If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to sell assets, seek additional capital or seek to restructure or refinance our indebtedness. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. We may be unable to consummate those asset sales to raise capital or sell assets at prices that we believe are fair and proceeds that we do receive may be inadequate to meet any debt service obligations then due.

We may incur substantial additional indebtedness, which could further exacerbate the risks that we face.

We may be able to incur substantial additional indebtedness in the future. The terms of our debt instruments do not fully prohibit us from doing so. Our senior secured revolving credit facility provides commitments of up to \$1,000.0 million, approximately \$625.2 million of which would have been available for future borrowings (after giving effect to letters of credit and bank guarantees outstanding) as of December 31, 2023. See Item 7. "Management's Discussion and Analysis of Financial

Condition and Results of Operations — Liquidity and Capital Resources — Debt Instruments and Related Covenants." If new debt is added to our current debt levels, the related risks that we now face could intensify.

The terms of our existing debt may limit our ability to finance future operations or capital needs or engage in other business activities that may be in our interest.

The terms of our existing debt impose, and the terms of any future indebtedness may impose, operating and other restrictions on us and our subsidiaries. Such restrictions affect or will affect, and in various circumstances limit or prohibit, among other things, our ability and the ability of our subsidiaries to:

- incur or guarantee additional indebtedness;
- create liens;
- pay dividends based on our leverage ratio and make other distributions in respect of our capital stock;
- redeem or buy back our capital stock based on our leverage ratio;
- make certain investments or certain other restricted payments;
- enter into a new line of business;
- sell or transfer certain kinds of assets;
- enter into certain types of transactions with affiliates; and
- effect mergers or consolidations.

The senior secured revolving credit facility due October 2026 also requires us to achieve certain financial and operating results and maintain compliance with specified financial ratios. Our ability to comply with these ratios may be affected by events beyond our control.

The restrictions contained in the senior secured revolving credit facility and our indentures could:

- limit our ability to plan for or react to market or economic conditions or meet capital needs or otherwise restrict our activities or business plans; and
- adversely affect our ability to finance our operations, acquisitions, investments or strategic alliances or other capital needs or to engage in other business activities that would be in our interest.

A breach of any of these covenants could result in a default under our debt agreements. If an event of default occurs under our debt agreements, which includes an event of default under the other debt agreements, the lenders or holders could elect to declare all indebtedness outstanding, together with accrued and unpaid interest, to be immediately due and payable. The lenders under our senior secured revolving credit facility will also have the right in these circumstances to terminate any commitments they have to provide further financing.

If we were unable to repay or otherwise refinance this indebtedness when due, our lenders could sell the collateral securing the senior secured revolving credit facility due October 2026 and the secured notes, which constitutes substantially all of our domestic wholly-owned subsidiaries' assets.

Our 1.00% Convertible Senior Subordinated Notes due November 2024 have certain fundamental change and conditional conversion features and our Senior Secured Notes due 2030 and our Senior Unsecured Notes due 2031 have certain change in control features which, if triggered, may adversely affect our financial condition.

If a fundamental change occurs under our 1.00% Convertible Senior Subordinated Notes due November 2024, the holders of the convertible notes may require us to purchase for cash any or all of the convertible notes. In addition, upon the occurrence of certain kinds of change of control, we will be required to offer to repurchase all of the outstanding secured notes and unsecured notes at 101% of the principal amount thereof plus accrued and unpaid interest, if any, to the date of repurchase. However, there can be no assurance that we will have sufficient funds at the time of the fundamental change or change in control to purchase all of the convertible notes, secured notes or unsecured notes delivered for purchase, and we may not be able to arrange necessary financing on acceptable terms, if at all. Likewise, if one of the conversion contingencies of our convertible notes is triggered, holders of convertible notes will be entitled to convert the convertible notes at any time during specified periods.

We are subject to counterparty risk with respect to the convertible note hedge and capped call transactions associated with our 1.00% Convertible Senior Subordinated Notes due November 2024.

The option counterparties for our convertible note hedging arrangements are financial institutions, and we will be subject to the risk that any or all of them might default under the convertible note hedge and capped call transactions. Our exposure to

the credit risk of the option counterparties is not secured by any collateral. Global economic conditions have from time to time resulted in the actual or perceived failure or financial difficulties of many financial institutions. If an option counterparty becomes subject to insolvency proceedings, we will become an unsecured creditor in those proceedings with a claim equal to our exposure at that time under the convertible note hedge and capped call transactions with that option counterparty. Our exposure will depend on many factors but, generally, the increase in our exposure will be correlated to the increase in the market price and in the volatility of our common stock. In addition, upon a default by an option counterparty, we may suffer adverse tax consequences and more dilution than we currently anticipate with respect to our common stock. We can provide no assurances as to the financial stability or viability of the option counterparties.

Risks Related to the Trading Market for Our Preferred and Common Stock

The issuance of common stock upon conversion of our 1.00% Convertible Senior Subordinated Notes due November 2024 or 6.75% Series B Mandatory Convertible Preferred Stock could cause dilution to the interests of our existing stockholders.

As of December 31, 2023, we had \$258.7 million aggregate principal amount of our 1.00% Convertible Senior Subordinated Notes due November 2024. Prior to the close of business on the business day immediately preceding August 15, 2024, the convertible notes will be convertible only upon satisfaction of certain conditions. Holders may convert their 1.00% convertible notes at their option at any time after August 15, 2024 until the close of business on the second scheduled trading day immediately preceding November 15, 2024. As a result of attaining these specified market price conditions, the notes are convertible in the first quarter of 2024, although there have been no significant conversions to date. On December 31, 2020, we amended the Indenture governing our 1.00% Convertible Senior Subordinated Notes due November 2024 to eliminate share settlement thus leaving us with two settlement options: (1) cash settlement or (2) cash for par and any combination of cash and shares for the excess settlement amount above the \$258.7 million aggregate principal amount of our 1.00% Convertible Senior Subordinated Notes due November 2024. We currently intend to settle conversions of 1.00% convertible notes through a combination of the payment of cash and issuance of shares, with payments of cash up to the aggregate principal amount of the convertible notes to be converted and delivering shares of our common stock in respect of the remainder, if any, of our conversion obligation in excess of the aggregate principal amount of the notes being converted.

In addition, unless earlier converted, each share of the Mandatory Convertible Preferred Stock will automatically convert on or around December 15, 2025 into between 7.0520 and 8.4620 shares of our common stock, subject to customary anti-dilution adjustments. At any time prior to December 15, 2025, a holder of Mandatory Convertible Preferred Stock may elect to convert such holder's shares of the Mandatory Convertible Preferred Stock, in whole or in part, at the minimum conversion rate of 7.0520 shares of common stock per share. If a fundamental change occurs on or prior to December 15, 2025, holders of the Mandatory Convertible Preferred Stock will have the right to convert their shares of Mandatory Convertible Preferred Stock, in whole or in part, into shares of common stock at a conversion rate based on the effective date of the fundamental change and the price paid (or deemed paid) per share of our common stock in such fundamental change. We may also pay declared dividends in cash or, subject to certain limitations, in shares of common stock or in any combination of cash and common stock. Conversion of the Mandatory Convertible Preferred Stock into common stock, as well as the payment of dividends in shares of common stock, could be dilutive to our existing stockholders.

Our common stock ranks junior to the Mandatory Convertible Preferred Stock with respect to dividends and amounts payable in the event of our liquidation, dissolution or winding-up of our affairs.

Our common stock ranks junior to the Mandatory Convertible Preferred Stock with respect to the payment of dividends and amounts payable in the event of our liquidation, dissolution or winding-up of our affairs. This means that, unless accumulated dividends have been paid or set aside for payment on all the outstanding Mandatory Convertible Preferred Stock through the most recently completed dividend period, no dividends may be declared or paid on our common stock subject to limited exceptions. Likewise, in the event of our voluntary or involuntary liquidation, dissolution or winding-up of our affairs, no distribution of our assets may be made to holders of our common stock until we have paid to holders of the Mandatory Convertible Preferred Stock a liquidation preference equal to \$1,000 per share plus accumulated and unpaid dividends.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 1C. Cybersecurity

Risk Management and Strategy

We have established processes for assessing, identifying, and managing material risks associated with cybersecurity threats, as defined in Item 106(a) of Regulation S-K. These risks include, among other things: operational risks, intellectual property theft, fraud, extortion, harm to employees or customers and violation of data privacy or security laws.

By prioritizing cybersecurity at the highest level of our leadership, we assess cybersecurity risk, allocate resources and maintain a culture of cybersecurity awareness throughout Chart. Chart ties cybersecurity or being cyber safe to our key theme of safety, as an industrial manufacturer. Identifying and assessing cybersecurity risk is integrated into our overall risk management systems and processes. Cybersecurity risks related to our business, technical operations, privacy and compliance issues are identified and addressed through third-party assessments, internal IT Audit, IT security, governance, risk and compliance reviews. To defend, detect and respond to cybersecurity incidents, we, among other programs: conduct proactive privacy and cybersecurity reviews of systems and applications, audit applicable data policies, perform penetration testing using external third-party tools and techniques to test security controls, encourage proactive vulnerability reporting, conduct employee training, monitor emerging laws and regulations related to data protection and information security and implement appropriate changes.

We have implemented preparation for incident response, incident response and breach management processes which have four stages: 1) preparation for cybersecurity incidents, 2) detection and analysis of cybersecurity incidents, 3) containment, eradication and recovery, and 4) post-incident analysis. Such incident responses are overseen by leaders from our information security, compliance and legal teams. Security events and data incidents are evaluated, ranked by severity, and prioritized for response and remediation. Incidents are evaluated to determine materiality as well as operational and business impact and reviewed for privacy impact.

We also simulate responses to cybersecurity incidents by conducting tabletop exercises. Our cybersecurity professionals then collaborate with technical and business stakeholders across our business units to further analyze the risk to the company, and form detection, mitigation, and remediation strategies.

As part of the above processes, we regularly engage external auditors and consultants to assess our internal cybersecurity programs and compliance with applicable practices and standards. In past years, our Information Security Management System has continued to work a Plan of Action and Milestones (POAM) tied to the United States Cybersecurity Maturity Model Certification (CMMC) program, formerly the National Institute of Standards and Technology (NIST) Cybersecurity Framework, while looking for synergies across other standards, such as the Information Assurance Technical Framework (IATF), or as required for specific product lines or customers. Furthermore, we benchmark externally against other industrial manufacturers within the B2B (Business to Business) manufacturing industry, and even to a vertical level to determine Chart's risk profile through cybersecurity insurance tools that rank companies and bring them together within forums for cyber intelligence sharing and best practices.

Our risk management program also assesses third-party risks to identify and mitigate risks from vendors, suppliers, and other business partners associated with our use of third-party service providers. Cybersecurity risks are evaluated when determining the selection and oversight of applicable third-party service providers and potential fourth-party risks when handling and/or processing our employee, business or customer data. In addition, we strive to have the appropriate cybersecurity clauses in our agreements and where necessary we have Data Processing Agreements (DPAs) put in place for privacy of data.

We describe whether and how risks from identified cybersecurity threats, including as a result of any previous cybersecurity incidents, have materially affected or are reasonably likely to materially affect us, including our business strategy, results of operations, or financial condition, under the heading "Data privacy and data security considerations could impact our business" included as part of our risk factor disclosures at Item 1A of this Annual Report on Form 10-K.

Governance

Cybersecurity is an important part of our risk management processes and an area of focus for our Board and management. Our Audit Committee is responsible for the oversight of risks from cybersecurity threats. The Board receives updates on a regular basis from senior management, including leaders from our information security, compliance and legal teams regarding matters of cybersecurity. This includes existing and new cybersecurity risks, status on how management is addressing and/or mitigating those risks, cybersecurity, and data privacy incidents (if any) and status of key information security initiatives. Our Board members also engage in ad hoc conversations with management on cybersecurity-related news events and discuss any updates to our cybersecurity risk management and strategy programs.

Our cybersecurity risk management and strategy processes are overseen by leaders from our information security, compliance and legal teams. Such individuals have an average of over 15 years of prior work experience in various roles involving information technology, including security, auditing, compliance, systems and programming. These individuals monitor the prevention, mitigation, detection and remediation of cybersecurity incidents through their management of, and participation in, the cybersecurity risk management and strategy processes described above, including our incident response plan, and report to the Audit Committee on any appropriate items.

Item 2. *Properties*

We occupy 186 facilities throughout the world totaling approximately 13.0 million square feet with the majority devoted to manufacturing, assembly, and storage, none of which are individually material. Of these facilities, approximately 8.6 million square feet are owned, and 4.4 million square feet are occupied under operating leases. Because Chart is global in nature, with substantial inter-segment cooperation, properties are often used by multiple business segments.

Regulatory Environment

We are subject to federal, state, and local regulations relating to the discharge of materials into the environment, production and handling of hazardous and regulated materials, and the conduct and condition of our production facilities. We do not believe that these regulatory requirements have had a material effect on our capital expenditures, earnings, or competitive position. We are not anticipating any material capital expenditures in 2024 that are directly related to regulatory compliance matters. We are also not aware of any pending or potential regulatory changes that would have a material adverse impact on our business.

Item 3. Legal Proceedings

In connection with our divestiture of our cryobiological products business on October 1, 2020, Chart retained certain potential liabilities, including claims in connection with lawsuits filed in the U.S. District Court for the Northern District of California and the San Francisco Superior Court during the second quarter of 2018 against Chart and other defendants with respect to the alleged failure of a stainless steel cryobiological storage tank at the Pacific Fertility Center in San Francisco, California.

As previously disclosed, the Company reached a settlement in late January 2023 to resolve these cases. In the fourth quarter of 2022, the Company recorded a loss contingency accrual of \$305.6 and a related loss receivable of \$231.9 from insurance proceeds from these combined cases, which were recognized in our consolidated balance sheet as of December 31, 2022. The net loss of approximately \$73.0 was recognized in discontinued operations and represented the expected out-of-pocket payments in connection with these settlements. The settlement was finalized and funded on March 20, 2023; therefore the previously disclosed loss contingency accrual and related loss receivable are no longer recorded as of December 31, 2023. This settlement and the net out-of-pocket payments do not reflect third-party recoveries which the Company is pursuing with respect to the underlying facts in these cases, and which the Company currently anticipates will result in recoveries approximating one-quarter or more of the Company's out-of-pocket, net payments.

We continue to evaluate the merits of the sole remaining lawsuit that was not included in the settlement in light of the information available. Based on the status of that lawsuit, a current estimate of reasonably possible losses in that case cannot be made; however, the Company does not anticipate the potential exposure to be material. The Company does not intend to report on this lawsuit quarterly, absent developments that would impact the materiality of the claim.

We are occasionally subject to various legal claims related to performance under contracts, product liability, taxes, employment matters, environmental matters, intellectual property, and other matters incidental to the normal course of our business. Based on our historical experience in litigating these claims, as well as our current assessment of the underlying merits of the claims and applicable insurance, if any, management believes that the final resolution of these matters, including the sole remaining Pacific Fertility Center case described above, will not have a material adverse effect on our financial position, liquidity, cash flows, or results of operations, except that our results of operations for any particular reporting period may be adversely affected by any potential or actual loss that is accrued in such period. Future developments may, however, result in resolution of these legal claims in a way that could have a material adverse effect.

Item 4. Mine Safety Disclosures

Not applicable.

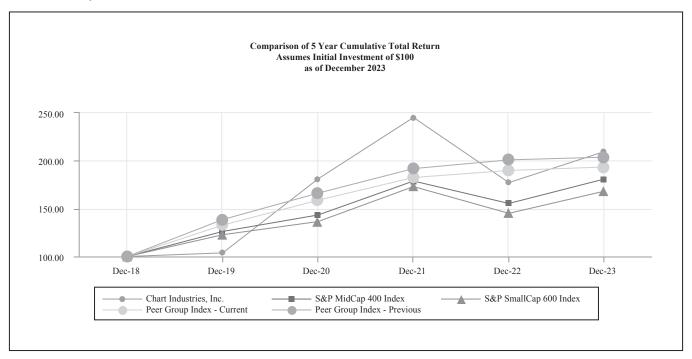
Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Chart's common stock is traded on the New York Stock Exchange under the symbol "GTLS." As of January 31, 2024, there were 203 holders of record of our common stock. Since many holders hold shares in "street name," we believe that there are a significantly larger number of beneficial owners of our common stock than the number of record holders.

Apart from the dividend requirements associated with the Series B Mandatory Convertible Preferred Stock that we issued to fund a portion of the Acquisition, we do not currently intend to pay any cash dividends on our common stock, and instead intend to retain earnings, if any, for debt reduction, organic capital expenditures for productivity and capacity and potential acquisitions. The amounts available to us to pay future cash dividends may be restricted by our 2026 Credit Facilities to the extent our pro forma leverage ratio exceeds certain targets. Any decision to declare and pay dividends in the future will be made at the discretion of our board of directors and will depend on, among other things, our results of operations, financial condition, cash requirements, contractual restrictions, and other factors that our board of directors may deem relevant.

Cumulative Total Return Comparison

Set forth below is a line graph comparing the cumulative total return of a hypothetical investment in the shares of common stock of Chart with the cumulative return of a hypothetical investment in each of the S&P MidCap 400 Index, S&P SmallCap 600 Index and our current and previous Peer Group Indexes based on the respective market prices of each such investment on the dates shown below, assuming an initial investment of \$100 on December 31, 2018, including reinvestment of dividends, if any.



	December 31,										
		2018		2019		2020		2021		2022	2023
Chart Industries, Inc.	\$	100.00	\$	103.78	\$	181.13	\$	245.26	\$	177.20	\$ 209.64
S&P MidCap 400 Index		100.00		126.17		143.39		178.85		155.42	180.90
S&P SmallCap 600 Index		100.00		122.74		136.53		173.04		145.10	168.23
Peer Group Index - Current		100.00		132.76		158.82		182.55		189.89	193.52
Peer Group Index - Previous		100.00		138.62		166.22		191.85		200.96	203.79

The cumulative total return comparison presents both the S&P MidCap 400 Index and S&P SmallCap 600 Index. During 2023, we transitioned from the S&P SmallCap 600 Index to the S&P MidCap 400 Index, which better aligns to the performance of our peers.

We select the peer companies that comprise the Peer Group Index solely on the basis of objective criteria. These criteria result in an index composed of oil field equipment/service and other comparable industrial companies. During 2023, we modified our peer group to include certain competitors of Howden. The cumulative total return comparison presents both the current and previous Peer Group Index. The current Peer Group Index is comprised of Air Products and Chemicals, Inc., Atlas Copco AB, Baker Hughes Company, Barnes Group Inc., Burckhardt Compression Holding AG, ChampionX Corporation, Cheniere Energy, Inc., CIMC Enric Holdings Limited, CNH Industrial N.V., EnPro Inc., ESCO Technologies Inc., Franklin Electric Co., Inc., IDEX Corporation, ITT Inc., New Fortress Energy LLC, NIKKISO CO., LTD., Plug Power Inc., SPX Corporation and Worthington Enterprises, Inc. The previous Peer Group Index is comprised of Air Products and Chemicals, Inc., Baker Hughes Company, Barnes Group Inc., ChampionX Corporation, Cheniere Energy, Inc., CIMC Enric Holdings Limited, CNH Industrial N.V., EnPro Inc., ESCO Technologies Inc., Franklin Electric Co., Inc., Harsco Corporation, IDEX Corporation, ITT Inc., New Fortress Energy LLC, NIKKISO CO., LTD., Plug Power Inc., SPX Corporation and Worthington Enterprises, Inc.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

	Issuer Purchases of Equity Securities										
Period	Total Number of Shares Purchased (1) Average Price Paid P							Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs			
October 1 — 31, 2023	_	\$	_	_	\$ —						
November 1 — 30, 2023	13		127.28	_	_						
December 1 — 31, 2023	51		130.16	_	_						
Total	64	\$	129.58		\$						

Includes shares of common stock surrendered to us during the fourth quarter of 2023 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 \$8,300. The total number of shares repurchased represents the net shares issued to satisfy tax withholding. All such repurchased shares were subsequently retired during the three months ended December 31, 2023.

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion of our results of operations and financial condition should be read in conjunction with our consolidated financial statements and related notes appearing elsewhere in this Annual Report on Form 10-K. This discussion contains forward-looking statements. Actual results may differ materially from those discussed below. See "Forward-Looking Statements" at the end of this discussion and Item 1A. "Risk Factors" for a discussion of the uncertainties, risks and assumptions associated with this discussion.

Overview

We are a leading independent global leader in the design, engineering, and manufacturing of process technologies and equipment for gas and liquid molecule handling for the Nexus of CleanTM – clean power, clean water, clean food, and clean industrials, regardless of molecule. Our unique product and solution portfolio across stationary and rotating equipment is used in every phase of the liquid gas supply chain, including engineering, service and repair from installation to preventive maintenance and digital monitoring. Chart is a leading provider of technology, equipment and services related to liquefied natural gas, hydrogen, biogas and carbon capture among other applications. We are committed to excellence in environmental, social and corporate governance (ESG) issues both for our company as well as our customers. With 64 global manufacturing locations and over 50 service centers from the United States to Asia, Australia, India, Europe and South America, we maintain accountability and transparency to our team members, suppliers, customers and communities.

Macroeconomic Impacts

The current conflict between Russia and Ukraine and the related sanctions imposed by countries against Russia, along with the heightened tensions between the United States and China and recent unrest in the Middle East continue to create uncertainty in the global economy. We are unable to predict the impact these actions will have on the global economy or on our business, financial condition and results of operations. These events did not have a material adverse effect on our reported results for the year ended December 31, 2023, however we will continue to actively monitor in terms of their potential impact on our results of operations beyond 2023.

Environmental, Social, Governance

Chart is proud to be at the forefront of the clean energy transition as a leading provider of technology, equipment and services related to liquefied natural gas (LNG), hydrogen, biogas, carbon capture and water treatment, among other applications. We also have a unique offering for the Nexus of Clean™ − clean power, clean water, clean food and clean industrials. This leadership position is possible not only because we have the broadest offering of clean innovative solutions for the various end markets we serve, but also because we are committed to global responsibility. Reporting our ESG performance is one of the ways we demonstrate accountability and transparency to our team members, suppliers, customers, shareholders and communities. Below are some highlights of our ESG efforts, and further information can be found in our fourth Annual Sustainability report with scorecard which was released in April 2023. Our fifth Annual Sustainability report with scorecard will be released in April 2024.

We measure our ESG and sustainability targets and progress against them.

- We measure progress through the Sustainability Accounting Standards Board (SASB) and Task Force on Climate Related Financial Disclosures (TCFD) indices, as well as contributing to the Global Reporting Initiative (GRI) and United Nations Sustainable Development Goals (SDGs). We contribute to 10 of the 17 United Nations Sustainable Development Goals (SDGs).
- Safety: total recordable incident rate (TRIR) of 0.52 as of January 31, 2024, our lowest in our history.
- Many of our safety programs and practices reflect requirements of the ISO 45001 Occupational Health and Safety standard for management systems. Chart voluntarily certifies certain manufacturing and fabrication facilities to this internationally recognized standard to increase safety and reduce workplace risks.
- We utilize iPoint and Riskmethods analytics to proactively monitor our supply chain for proper governance in our supplier network including their climate targets and other ESG activities.
- Chart remains committed to its ambitious climate targets of 50% emission intensity reduction by 2030 and net zero emissions by 2050 and are ahead of our 2030 target in terms of progress toward it. In addition to decreasing our emissions intensity in 2022, we also managed to reduce emissions 5.8% on an absolute basis. We made plant improvements including energy efficient upgrades for various equipment including replacement of diesel powered equipment with electric and installation of LED lighting in office spaces. In addition, we plan to achieve our targets by switching energy from fossil fuel based to carbon free supply and installing on-site renewables where applicable, as

well as continuing to participate in ongoing energy audits. At a local site level, we also continue to find ways to reduce both waste-to-landfill as well as mains water usage.

- We began tracking and reporting our global water consumption and waste recycled, an effort that speaks to our commitment to ESG transparency.
- We remain committed to our social targets:
 - Increase female representation to 40% on our management team by 2030.
 - Increase female representation to 35% in senior roles by 2030.
 - Achieve team member volunteer participation of 25% as part of our community program by 2030.

We provide our One Chart global team members with various programs and practices to support our ESG and employeedrive culture:

- We have a Global Sustainability Committee, Global Safety Council, and Global Diversity & Inclusion Committee, all comprised of team member volunteers and engagement from our global locations.
 - Our Global Sustainability Committee has five sub-committees focused on energy management, zero waste, electrification, renewable energy and water management. In 2023, this committee focused on sustainable global best practice and knowledge sharing between the Chart and Howden businesses.
- We have numerous employee resource groups (ERG), including:
 - Chart Network of Women (NOW) with a mission of empowering women both personally and professionally with local chapters globally across the United States, Europe, and Asia.
 - Chart Pride ERG supporting LGBTQIA+ team members.
 - In Q1 2024, there are planned launch dates for Chart Young Professionals and Veterans ERGs.
- Chart adopted Howden's Bright Futures community volunteering program, which is now a facet of Chart's Giving Back Program. Bright Futures is a program focused around giving back to the younger generation, with particular focus on promoting STEM.
- We have an employee relief fund for our own team members that need assistance.
- Our team members raised over \$25,000 to support women in the Dress For Success campaign in March 2023. This is the third year in a row raising \$25,000 for this cause.
- Our team members raised over \$60,000 in 2023 through an internal STEPtember campaign, coordinated by our finance organization.

We are our helping customers to achieve their own sustainability targets in a number of different ways whether that's through reducing the amount of plastic used in packaging to lowering greenhouse gas emissions by enabling the transition towards cleaner fuels.

- Howden's installed base of products enables the avoidance of over 245 million tons of CO2 a year. This is equivalent to removing 52 million fossil-fueled cars from the road in the same period.
- A single gas-gas heater is estimated to avoid 64,000 tons of CO2 emissions from flue gas. Our current gas-gas heater installed base (doubled since 2022) saves approximately 32 million tons of CO2 per year.
- Our ChartWater team treats over 4.5 billion gallons of water a day in the United States and provides clean water to approximately a billion people worldwide daily.
- We helped to eliminate nearly 280 million of PET (plastic) used in water bottles in the United States. Our liquid nitrogen doser enables customers to produce 432,000,000 cans of water annually (instead of plastic bottles) which avoids production of 8.21 billion grams of plastic per year.
- In 2023, Chart products produced about 65 million tons of LNG to replace coal fired power generation (non-U.S.).
- In 2023, Chart products reduced over 800 million liters of diesel used by over-the-road trucks.
- VentsimTM DESIGN is used by over 2,800 mines, universities, consultants, government, and research organizations in 70 countries. VentsimTM CONTROL has been successfully installed on over 30 mine sites in 5 continents. For example, a mining customer is seeing a 56% reduction in underground ventilation electricity costs by utilizing VentsimTM CONTROL for mine optimization.

Our governance supports our ESG focus

- We have an independent Board of Directors that is comprised of ten directors (four of our ten directors are female and four of our ten are diverse) and governed with a separate independent Chairwoman and CEO.
- We regularly hold reviews on ESG and cybersecurity with our Board of Directors.

- We link our executives and their direct reports short-term incentive payout (25% of the strategic and operational goals) to a metric driven, percentage-reduction ESG metric, and have done this for three years (and continue to do in 2024).
- We offer every team member worldwide one paid day off each year to volunteer in our communities. In 2021, Chart started matching employee donations up to \$250 per employee per year to charitable organizations.

In 2023, we received the following ESG-oriented recognition:

- S&P Global Platts Energy Awards Corporate Impact Comprehensive Portfolio finalist (2023)
- Hydrogen Technology of the Year finalist in the 2023 Hydrogen Future Awards
- Named to Newsweek's America's Most Responsible Companies 2024 list, demonstrating our commitment to corporate social responsibility, sustainability, and giving back to our communities.

2023 Highlights

On March 17, 2023, we completed the acquisition of Howden (the "Howden Acquisition"), a leading global provider of mission critical air and gas handling products and services, from affiliates of KPS Capital Partners, LP. Results of operations include results of Howden from the date of acquisition and exclude RootsTM ("Roots") business financial results for our entire ownership period of March 17, 2023 through the divestiture date, August 18, 2023. Record order activity, mainly driven by the impact of the Howden Acquisition, contributed to record ending total backlog of \$4,278.8 million as of December 31, 2023 compared to \$2,338.1 million as of December 31, 2022, representing an increase of \$1,940.7 million or 83.0%, which reflects the broad-based demand we continue to see year-over-year across our product categories. The increase in backlog was largely driven by record orders for the year ended December 31, 2023 of \$4,140.2 million compared to \$2,779.9 million for the year ended December 31, 2022 representing an increase of \$1,360.3 million or 48.9%. Record order intake in our Repair, Service & Leasing segment of \$1,100.8 million in 2023 compared to \$218.9 million in 2022, was mainly driven by the inclusion of the Howden aftermarket business and LNG retrofit. Record orders in our Specialty Products segment for 2023 of \$1,341.6 million compared to \$665.5 million for 2022 were mainly driven by strong order intake for hydrogen and helium, space exploration, water treatment, carbon capture and other specialty applications. Heat Transfer Systems segment backlog totaled a record \$1,716.5 million as of December 31, 2023 compared to \$1,300.1 million as of December 31, 2022. Specialty Products segment backlog totaled a record \$1,631.1 million as of December 31, 2023, compared to \$645.9 million as of December 31, 2022. Cryo Tank Solutions segment backlog totaled \$361.9 million as of December 31, 2023, compared to \$371.0 million as of December 31, 2022.

Consolidated sales increased to a record \$3,352.5 million in 2023 from \$1,612.4 million in 2022, representing an increase of \$1,740.1 million or 107.9%. The consolidated sales increase was bolstered by sales from the Howden Acquisition. This increase was mainly driven by growth in our Repair, Service & Leasing segment, increased sales in our Heat Transfer Systems segment on favorable sales in process systems related to big and small-scale LNG liquefaction and floating LNG, gains within our Cryo Tank Solutions segment on favorable sales in general industrials and within our Specialty Products segment on favorable sales in energy recovery, water treatment, space applications, metals, mining and carbon capture. Consolidated gross profit in 2023 increased by \$633.0 million from \$407.4 million to a record \$1,040.4 million or 155.4% compared to 2022. Gross profit margin of 31.0% in 2023 increased from 25.3% in 2022. The increase in gross profit and gross profit margin for 2023 compared to 2022 was mainly driven by product mix and also demonstrates our progress in improvement in our margin profile as we continued to take further pricing and cost reduction actions.

Consolidated SG&A expenses as a percentage of consolidated sales for 2023 increased by 1.2% as compared to 2022 primarily due to integration related costs incurred in 2023.

Operating Results

The following table sets forth the percentage relationship that each line item in our consolidated statements of income represents to sales for the years ended December 31, 2023, 2022, and 2021:

	2023	2022	2021
Sales	100.0 %	100.0 %	100.0 %
Cost of sales (1)	69.0	74.7	75.4
Gross profit	31.0	25.3	24.6
Selling, general and administrative expenses (2)-(4)	14.5	13.3	14.9
Amortization expense	4.9	2.6	3.0
Operating income	11.7	9.4	6.7
Acquisition related finance fees	0.8	2.3	
Interest expense, net	8.1	1.8	0.8
Financing costs amortization (5)	0.5	0.2	0.6
Loss on extinguishment of debt	0.2	_	_
Unrealized loss (gain) on investment in equity securities	0.4	(0.8)	(0.2)
Realized gain on investment in equity securities	_		(0.2)
Foreign currency (gain) loss	(0.1)	_	0.1
Other (income) expense, net	_	(0.1)	
Income tax expense, net	0.1	1.0	1.0
Net income from continuing operations	1.7	5.1	4.6
Loss from discontinued operations, net of tax	_	(3.6)	_
Net income	1.7	1.6	4.6
Less: Income attributable to noncontrolling interests of continuing operations, net of taxes	0.3	0.1	0.1
Net income attributable to Chart Industries	1.4	1.5	4.5

⁽¹⁾ Cost of sales includes restructuring costs/(credits) of \$0.5, \$(1.0) and \$2.6 for the years ended December 31, 2023, 2022 and 2021, respectively.

Selling, general and administrative expenses include restructuring costs of \$13.0, \$0.0 and \$0.9 for the years ended December 31, 2023, 2022 and 2021, respectively.

⁽³⁾ Includes deal-related and integration costs of \$38.5 and \$17.6 for the years ended December 31, 2023 and 2022.

Includes share-based compensation expense of \$12.6, \$10.6 and \$11.2, representing 0.4%, 0.7% and 0.8% of sales, for the years ended December 31, 2023, 2022 and 2021, respectively.

Consolidated Results for the Years Ended December 31, 2023, 2022 and 2021

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 years ended December 31, 2023, 2022 and 2021 (dollar amounts in millions). Further detailed information regarding our operating segments is presented in Note 4, "Segment and Geographic Information," of the consolidated financial statements included under Item 15 "Exhibits and Financial Statement Schedules" of this Annual Report on Form 10-K.

Selected Segment Financial Information

		Year Ended December 31					
		2023	20	22		2021	
Sales							
Cryo Tank Solutions	\$	640.8	\$	504.3	\$	447.4	
Heat Transfer Systems	,	891.2	*	462.7	_	262.7	
Specialty Products		819.9		448.3		432.9	
Repair, Service & Leasing		1,029.2		209.6		187.0	
Intersegment eliminations		(28.6)		(12.5)		(12.3)	
Consolidated	\$		\$ 1	,612.4	\$	1,317.7	
Gross Profit							
Cryo Tank Solutions	\$	132.0	\$	98.7	\$	93.5	
Heat Transfer Systems		246.8		90.6		35.6	
Specialty Products		221.4		138.6		145.5	
Repair, Service & Leasing		440.2		79.5		49.6	
Consolidated	\$	1,040.4	\$	407.4	\$	324.2	
Gross Profit Margin							
Cryo Tank Solutions		20.6 %		19.6 %		20.9 %	
Heat Transfer Systems		27.7 %		19.6 %		13.6 %	
Specialty Products		27.0 %		30.9 %		33.6 %	
Repair, Service & Leasing		42.8 %		37.9 %		26.5 %	
Consolidated		31.0 %		25.3 %		24.6 %	
SG&A Expenses							
Cryo Tank Solutions	\$	70.9	\$	41.8	\$	38.1	
Heat Transfer Systems		54.1		24.0		28.1	
Specialty Products		82.6		55.6		43.3	
Repair, Service & Leasing		116.1		15.2		17.8	
Corporate		162.6		77.9		69.5	
Consolidated	\$	486.3	\$	214.5	\$	196.8	
SG&A Expenses (% of Sales)							
Cryo Tank Solutions		11.1 %		8.3 %		8.5 %	
Heat Transfer Systems		6.1 %		5.2 %		10.7 %	
Specialty Products		10.1 %		12.4 %		10.0 %	
Repair, Service & Leasing		11.3 %		7.3 %		9.5 %	
Consolidated		14.5 %		13.3 %		14.9 %	
Operating Income (Loss) (1)							
Cryo Tank Solutions	\$	54.5	\$	54.0	\$	52.9	
Heat Transfer Systems (2)		175.8		51.7		(12.3)	
Specialty Products		119.7		72.9		94.1	
Repair, Service & Leasing		203.3		51.0		23.3	
Corporate		(162.6)		(78.1)		(69.5)	
Consolidated	\$	390.7	\$	151.5	\$	88.5	

Operating Margin

Cryo Tank Solutions	8.5 %	10.7 %	11.8 %
Heat Transfer Systems	19.7 %	11.2 %	(4.7)%
Specialty Products	14.6 %	16.3 %	21.7 %
Repair, Service & Leasing	19.8 %	24.3 %	12.5 %
Consolidated	11.7 %	9.4 %	6.7 %

⁽¹⁾ Restructuring charges/(credits) for the years ended:

- December 31, 2023 were \$13.5 (\$5.2 Corporate, \$4.0 Repair, Service & Leasing, \$1.8 Specialty Products, \$1.6 Cryo Tank Solutions and \$0.9 Heat Transfer Systems);
- December 31, 2022 were \$(1.0) (\$(1.4) Repair, Service & Leasing, \$0.3 Heat Transfer Systems and \$0.1 Cryo Tank Solutions); and
- December 31, 2021 were \$3.5 (\$1.7 Heat Transfer Systems, \$1.5 Repair, Service & Leasing, \$0.3 Cryo Tank Solutions).
- ⁽²⁾ Includes deal-related and integration costs of \$38.5 and \$17.6 for the years ended December 31, 2023 and 2022, respectively.

Results of Operations for the Years Ended December 31, 2023 and 2022

Sales in 2023 increased by \$1,740.1 million from \$1,612.4 million to a record \$3,352.5 million, or 107.9%. This increase was mainly driven by the sales contribution from the Howden Acquisition, including growth in our Repair, Service & Leasing segment, increased sales in our Heat Transfer Systems segment on favorable sales in process systems related to big and small-scale LNG liquefaction and floating LNG, gains within our Cryo Tank Solutions segment on favorable sales in general industrials and within our Specialty Products segment on favorable sales in energy recovery, water treatment, space applications, metals, mining and carbon capture.

Gross profit in 2023 increased by \$633.0 million from \$407.4 million to \$1,040.4 million or 155.4% compared to 2022. The increase in gross profit was primarily driven by the contribution from the Howden Acquisition. Gross profit margin of 31.0% in 2023 increased from 25.3% in 2022. The increase in gross profit margin for 2023 compared to 2022 was primarily driven by our ongoing cost out actions, productivity, early synergy achievement and pricing actions. Restructuring costs/ (credits) recorded to cost of sales were \$0.5 million and \$(1.0) million for the years ended December 31, 2023 and 2022, respectively.

Consolidated SG&A expenses increased by \$271.8 million or 126.7% during 2023 compared to the same period in 2022 primarily driven by the inclusion of Howden SG&A expenses, including higher employee-related costs, while consolidated SG&A expenses as a percentage of consolidated sales for 2023 increased by 1.2% as compared to 2022 primarily due to activities related to the integration of the Howden Acquisition.

Acquisition Related Finance Fees

Acquisition related finance fees for the year ended December 31, 2023 were \$26.1 million related to bridge loan financing for our acquisition of Howden. Acquisition related finance fees for the year ended December 31, 2022 were \$37.0 million related to financing for the acquisition of Howden.

Interest Expense, Net and Financing Costs Amortization

Interest expense, net for the year ended December 31, 2023 and 2022 was \$271.9 million and \$28.8 million, respectively. The increase in interest expense, net, is primarily due to higher borrowings outstanding, specifically our senior secured notes due 2030 and senior unsecured notes due 2031, both issued on December 22, 2022 with interest payable semi-annually on January 1 and July 1 of each year, commencing July 1, 2023, as well as borrowings related to our term loan, drawn on March 17, 2023 for the Howden Acquisition and an additional incremental term loan drawn on June 30, 2023, compared to borrowings outstanding during the same period in 2022. The increase in interest expense, net was also driven by higher average interest rates during the year ended December 31, 2023. The increase in interest expense, net was partially offset by interest income of \$21.5 million earned primarily from deposits of proceeds from the senior secured notes due 2030, senior unsecured notes due 2031, common stock and preferred stock offerings held until the consummation of the Howden Acquisition, interest income on sales-type leases of \$3.3 million, and \$1.6 million interest income from our cross-currency swaps entered into on September 16, 2022. Interest expense, net for the year ended December 31, 2023 and 2022 included \$147.2 million and \$23.4 million, respectively, in interest related to borrowings on our current senior secured revolving credit facility due 2026 and previous

senior secured revolving credit facility and term loan due 2030. Interest expense, net for the year ended December 31, 2023 related to borrowings on our senior secured notes due 2030 and senior unsecured notes due 2031 was \$109.7 million and \$48.6 million, respectively. Interest expense, net for the year ended December 31, 2022 related to borrowings on our senior secured notes due 2030 and senior unsecured notes due 2031 was \$3.0 million and \$1.3 million, respectively. Interest expense, net for the year ended December 31, 2023 included \$2.4 million of 1.0% cash interest expense related to our convertible notes due November 2024. Interest expense, net for the year ended December 31, 2022 included \$4.0 million of 1.0% cash interest expense related to our convertible notes due November 2024.

For 2023 and 2022, financing costs amortization was \$17.2 million and \$2.9 million, respectively. The increase of \$14.3 million was primarily due to the amendment of our senior secured revolving credit facility due 2026, the issuance of senior secured notes due 2030 and senior unsecured notes due 2031 during the fourth quarter of 2022 as well as the issuance of incremental term loans on March 17, 2023 and June 30, 2023, all of which increased deferred debt issuance costs.

Loss on Extinguishment of Debt

As a result of the events of both the October 2, 2023 Credit Agreement amendment and the December 4, 2023 partial prepayment of the term loans due March 2030, we recognized a loss on extinguishment of debt of \$7.8 million for the year ended December 31, 2023. For further information, refer to Note 10, "Debt and Credit Arrangements" of this Annual Report on Form 10-K.

Unrealized Loss (Gain) On Investments In Equity Securities

During 2023, we recognized an unrealized loss on investments in equity securities of \$14.4 million, which was driven by an unrealized loss of \$12.7 million on the mark-to-market adjustment of our investment in McPhy (Euronext Paris: MCPHY – ISIN; FR0011742329) ("McPhy") and a \$1.7 million unrealized loss on the mark-to-market adjustment of our investment in Stabilis Energy, Inc. (NasdaqCM: SLNG) ("Stabilis"). During 2022, we recognized an unrealized gain on investments in equity securities of \$13.1 million, which was driven by an unrealized gain of \$23.3 million upon remeasurement of the Svante investment due to an observable price change in an orderly transaction for similar instruments of the same issuer and a \$1.6 million unrealized gain on the mark-to-market adjustment of our investment in Stabilis, partially offset by a \$11.8 million unrealized loss on the mark-to-market adjustment of our investment in McPhy.

Foreign Currency (Gain) Loss

For the year ended December 31, 2023, foreign currency gain was \$4.1 million, and for the year ended December 31, 2022 foreign currency gain was \$0.8 million. The variance between periods was primarily driven by fluctuations in the U.S. dollar as compared to the euro and British pound.

Income Tax Expense

Income tax expense of \$3.0 million and \$15.9 million for the years ended December 31, 2023 and 2022, respectively, represents taxes on both U.S. and foreign earnings at a combined effective income tax rate of 5.2% and 16.1%, respectively. The effective income tax rate of 5.2% for the year ended December 31, 2023 differed from the U.S. federal statutory rate of 21% due primarily to tax benefits associated with the Howden integration, release of previously booked valuation allowances, research and development credits and share-based compensation offset by the effect of income earned by certain of our foreign entities being taxed at higher rates than the federal statutory rate.

The effective income tax rate of 16.1% for the year ended December 31, 2022 differed from the U.S. federal statutory rate of 21% primarily due to tax benefits associated with share-based compensation and the release of previously booked valuation allowances offset by the effect of income earned by certain of our foreign entities being taxed at higher rates than the federal statutory rate as well as increases in our state taxes due to expansion in new jurisdictions.

Net Income Attributable to Chart Industries, Inc. From Continuing Operations

As a result of the foregoing, net income attributable to Chart Industries, Inc. from continuing operations was \$47.9 million and \$81.6 million for 2023 and 2022, respectively.

Discontinued Operations

The financial results of the Roots business are reflected in our consolidated financial statements as discontinued operations for the years ended December 31, 2023. For further information, refer to Note 3, "Discontinued Operations and Other Businesses Sold" of our consolidated financial statements included under Item 15, "Exhibits and Financial Statement Schedules" of this Annual Report on Form 10-K.

Results of Operations for the Years Ended December 31, 2022 and 2021

Sales in 2022 increased by \$294.7 million from \$1,317.7 million to \$1,612.4 million, or 22.4%. This increase was primarily driven by growth in our Heat Transfer Systems segment on favorable sales in process systems related to big and small-scale LNG liquefaction and floating LNG, as well as gains within our Cryo Tank Solutions segment on favorable sales in storage equipment and mobile equipment, within our Repair, Service & Leasing segment on favorable sales in parts, repairs, and services, aftermarket fans, aftermarket air cooled heat exchangers and in our lifecycle business and within our Specialty Products segment on favorable sales in hydrogen and helium applications, water treatment, space applications, food & beverage applications and carbon capture.

Gross profit in 2022 increased by \$83.2 million from \$324.2 million to \$407.4 million or 25.7% compared to 2021. Gross profit margin of 25.3% in 2022 increased from 24.6% in 2021. The increase in gross profit margin for 2022 compared to 2021 was primarily driven by product mix and pricing and cost reduction actions we took for all segments overall. Restructuring (credits)/costs recorded to cost of sales were \$(1.0) million and \$2.6 million for the years ended December 31, 2022 and 2021, respectively.

Consolidated SG&A expenses increased by \$17.7 million, or 9.0% during 2022, compared to the same period in 2021 primarily driven by higher employee-related costs while consolidated SG&A expenses as a percentage of consolidated sales for 2022 decreased by 1.6% as compared to 2021 primarily due to the effect of cost reduction actions we took in 2022.

Acquisition Related Finance Fees

Acquisition related finance fees for the year ended December 31, 2022 were \$37.0 million related to financing for the acquisition of Howden. There were no acquisition related finance fees for the year ended December 31, 2021.

Interest Expense, Net and Financing Costs Amortization

Interest expense, net for the year ended December 31, 2022 and 2021 was \$28.8 million and \$10.7 million, respectively. The increase in interest expense, net, is primarily due to higher borrowings outstanding and higher average interest rates during 2022 on our senior secured revolving credit facility due October 2026, as compared to borrowings outstanding and average interest rates on our previous senior secured revolving credit facility and term loan due June 2024 during 2021 as well as borrowings related to our senior secured notes due 2030 and senior unsecured notes due 2031, which were issued on December 22, 2022. The increase was partially offset by interest income of \$1.3 million from our cross-currency swaps entered into during 2022. Interest expense, net for the year ended December 31, 2022 included \$4.0 million of 1.5% cash interest expense related to our convertible notes due November 2024. Interest expense, net for the year ended December 31, 2021 included \$2.6 million of 1.0% cash interest expense related to our convertible notes due November 2024. Interest expense, net for the year ended December 31, 2022 and 2021 included \$23.4 million and \$9.0 million, respectively, in interest related to borrowings on our current senior secured revolving credit facility due 2026 and previous senior secured revolving credit facility and term loan due 2024. Interest expense, net for the year ended December 31, 2022 related to borrowings on our senior secured notes due 2030 and senior unsecured notes due 2031 was \$3.0 million and \$1.3 million, respectively.

For 2022 and 2021, financing costs amortization was \$2.9 million and \$8.3 million, respectively. The decrease of \$5.4 million was primarily due to the amendment of our credit facilities during the fourth quarter of 2021 and the related write off of the unamortized deferred debt issuance costs associated with the senior secured revolving credit facility due June 2024 and the term loan due June 2024, respectively. In conjunction with the amendment of our credit facilities in the fourth quarter of 2021, we recorded charges to net income of \$3.8 million of the unamortized deferred debt issuance costs associated with the senior secured revolving credit facility due 2024 and the term loan due June 2024 as well as \$0.3 million in new debt issuance costs resulting in a total one-time charge to net income of \$4.1 million.

Unrealized Gain On Investments In Equity Securities

During 2022, we recognized an unrealized gain on investments in equity securities of \$13.1 million, which was driven by an unrealized gain of \$23.3 million upon remeasurement of the Svante investment due to an observable price change in an orderly transaction for similar instruments of the same issuer and a \$1.6 million unrealized gain on the mark-to-market adjustment of our investment in Stabilis, partially offset by a \$11.8 million unrealized loss on the mark-to-market adjustment of our investment in McPhy. During 2021, we recognized an unrealized gain of \$3.2 million, which was driven by an unrealized gain of \$20.7 million upon remeasurement of the initial HTEC investment due to an observable orderly transaction for similar instruments of the same issuer and a \$2.2 million unrealized gain on the mark-to-mark adjustment of our investment in Stabilis, partially offset by a \$19.7 million unrealized loss on the mark-to-market adjustment of our investment in McPhy.

Realized Gain on Investment In Equity Securities

On December 14, 2021 we completed the acquisition of the remaining 85% of the shares of Earthly Labs. On the acquisition date, we recognized a gain of \$2.6 on the remeasurement of our initial 15% investment, which was recorded as realized gain on investment in equity securities in the consolidated statement of income for the year ended December 31, 2021.

Foreign Currency (Gain) Loss

For the year ended December 31, 2022, foreign currency gain was \$0.8 million, and for the year ended December 31, 2021 foreign currency loss was \$0.9 million. The variance between the periods was primarily driven by fluctuations in the U.S. dollar as compared to the euro and Chinese yuan.

Income Tax Expense

Income tax expense of \$15.9 million and \$13.5 million for the years ended December 31, 2022 and 2021, respectively, represents taxes on both U.S. and foreign earnings at a combined effective income tax rate of 16.1% and 18.2%, respectively. The effective income tax rate of 16.1% for the year ended December 31, 2022 differed from the U.S. federal statutory rate of 21% primarily due to tax benefits associated with share-based compensation and the release of previously booked valuation allowances offset by the effect of income earned by certain of our foreign entities being taxed at higher rates than the federal statutory rate as well as increases in our state taxes due to expansion into new jurisdictions.

The effective income tax rate of 18.2% for the year ended December 31, 2021 differed from the U.S. federal statutory rate of 21% primarily due to tax benefits associated with share-based compensation and the Alabama Trailers bargain purchase gain offset by the effect of income earned by certain of our 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 Attributable to Chart Industries, Inc. From Continuing Operations

As a result of the foregoing, net income attributable to Chart Industries, Inc. from continuing operations was \$81.6 million and \$59.1 million for 2022 and 2021, respectively.

Segment Results for the Years Ended December 31, 2023, 2022 and 2021

Our reportable and operating segments include: Cryo Tank Solutions, Heat Transfer Systems, Specialty Products and Repair, Service & Leasing. 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 4, "Segment and Geographic Information" of our consolidated financial statements included under Item 15, "Exhibits and Financial Statement Schedules" of this Annual Report on Form 10-K. 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 years ended December 31, 2023, 2022 and 2021 (dollar amounts in millions):

Cryo Tank Solutions—Results of Operations for the Years Ended December 31, 2023 and 2022

	Year Ended December 31,					2023 vs.	2022
		2023		2022		Variance (\$)	Variance (%)
Sales	\$	640.8	\$	504.3	\$	136.5	27.1 %
Gross Profit		132.0		98.7		33.3	33.7 %
Gross Profit Margin		20.6 %	, O	19.6 %)		
SG&A Expenses	\$	70.9	\$	41.8	\$	29.1	69.6 %
SG&A Expenses (% of Sales)		11.1 %	, O	8.3 %)		
Operating Income	\$	54.5	\$	54.0	\$	0.5	0.9 %
Operating Margin		8.5 %	, D	10.7 %)		

Cryo Tank Solutions segment sales increased by \$136.5 million during 2023 as compared to 2022 to \$640.8 million. As mentioned in the results of operations above, this increase was mainly driven by favorable sales in general industrials. The increase in the sales was also partially driven by the impact of the Howden Acquisition.

Cryo Tank Solutions segment gross profit increased by \$33.3 million during 2023 as compared to 2022 primarily due to higher volume, while gross profit margin increased 100 basis points compared to 2022 due to improved cost conditions in 2023. The increase in gross profit was also partially driven by the impact of the Howden Acquisition.

Cryo Tank Solutions SG&A expenses increased during 2023 as compared to 2022 while SG&A expenses as a percentage of sales increased by 280 basis points. The increase in SG&A expenses was mainly due to employee and integration related costs driven by the Howden Acquisition.

Cryo Tank Solutions—Results of Operations for the Years Ended December 31, 2022 and 2021

	 Year Ended December 31,					2021
	2022		2021		Variance (\$)	Variance (%)
Sales	\$ 504.3	\$	447.4	\$	56.9	12.7 %
Gross Profit	98.7		93.5		5.2	5.6 %
Gross Profit Margin	19.6 %)	20.9 %			
SG&A Expenses	\$ 41.8	\$	38.1	\$	3.7	9.7 %
SG&A Expenses (% of Sales)	8.3 %)	8.5 %			
Operating Income	\$ 54.0	\$	52.9	\$	1.1	2.1 %
Operating Margin	10.7 %)	11.8 %			

Cryo Tank Solutions segment sales increased by \$56.9 million during 2022 as compared to 2021. This increase was mainly driven by favorable sales in storage equipment in the United States and Europe and mobile equipment in the United States.

Cryo Tank Solutions segment gross profit increased by \$5.2 million during 2022 as compared to 2021, and gross profit margin decreased by 130 basis points. The decrease in gross profit and gross profit margin was mainly driven by higher material prices and higher labor costs due to macroeconomic conditions.

Cryo Tank Solutions segment SG&A expenses increased by \$3.7 million during 2022 as compared to 2021. Furthermore, Cryo Tank Solutions segment SG&A expenses as a percentage of Cryo Tank Solutions segment sales decreased by 20 basis points in 2022 as compared to 2021. The increase in SG&A expenses was mainly due to higher employee-related costs.

Heat Transfer Systems—Results of Operations for the Years Ended December 31, 2023 and 2022

	 Year Ended December 31,				2023 vs.	s. 2022	
	2023		2022		Variance (\$)	Variance (%)	
Sales	\$ 891.2	\$	462.7	\$	428.5	92.6 %	
Gross Profit	246.8		90.6		156.2	172.4 %	
Gross Profit Margin	27.7 %	,)	19.6 %				
SG&A Expenses	\$ 54.1	\$	24.0	\$	30.1	125.4 %	
SG&A Expenses (% of Sales)	6.1 %	,)	5.2 %				
Operating Income (Loss)	\$ 175.8	\$	51.7	\$	124.1	240.0 %	
Operating Margin	19.7 %	,)	11.2 %				

Heat Transfer Systems segment sales increased by \$428.5 million during 2023 as compared to 2022 to a record \$891.2 million. The increase was primarily driven by LNG products that utilized brazed aluminum heat exchangers and air coolers and systems servicing big LNG, floating LNG and small scale LNG applications as well as traditional energy applications.

Heat Transfer Systems segment gross profit increased by \$156.2 million during 2023 as compared to 2022, and gross profit margin increased by 810 basis points. The increase in Heat Transfer Systems segment gross profit was primarily due to volume, and the increase in the related margin was mainly due to overall product and project volume mix.

Heat Transfer Systems segment SG&A expenses increased by \$30.1 million during 2023 as compared to 2022, and SG&A expenses as a percentage of sales increased by 90 basis points. The increase in SG&A expenses was mainly due to higher employee and integration related costs driven by the Howden Acquisition.

Heat Transfer Systems—Results of Operations for the Years Ended December 31, 2022 and 2021

	 Year Ended December 31,				2022 vs. 2021		
	2022		2021		Variance (\$)	Variance (%)	
Sales	\$ 462.7	\$	262.7	\$	200.0	76.1 %	
Gross Profit	90.6		35.6		55.0	154.5 %	
Gross Profit Margin	19.6 %)	13.6 %				
SG&A Expenses	\$ 24.0	\$	28.1	\$	(4.1)	(14.6)%	
SG&A Expenses (% of Sales)	5.2 %)	10.7 %				
Operating Income	\$ 51.7	\$	(12.3)	\$	64.0	(520.3)%	
Operating Margin	11.2 %)	(4.7)%				

Heat Transfer Systems segment sales increased by \$200.0 million during 2022 as compared to 2021. The increase was primarily driven by sales in small-scale, floating LNG and big LNG.

Heat Transfer Systems segment gross profit increased by \$55.0 million during 2022 compared to 2021, and gross profit margin increased by 600 basis points driven by lower volume, partially offset by lower restructuring costs. The increase in Heat Transfer Systems segment gross profit was primarily due to overall product and project volume mix.

Heat Transfer Systems segment SG&A expenses decreased by \$4.1 million during 2022 as compared to 2021 mainly due to lower restructuring costs and lower employee-related costs.

Specialty Products—Results of Operations for the Years Ended December 31, 2023 and 2022

	Year Ended December 31,				2023 vs. 2022		
		2023		2022		Variance (\$)	Variance (%)
Sales	\$	819.9	\$	448.3	\$	371.6	82.9 %
Gross Profit		221.4		138.6		82.8	59.7 %
Gross Profit Margin		27.0 %	ı	30.9 %			
SG&A Expenses		82.6	\$	55.6	\$	27.0	48.6 %
SG&A Expenses (% of Sales)		10.1 %	ı	12.4 %			
Operating Income		119.7	\$	72.9	\$	46.8	64.2 %
Operating Margin		14.6 %		16.3 %			

Specialty Products segment sales increased by \$371.6 million during 2023 as compared to 2022 to a record \$819.9 million. The increase in Specialty Products sales was primarily driven by the inclusion of the acquired Howden business in the current year, including favorable sales in energy recovery, marine, metals, space, water treatment and carbon capture.

Specialty Products segment gross profit increased by \$82.8 million during 2023 as compared to 2022 largely due to the Howden Acquisition and volume, while gross profit margin decreased by 390 basis points largely due to product and project volume mix.

Specialty Products segment SG&A expenses increased by \$27.0 million during 2023 as compared to 2022 primarily driven by inclusion of the Howden business, along with employee and integration related costs driven by the Howden Acquisition.

Specialty Products—Results of Operations for the Years Ended December 31, 2022 and 2021

	 Year Ended December 31,				2022 vs. 2021		
	2022		2021		Variance (\$)	Variance (%)	
Sales	\$ 448.3	\$	432.9	\$	15.4	3.6 %	
Gross Profit	138.6		145.5		(6.9)	(4.7)%	
Gross Profit Margin	30.9 %	,)	33.6 %				
SG&A Expenses	\$ 55.6	\$	43.3	\$	12.3	28.4 %	
SG&A Expenses (% of Sales)	12.4 %	,)	10.0 %				
Operating Income	\$ 72.9	\$	94.1	\$	(21.2)	(22.5)%	
Operating Margin	16.3 %	,)	21.7 %				

Specialty Products segment sales increased by \$15.4 million during 2022 as compared to 2021 to \$448.3 million. Similar to the comments previously mentioned in the results of operations section, the increase in Specialty Products sales was primarily driven by favorable sales in hydrogen and helium applications, water treatment, space applications, food & beverage applications and carbon capture. The sales increase was almost fully offset by a 79.2% decline in HLNG vehicle tank sales driven by higher natural gas prices and our customers' availability of semiconductors due to macroeconomic conditions.

Specialty Products segment gross profit decreased by \$6.9 million during 2022 as compared to 2021, and gross profit margin decreased by 270 basis points largely due to stronger HLNG vehicle tank sales in 2021 as compared to 2022. The decrease in gross profit margin was mainly driven by overall product and project volume mix.

Specialty Products segment SG&A expenses increased by \$12.3 million during 2022 as compared to 2021 primarily driven by ramp up in the business and acquisition additions.

Repair, Service & Leasing—Results of Operations for the Years Ended December 31, 2023 and 2022

	 Year Ended	l Decen	ıber 31,	 2023 vs.	2022
	2023		2022	Variance (\$)	Variance (%)
Sales	\$ 1,029.2	\$	209.6	\$ 819.6	391.0 %
Gross Profit	440.2		79.5	360.7	453.7 %
Gross Profit Margin	42.8 %	, O	37.9 %		
SG&A Expenses	\$ 116.1	\$	15.2	\$ 100.9	663.8 %
SG&A Expenses (% of Sales)	11.3 %	, O	7.3 %		
Operating Income	\$ 203.3	\$	51.0	\$ 152.3	298.6 %
Operating Margin	19.8 %	, O	24.3 %		

Repair, Service & Leasing segment sales increased by \$819.6 million during 2023 as compared to 2022 to a record \$1,029.2 million. The increase in the sales was largely attributed to the Howden Acquisition.

Repair, Service & Leasing segment gross profit increased by \$360.7 million during 2023 as compared to 2022 to a record \$440.2 million, and gross profit margin increased by 490 basis points to 42.8%. The increase in gross profit and the related margin was driven by volumes from the Howden Acquisition and early synergies achieved.

Repair, Service & Leasing segment SG&A expenses increased by \$100.9 million during 2023 as compared to 2022. SG&A expenses as a percentage of sales increased by 400 basis points. The increase in SG&A expenses was largely attributed to inclusion of the Howden Acquisition in the current year and restructuring associated with the acquisition integration.

Repair, Service & Leasing—Results of Operations for the Years Ended December 31, 2022 and 2021

	 Year Ended December 31,				2022 vs. 2021			
	2022		2021		Variance (\$)	Variance (%)		
Sales	\$ 209.6	\$	187.0	\$	22.6	12.1 %		
Gross Profit	79.5		49.6		29.9	60.3 %		
Gross Profit Margin	37.9 %)	26.5 %					
SG&A Expenses	\$ 15.2	\$	17.8	\$	(2.6)	(14.6)%		
SG&A Expenses (% of Sales)	7.3 %)	9.5 %					
Operating Income	\$ 51.0	\$	23.3	\$	27.7	118.9 %		
Operating Margin	24.3 %)	12.5 %					

Repair, Service & Leasing segment sales increased by \$22.6 million during 2022 as compared to 2021. Similar to the comments previously mentioned in the results of operations section, the increase was mainly driven by favorable sales in parts, repairs, and services, aftermarket fans, aftermarket air cooled heat exchangers and in our lifecycle business.

Repair, Service & Leasing segment gross profit increased by \$29.9 million during 2022 as compared to 2021, and gross profit margin increased by 1,140 basis points. The increase in gross profit and the related margin was driven by more high margin, short-lead time replacement equipment sales during 2022 as compared to 2021. Furthermore, during 2021 we incurred unfavorable material costs relative to our leasing business which we did not incur during 2022.

Repair, Service & Leasing segment SG&A expenses decreased by \$2.6 million during 2022 as compared to 2021. SG&A expenses as a percentage of sales decreased by 220 basis points as a result of large aftermarket sales without incremental SG&A.

Corporate

Corporate SG&A expenses increased by \$84.7 million during 2023 as compared to 2022 mainly due to higher professional fees and employee-related costs. Corporate SG&A expenses increased by \$8.4 million during 2022 as compared to 2021 mainly due to higher employee-related costs.

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 December 31, 2023, 2022 and 2021 was \$4,278.8 million, \$2,338.1 million and \$1,190.1 million, respectively.

The tables below represent orders received and backlog by segment for the periods indicated (dollar amounts in millions):

	Year Ended December 31,						
	2023			2022		2021	
Orders							
Cryo Tank Solutions	\$	608.8	\$	508.4	\$	555.4	
Heat Transfer Systems		1,114.2		1,417.6		312.0	
Specialty Products		1,341.6		665.5		648.6	
Repair, Service & Leasing		1,100.8		218.9		180.6	
Intersegment eliminations		(25.2)		(30.5)		(20.5)	
Consolidated	\$	4,140.2	\$	2,779.9	\$	1,676.1	

	As of December 31,					
	2023		2022			2021
Backlog						
Cryo Tank Solutions	\$	361.9	\$	371.0	\$	346.8
Heat Transfer Systems		1,716.5		1,300.1		370.4
Specialty Products		1,631.1		645.9		438.2
Repair, Service & Leasing		587.9		57.0		56.5
Intersegment eliminations		(18.6)		(35.9)		(21.8)
Consolidated	\$	4,278.8	\$	2,338.1	\$	1,190.1

Orders and Backlog for the Year Ended and As of December 31, 2023 Compared to the Year Ended and As of December 31, 2022

Cryo Tank Solutions segment orders for 2023 were \$608.8 million, as compared to \$508.4 million for 2022, an increase of \$100.4 million. This increase was driven by higher orders in general industrials offset by decreases in mobile and storage equipment. Cryo Tank Solutions segment backlog totaled \$361.9 million as of December 31, 2023, compared to \$371.0 million as of December 31, 2022, a decrease of \$9.1 million.

Heat Transfer Systems segment orders for 2023 were \$1,114.2 million compared to \$1,417.6 million for 2022, a decrease of \$303.4 million mainly driven by lower orders for brazed aluminum heat exchangers, air exchangers and across systems. Heat Transfer Systems segment backlog totaled a record \$1,716.5 million as of December 31, 2023 compared to \$1,300.1 million as of December 31, 2022, an increase of \$416.4 million.

Specialty Products segment orders for 2023 were \$1,341.6 million compared to \$665.5 million for 2022, an increase of \$676.1 million. The increase in Specialty Products was mainly driven by strong order intake for hydrogen and helium liquefaction, space, water treatment, carbon capture and other specialty applications. Specialty Products segment backlog totaled a record \$1,631.1 million as of December 31, 2023, compared to \$645.9 million as of December 31, 2022, an increase of \$985.2 million.

Repair, Service & Leasing segment orders for 2023 were \$1,100.8 million compared to \$218.9 million in 2022, an increase of \$881.9 million. The increase was primarily driven by the Howden Acquisition. Repair, Service & Leasing segment backlog totaled \$587.9 million as of December 31, 2023, compared to \$57.0 million as of December 31, 2022, an increase of \$530.9 million.

Orders and Backlog for the Year Ended and As of December 31, 2022 Compared to the Year Ended and As of December 31, 2021

Cryo Tank Solutions segment orders for 2022 were \$508.4 million, as compared to \$555.4 million for 2021, a decrease of \$47.0 million. This decrease was driven by lower order intake for mobile equipment and storage equipment due to timing shifts of customer orders. Cryo Tank Solutions segment backlog totaled \$371.0 million as of December 31, 2022, compared to \$346.8 million as of December 31, 2021, an increase of \$24.2 million.

Heat Transfer Systems segment orders for 2022 were \$1,417.6 million compared to \$312.0 million for 2021, an increase of \$1,105.6 million mainly driven by higher order intake for LNG including big and small-scale LNG, as well as floating LNG. Heat Transfer Systems segment backlog totaled \$1,300.1 million as of December 31, 2022 compared to \$370.4 million as of December 31, 2021, an increase of \$929.7 million.

Specialty Products segment orders for 2022 were \$665.5 million compared to \$648.6 million for 2021, an increase of \$16.9 million. Comparatively, during 2022 we recorded hydrogen and helium orders of \$300.1 million that included four liquefaction orders totaling \$194.4 million whereas during 2021 we recorded hydrogen and helium orders of \$282.1 million that included four liquefaction orders totaling approximately \$150.0 million. The increase in orders was also attributed to an increase in space, water treatment, carbon capture and other specialty applications partially offset by lower order intake for HLNG vehicle tanks driven by higher natural gas prices and our customers' availability of semiconductors due to macroeconomic conditions. Specialty Products segment backlog totaled \$645.9 million as of December 31, 2022, compared to \$438.2 million as of December 31, 2021, an increase of \$207.7 million.

Repair, Service & Leasing segment orders for 2022 were \$218.9 million compared to \$180.6 million for 2021, an increase of \$38.3 million. This increase was primarily driven by higher order intake within lifecycle services, aftermarket fans and our leasing business. Repair, Service & Leasing segment backlog totaled \$57.0 million as of December 31, 2022, compared to \$56.5 million as of December 31, 2021, an increase of \$0.5 million.

Liquidity and Capital Resources

In connection with the funding of the Howden Acquisition, we borrowed incremental term loans in March 2023 and entered into a revised and expanded senior secured revolving credit facility and issued senior secured notes due 2030 and senior unsecured notes due 2031 during the fourth quarter of 2022. A description of these and our other debt instruments and related covenants are described in Note 10, "Debt and Credit Arrangements," of our consolidated financial statements included under Item 15, "Exhibits and Financial Statement Schedules" of this Annual Report on Form 10-K.

Sources and Uses of Cash

Our cash and cash equivalents totaled \$201.1 million, which includes \$12.8 million of restricted cash as of December 31, 2023, a decrease of \$2,404.2 from the balance at December 31, 2022, which included borrowings in connection with the Howden Acquisition. Our foreign subsidiaries held cash of approximately \$170.1 million and \$66.7 million at December 31, 2023 and 2022, respectively, to meet their liquidity needs. No material restrictions exist to accessing cash held by our foreign subsidiaries. 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 senior secured revolving credit facility due October 2026 or other financing alternatives, and cash provided by operations will be sufficient to meet our normal working capital needs, capital expenditures and investments for the foreseeable future.

Years Ended December 31, 2023 and 2022

Cash provided by operating activities during 2023 was \$167.2 million, an increase of \$86.4 million from 2022, primarily due to an increase in cash generated by operations, partially offset by higher interest payments as a result of the debt raised in connection with the Howden Acquisition and the settlement of claims related to the Pacific Fertility Clinic lawsuits in the amount of \$73.0 million as discussed in Item 3. Legal Proceedings.

Cash used in investing activities during 2023 was \$3,990.1 million, as compared to cash used in investing activities of \$101.6 million during 2022. During 2023 we used \$4,322.3 million of cash for the acquisition of Howden, \$135.6 million for capital expenditures, and \$11.6 million for investments, primarily Avina and Hylium Industries. In 2023 we also received proceeds, net of cash divested, of \$474.8 million from the sale of our Roots, Cofimco, American Fan, and Cryo Diffusion businesses. See below for discussion regarding the composition of cash provided by investing activities during 2022.

Cash provided by financing activities during 2023 was \$1,412.5 million compared to cash provided by financing activities of \$2,504.2 million during 2022. In connection with the Howden Acquisition, we borrowed incremental term loans in the aggregate principal amount of \$1,534.8 million and borrowed incremental term loans in the aggregate principal amount of \$250.0 million for general corporate purposes during 2023. On December 4, 2023, we voluntarily prepaid a portion of our term loans due March 2030 in the amount of \$150.0 million. During 2023, we borrowed \$1,895.1 million from revolving credit facilities and raised \$11.7 million in proceeds for the issuance of common stock, primarily to fund the Howden Acquisition and repaid \$1,901.2 million in borrowings on credit facilities. A portion of debt repayments was funded with the proceeds from the previously mentioned divestitures. During 2023 we paid \$136.2 million in debt issuance costs and paid \$27.3 million of dividends on our mandatory convertible preferred stock. We also paid \$12.2 million in dividend distributions to noncontrolling interest owners during 2023. See below for discussion regarding the composition of cash provided by financing activities during 2022.

Years Ended December 31, 2022 and 2021

Cash provided by operating activities during 2022 was \$80.8 million, an increase of \$102.1 million from 2021, primarily due to an increase in operating cash provided by working capital, particularly within accounts payable and inventory.

Cash used in investing activities during 2022 was \$101.6 million, as compared to cash used in investing activities of \$361.2 million during 2021. During 2022, we paid \$74.2 million for capital expenditures. We also used \$25.8 million of cash for the acquisitions of Fronti Fabrications, Inc., CSC Cryogenic Service Center AB, 100% of a joint venture in AdEdge India and a final net working capital adjustment related to our 2021 acquisition of AdEdge. We used \$9.9 million for investments in Hy24, Gold Hydrogen LLC and Avina Clean Hydrogen Inc., partially offset by \$9.4 million cash received from settlements of our cross-currency swaps.

Cash provided by financing activities during 2022 was \$2,504.2 million compared to cash provided by financing activities of \$381.9 million during 2021. During 2022, we borrowed \$2,575.3 million on credit facilities, primarily related to senior secured notes due 2030, senior unsecured notes due 2031 and our senior secured revolving credit facility and repaid \$1,128.2 million in borrowings on credit facilities using proceeds from equity offerings related to the Howden Acquisition to pay down a portion of our senior secured revolving credit facility. Also during 2022, we received \$675.1 million net proceeds from the issuance of common stock and \$388.1 million net proceeds from the issuance of preferred stock, both related to the Howden Acquisition.

Cash Requirements

We do not currently anticipate any unusual cash requirements for working capital needs for the year ending December 31, 2024 relating to our existing business. 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. We expect capital expenditures for 2024 to be in the range of \$115.0 million to \$125.0 million.

Contractual Obligations

Our material cash requirements from known contractual obligations include those related to debt and leases, refer to Note 10, "Debt and Credit Arrangements" and Note 20, "Leases", respectively, within Item 15, "Exhibits and Financial Statement Schedules" of this Annual Report on Form 10-K for payments due by period. We also have contractual coupon interest related to our 1.00% convertible notes due November 2024, 7.500% senior secured notes due 2030 and 9.500% senior unsecured notes due 2031, which, as of December 31, 2023 totals \$160.5 million for the next twelve months and \$917.2 million thereafter. Purchase obligations arising from purchases of inventory and services are entered into with vendors in the normal course of business and are within our expected requirements for resource planning. We occasionally enter into firm purchase commitments to procure raw materials such as stainless steel, carbon steel and aluminum. As of December 31, 2023, firm purchase commitments were not material.

We also have a 44.1 million euros investment commitment for the Clean H2 Infra Fund as mentioned in Note 6, "Investments" within Item 15, "Exhibits and Financial Statement Schedules" of this Annual Report on Form 10-K. Funding is required when the fund manager issues a capital call, which shall not exceed 30% of our capital commitment in any rolling 12-month period. We also have contingent consideration arrangements from prior acquisitions with a potential payout range of \$0.0 million to \$12.5 million. Refer to Note 14, "Business Combinations" within Item 15, "Exhibits and Financial Statement Schedules" of this Annual Report on Form 10-K for further information.

Our commercial commitments as of December 31, 2023, which include standby letters of credit and bank guarantees, represent potential cash requirements resulting from contingent events that require performance by us or our subsidiaries pursuant to funding commitments, and are as follows (dollar amounts in millions):

	Total Expi			iring in 2024	ring in 2025 d beyond
Standby letters of credit	\$	272.1	\$	165.8	\$ 106.3
Bank guarantees		134.3		85.3	49.0
Total commercial commitments	\$	406.4	\$	251.1	\$ 155.3

Contingencies

We are subject to federal, state, local, and foreign environmental laws and regulations concerning, among other matters, waste water effluents, air emissions, and handling and disposal of hazardous materials, such as cleaning fluids. We are involved with environmental compliance, investigation, monitoring, and remediation activities at certain of our owned and formerly owned manufacturing facilities and at one owned facility that is leased to a third party, and, except for these continuing remediation efforts, believe we are currently in substantial compliance with all known environmental regulations. Management believes that any additional liability in excess of amounts accrued, which may result from the resolution of such matters, should not have a material adverse effect on our financial position, liquidity, cash flows or results of operations.

We are occasionally subject to various legal claims related to performance under contracts, product liability, taxes, employment matters, environmental matters, intellectual property, and other matters, several of which claims assert substantial damages, in the ordinary course of our business. Based on our historical experience in litigating these claims, as well as our current assessment of the underlying merits of the claims and applicable insurance, if any, we believe the resolution of these legal claims will not have a material adverse effect on our financial position, liquidity, cash flows or results of operations. Future developments may, however, result in resolution of these legal claims in a way that could have a material adverse effect. See Item 1A. "Risk Factors" and Item 3, "Legal Proceedings" for further information.

Foreign Operations

Our foreign operations accounted for approximately 58.6% of 2023 consolidated sales and 57.4% of total property, plant and equipment at December 31, 2023. Functional currencies used by these operations include the Chinese yuan, the euro, the British pound, the South African rand, the Indian rupee, and the Canadian dollar. We are exposed to foreign currency exchange risk as a result of transactions by these subsidiaries in currencies other than their functional currencies, and from transactions by our domestic operations in currencies other than the U.S. dollar. The majority of these functional currencies and the other currencies in which we record transactions are fairly stable, although we experienced variability in the current year as more fully discussed in Item 7A. The use of these currencies, combined with the use of foreign currency forward purchase and sale contracts, has enabled us to be sheltered from significant gains or losses resulting from foreign currency transactions. This situation could change if these currencies experience significant fluctuations or the volume of forward contracts changes.

Critical Accounting Estimates

Our consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles and are based on the selection and application of significant accounting policies, which require management to make estimates and assumptions about future events that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ materially from those estimates. There were no material changes to estimates or methodologies used to develop those estimates in 2023. Management believes the following are the more critical judgmental areas in the application of its accounting policies that affect its financial position and results of operations.

Goodwill and Indefinite-Lived Intangible Assets: We evaluate goodwill and indefinite-lived intangible assets for impairment on an annual basis, as of October 1 or whenever events or changes in circumstances indicate that an evaluation should be completed. A significant amount of judgment is involved in determining if an indicator of impairment has occurred. Such indicators may include deterioration in general economic conditions, negative developments in equity and credit markets, a decline in stock price and market capitalization, adverse changes in the markets in which we operate, and a trend of negative or declining cash flows over multiple periods. The fair value that could be realized in an actual transaction may differ from that used to evaluate the impairment of goodwill.

Goodwill is analyzed on a reporting unit basis. The reporting units are the same as our operating and reportable segments, which are as follows: Cryo Tank Solutions, Heat Transfer Systems, Specialty Products and Repair, Service & Leasing. To test goodwill for impairment, we first evaluate qualitative factors, such as macroeconomic conditions and our overall financial performance to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying

amount, including goodwill (the "Step 0 Test"). If we determine that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, the first step of the goodwill impairment test is not necessary. Otherwise, we would proceed to the first step of the goodwill impairment test.

Alternatively, we may also bypass the Step 0 Test and proceed directly to the first step of the goodwill impairment test. Under the first step ("Step 1"), we estimate the fair value of our reporting units by considering income and market approaches to develop fair value estimates, which are weighted to arrive at a fair value estimate for each reporting unit. With respect to the income approach, a model has been developed to estimate the fair value of each reporting unit. This fair value model incorporates estimates of future cash flows, estimates of allocations of certain assets and cash flows among reporting units, estimates of future growth rates, and management's judgment regarding the applicable discount rates to use to discount such estimates of cash flows. With respect to the market approach, a guideline company method is employed whereby pricing multiples are derived from companies with similar assets or businesses to estimate fair value of each reporting unit. If the fair value of the reporting unit exceeds the carrying amount of the net assets assigned to that reporting unit, then goodwill is not impaired, and no further testing is required. However, if the fair value of the reporting unit is less than its carrying amount, the impairment charge is based on the excess of a reporting unit's carrying amount over its fair value (i.e., we would measure the charge based on the result from Step 1). The assumptions and judgment used by management to estimate future cash flows, allocation of assets and cash flows among reporting units, estimates of future growth rates and selection of discount rates are subject to change due to the economic environment, including such factors as interest rates, expected market returns and volatility of markets served. Changes to the assumptions and estimates used throughout the steps described above may result in a significantly different estimate of the fair value of the reporting units, which could result in a different assessment of the recoverability of goodwill and result in future impairment charges.

In order to assess the reasonableness of the calculated fair values of our reporting units, we also compare the sum of the reporting units' fair values to our market capitalization and calculate an implied control premium (the excess of the sum of the reporting units' fair values over the market capitalization). We evaluate the control premium by comparing it to control premiums of recent comparable transactions. If the implied control premium is not reasonable in light of this assessment, we reevaluate our fair value estimates of the reporting units by adjusting the discount rates and other assumptions as necessary.

With respect to indefinite-lived intangible assets, we first evaluate relevant events and circumstances to determine whether it is more likely than not that the fair value of an indefinite-lived intangible asset is less than its carrying amount. If, in weighing all relevant events and circumstances in totality, we determine that it is not more likely than not that an indefinitelived intangible asset is impaired, no further action is necessary. Otherwise, we would determine the fair value of indefinitelived intangible assets and perform a quantitative impairment assessment by comparing the indefinite-lived intangible asset's fair value to its carrying amount. We may bypass such a qualitative assessment and proceed directly to the quantitative assessment. We estimate the fair value of our indefinite-lived assets using the income approach. This may include the relief from royalty method or use of a model similar to the one described above related to goodwill which estimates the future cash flows attributed to the indefinite-lived intangible asset and then discounting these cash flows back to a present value. Under the relief from royalty method, fair value is estimated by discounting the royalty savings, as well as any tax benefits related to ownership to a present value. The fair value from either approach is compared to the carrying value and an impairment is recorded if the fair value is determined to be less than the carrying value. Management's estimates regarding future cash flows, selection of discount rates and estimated tax benefits are subject to change due to various economic factors and changes to the assumptions and estimates used throughout the steps described above and may result in a significantly different estimate of the fair value of indefinite-lived intangible assets which could result in a different assessment of the recoverability of these assets and result in future impairment charges.

As of October 1, 2023, 2022 and 2021 ("annual reporting unit assessment dates") we elected to bypass the Step 0 test and based on our Step 1 test, we determined that the fair value of each of our reporting units was greater than its respective carrying value at each annual reporting unit assessment date, and therefore, no further action was necessary.

As of October 1, 2023, we elected to bypass the Step 0 test and based on our Step 1 test, we determined that the fair value of each of our indefinite-lived intangible assets was greater than its respective carrying value, and therefore, no further action was necessary. As of October 1, 2022 and 2021, we also elected to bypass the qualitative assessment for indefinite-lived intangible assets with the exception of Earthly Labs and Fronti Fabrications, Inc trade names for the October 1, 2022 assessments. Based on our qualitative assessment of these trade names, we determined that it is not "more likely than not" that the fair value of each of these trade names is less than its respective carrying amount. Based on our quantitative assessments of all other indefinite-lived intangible assets, we determined that the fair value of each of the indefinite-lived intangible assets was greater than its respective carrying value at both October 1, 2022 and 2021, and therefore, no further action was necessary.

Long-Lived Assets: We monitor our property, plant and equipment, and finite-lived intangible assets for impairment indicators on an ongoing basis. If impairment indicators exist, assets are grouped and tested at the lowest level for which

identifiable cash flows are available, and we perform the required analysis and record impairment charges if applicable. In conducting this analysis, we compare the undiscounted cash flows expected to be generated from the long-lived assets to the related net book values. If the undiscounted cash flows exceed the net book value, the long-lived assets are considered not to be impaired. If the net book value exceeds the undiscounted cash flows, an impairment loss is measured and recognized. An impairment loss is measured as the difference between the net book value and the fair value of the long-lived assets. Fair value is estimated from discounted future net cash flows (for assets held for use) or net realizable value (for assets held for sale). In assessing the recoverability of our long-lived assets, a significant amount of judgment is involved in estimating the future cash flows, discount rates and other factors necessary to determine the fair value of the respective assets. Key assumptions used in these estimates include industry and market conditions, costs to produce and projected revenue growth. If these estimates or the related assumptions change in the future, we may be required to record impairment charges for these assets in the period such determination was made. We amortize intangible assets that have finite lives over their estimated useful lives. We had no long-lived asset impairments in the last three years.

Business Combinations: We account for business combinations in accordance with Accounting Standards Codification ("ASC") 805, "Business Combinations." We recognize and measure identifiable assets acquired and liabilities assumed based on their estimated fair values. The excess of the consideration transferred over the fair value of the net assets acquired, including identifiable intangible assets, is assigned to goodwill. We estimate the fair value of identifiable intangible assets under income approaches where the fair value models incorporate estimates of future cash flows, estimates of allocations of certain assets and cash flows, estimates of future growth rates, and management's judgment regarding the applicable discount rates to use to discount such estimates of cash flows. Assigning estimated fair values to the identifiable assets acquired and liabilities assumed requires the use of significant estimates, judgments, inputs and assumptions. Such assumptions are based in part on historical experience, industry and market conditions and information obtained from management of the acquired companies and are thus inherently uncertain. As additional information becomes available, we may 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.

Investments in Equity Securities Without a Readily Determinable Fair Value: Our investments in equity securities for which there is no readily determinable fair value are measured at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. As part of our assessment for impairment indicators, judgement is involved in considering significant deterioration in the earnings performance, credit rating, asset quality or overall business prospects of the investee as well as significant adverse changes in the external environment in which an investee operates, a significant adverse change in the general market condition of either the geographical area or the industry in which the investee operates or factors that raise significant concerns about the investee's ability to continue as a going concern, such as negative cash flows from operations, working capital deficiencies, or noncompliance with statutory capital requirements or debt covenants. Furthermore, management must use reasonable efforts to identify an observable price change on a timely basis. Despite these efforts, we may not be able to obtain this information. If we determine that an investment is impaired, we shall measure the investment at fair value, which may involve a significant degree of judgement and subjectivity. The carrying amount of our investments in equity securities without a readily determinable fair value was \$80.3 million as of December 31, 2023.

Contingencies: On an ongoing basis, we assess the potential liabilities related to any lawsuits or claims brought against us. While it is typically very difficult to determine the timing and ultimate outcome of such actions, management uses its best judgment to determine if it is probable that we will incur an expense related to the settlement or final adjudication of such matters and whether a reasonable estimation of such probable loss, if any, can be made. In assessing probable losses, we take into consideration estimates of the amount of insurance recoveries, if any, which are recorded in other current assets when recoverability is probable. We accrue a liability when we believe a loss is probable and the amount of loss can be reasonably estimated. Due to the inherent uncertainties related to the eventual outcome of litigation and potential insurance recoveries, it is possible that certain matters may be resolved for amounts materially different from any provisions or disclosures that we have previously made.

Revenue Recognition: Revenue is recognized when (or as) we satisfy performance obligations by transferring a promised good or service, an asset, to a customer. An asset is transferred to a customer when, or as, the customer obtains control over that asset. In most contracts, the transaction price includes both fixed and variable consideration. The variable consideration contained within our contracts with customers includes discounts, rebates, refunds, credits, price concessions, incentives, performance bonuses, penalties and other similar items. When a contract includes variable consideration, we evaluate the estimate of the variable consideration to determine whether the estimate needs to be constrained; therefore, we include the variable consideration in the transaction price only to the extent that it is probable that a significant reversal of the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Variable consideration estimates are updated at each reporting date.

In certain contracts, we are engaged to engineer and build highly-customized products and systems. In these circumstances, we produce an asset with no alternative use and have a right to payment for performance completed to date. For these contracts, revenue is recognized as we satisfy the performance obligations by an allocation of the transaction price to the accounting period computed using input methods such as costs incurred. Selecting the method used to measure progress towards completion for our contracts requires judgment and is based on the nature of the products to be provided. Accounting for contracts using the costs incurred input method requires management judgment relative to assessing risks and their impact on the estimates of revenue and costs. Certain factors can impact these estimates including, but not limited to, the potential for incentives or penalties on performance, schedule delays, labor productivity, the complexity of work performed and the cost and availability of materials. Revisions to estimated cost to complete a project that result from inefficiencies in our performance that were not expected in the pricing of the contract are expensed in the period in which these inefficiencies become known. Contract modifications can change a contract's scope, price, or both. Approved contract modifications are accounted for as either a separate contract or as part of the existing contract depending on the nature of the modification which is subject to management's judgment.

Income Taxes: The Company and its U.S. subsidiaries file a consolidated federal income tax return. Deferred income taxes are provided for temporary differences between financial reporting and the consolidated tax return in accordance with the liability method. A valuation allowance is provided against net deferred tax assets when conditions indicate that it is more likely than not that the benefit related to such assets will not be realized. In the event that we change our determination as to the amount of deferred tax assets that can be realized, the valuation allowance will be adjusted with a corresponding impact to the provision for income taxes in the period in which such determination is made. Management must make assumptions, judgments and estimates to determine our deferred tax assets and liabilities, current provision for income taxes and valuation allowances. In making such assumptions we consider all available evidence including past operating results, estimates of future taxable income and the feasibility of tax planning strategies.

We utilize a two-step approach for the recognition and measurement of uncertain tax positions. The first step is to evaluate the tax position and determine whether it is more likely than not that the position will be sustained upon examination by tax authorities. The second step is to measure the tax benefit as the largest amount that is more likely than not of being realized upon settlement. Our income tax positions are based on research and interpretations of the income tax laws and rulings in each of the jurisdictions in which we do business. Due to the subjectivity of interpretations of laws and rulings in each jurisdiction, the differences and interplay in tax laws between those jurisdictions, as well as the inherent uncertainty in estimating the final resolution of complex tax audit matters, management's estimates of income tax liabilities may differ from actual payments or assessments. Resolution of uncertain tax positions could have a material adverse effect or materially benefit our results of operations in future periods depending on their ultimate resolution.

We use an estimate of our annual effective tax rate at each interim reporting period based on the facts and circumstances available at that time, while the actual effective tax rate is calculated at year-end. In calculating these rates, significant judgment is involved regarding the application of global income tax laws and regulations and when projecting the jurisdictional mix of income. Additionally, interpretation of tax laws, court decisions or other guidance provided by taxing authorities influences our estimate of the effective income tax rates. As a result, our actual effective income tax rates and related income tax liabilities may differ materially from our estimated effective tax rates and related income tax liabilities. Any resulting differences are recorded in the period they become known. An increase or decrease of one percentage point in our effective tax rate would have affected our 2023 net income by \$0.6 million.

Recent Accounting Standards

For disclosures regarding recent accounting standards, refer to Note 2, "Significant Accounting Policies," of our consolidated financial statements included under Item 15, "Exhibits and Financial Statement Schedules" of this Annual Report on Form 10-K.

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 Annual Report includes "forward-looking statements." These forward-looking statements include statements relating to our business, including statements regarding completed acquisitions and investments and related accretion or statements with respect to the use of proceeds or redeployment of capital from recent divestitures, as well statements regarding revenues, cost and commercial synergies and efficiency savings, objectives, future orders, margins, segment sales mix, earnings or performance, liquidity and cash flow, inventory levels, capital expenditures, supply chain challenges, inflationary pressures including materials costs and pricing increases, business trends, clean energy market opportunities including addressable market and projected industry-wide investments, carbon and GHG emission targets, governmental initiatives, including executive orders and other information that is not historical in nature. In some cases, forward-looking

statements may be identified by terminology such as "may," "will", "should," "expects," "anticipates," "believes," "projects," "forecasts," "outlook," "guidance," "target," "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, clean energy and other new market or expansion opportunities, cost and commercial 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 our actual results to differ materially from those matters expressed or implied by forward-looking statements.

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," among others, could affect our future performance and liquidity and value of our securities and could cause our actual results to differ materially from those expressed or implied by forward-looking statements made by us or on our behalf. 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 included in this Annual Report are expressly qualified in their entirety by these cautionary statements.

All forward-looking statements attributable to us or persons acting on our behalf apply only as of the date of this Annual Report and are expressly qualified in their entirety by the cautionary statements included in this Annual Report. 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 7A. 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 various floating rate pricing mechanisms contained in our senior secured revolving credit facility due October 2026 and term loans due March 2030. If interest rates were to increase 100 basis points (1 percent) from the weighted-average interest rate of 6.2% at December 31, 2023, and assuming no changes in the \$102.8 million of borrowings outstanding under the senior secured revolving credit facility due October 2026 at December 31, 2023, our additional annual expense would be approximately \$1.0 million on a pre-tax basis. If interest rates were to increase 100 basis points (1 percent) from the interest rate for our term loan of 8.7% at December 31, 2023, and assuming no changes in the \$1,631.0 million of borrowings outstanding under the term loan at December 31, 2023, our additional annual expense would be approximately \$16.3 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 consolidated statements of income and comprehensive income. Translation exposure is primarily with the euro, the Czech koruna, the Chinese yuan, the South African rand, the British pound and the Indian rupee. During 2023, the U.S. dollar strengthened in relation to the South African rand by 9% and Chinese yuan by 2%, and weakened in relation to the British pound by 5% and the euro by 3%. There was no notable movement between the U.S. dollar and the Indian rupee or Czech koruna. At December 31, 2023, a hypothetical further 10% strengthening of the U.S. dollar would not materially affect our financial statements.

EUR Revolver Borrowings: Additionally, assuming no changes in the euro 88.5 million in EUR Revolver Borrowings outstanding under the senior secured revolving credit facility due October 2026 and an additional 100 basis points (1 percent) strengthening in the U.S. dollar in relation to the euro as of the beginning of 2023, during the year ended December 31, 2023, our additional unrealized foreign currency gain would be approximately \$1.0 million on a pre-tax basis.

Transaction Gains and Losses: Chart's primary transaction exchange rate exposures are with the euro, the Chinese yuan, the Czech koruna, the Indian rupee, the Australian dollar, the British pound, the Canadian dollar and the South African rand. 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 consolidated statements of income and comprehensive income as a component of foreign currency gain.

Derivative Instruments: We enter into foreign currency contracts not designated as hedging instruments to mitigate foreign currency risk for anticipated and firmly committed foreign currency transactions. At December 31, 2023, a hypothetical 10% weakening of the U.S. dollar would not materially affect our outstanding foreign exchange forward contracts. We enter into a combination of cross-currency swaps and foreign exchange collars as a net investment hedge of our investments in certain international subsidiaries that use the euro as their functional currency in order to reduce the volatility caused by changes in exchange rates. As disclosed in Note 10, "Debt and Credit Arrangements," we have an out-of-the-money protective call while writing a put option with a strike price at which the premium received is equal to the premium of the protective call purchased, which involved no initial capital outlay. The call was structured with a strike price higher than our cost basis in such investments, thereby limiting any foreign exchange losses to approximately \$11.4 million on a pre-tax basis. We do not use derivative financial instruments for speculative or trading purposes. The terms of the contracts are generally one to three years.

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") which relate to 4.41 million shares of our common stock and represents the number of shares of our common stock underlying the 2024 Notes. These Note Hedge Transactions are expected to reduce the potential dilution upon any future conversion of the 2024 Notes to the extent that the market price per share of our common stock exceeds the conversion price of \$58.725 per share.

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 10, "Debt and Credit Arrangements," of our consolidated financial statements included under Item 15, "Exhibits and Financial Statement Schedules" of this Annual Report on Form 10-K.

Item 8. Financial Statements and Supplementary Data

Our Financial Statements and the accompanying Notes that are filed as part of this Annual Report are listed under Item 15. "Exhibits and Financial Statement Schedules" and are set forth beginning on page <u>F-1</u> immediately following the signature page of this Form 10-K and are incorporated into this Item 8 by reference.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As of December 31, 2023, an evaluation was performed under the supervision and with the participation of our management including our Chief Executive Officer 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"). The term "disclosure controls" means disclosure controls and procedures that are designed 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. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Based on the evaluation of our disclosure controls and procedures as of December 31, 2023, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective at a reasonable level of assurance.

Management's Report on Internal Control Over Financial Reporting

Management of Chart Industries, Inc. and its subsidiaries (the "Company," "Chart," "we," "us," or "our") is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is a process designed under the supervision of our principal executive and financial officers to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external reporting purposes in accordance with U.S. generally accepted accounting principles.

The Company's internal control over financial reporting includes policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of assets of the Company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and the directors of the Company; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the Company's financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures may deteriorate. Management has assessed the effectiveness of its internal control over financial reporting as of December 31, 2023 based on the framework established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) (the "COSO criteria").

We did not include an evaluation of the internal control over financial reporting of Howden, which was acquired during 2023 and which, constituted \$6,005.0 million and \$4,058.7 million of total and net assets, respectively, as of December 31, 2023, and \$1,537.9 million and \$188.5 million of sales and operating income, respectively, for the year then ended.

Based on our assessment of internal control over financial reporting, management has concluded that, as of December 31, 2023, our internal control over financial reporting was effective.

The effectiveness of our internal control over financial reporting as of December 31, 2023 has been audited by Deloitte & Touche, LLP, an independent registered public accounting firm, and is included in this Annual Report on Form 10-K on page F-4 under the caption "Report of Independent Registered Public Accounting Firm."

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.

Item 9B. Other Information

Not applicable.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

None.

Item 10. Directors, Executive Officers and Corporate Governance

Information required by this item as to the Directors of the Company appearing under the caption "Election of Directors" in our 2024 Proxy Statement is incorporated herein by reference. Information required by Item 405 is set forth in the 2024 Proxy Statement under the heading "Delinquent section 16(a) Reports," which information is incorporated herein by reference. Information required by Items 406 and 407(c)(3), (d)(4) and (d)(5) of Regulation S-K is set forth in the 2024 Proxy Statement under the headings "Information Regarding Meetings and Committees of the Board of Directors," "Code of Ethical Business Conduct and Officer Code of Ethics" and "Stockholder Communications with the Board," which information is incorporated herein by reference.

The Charters of the Audit Committee, Compensation Committee and Nominations and Corporate Governance Committee and the Corporate Governance Guidelines, Officer Code of Ethics and Code of Ethical Business Conduct are available free of charge on our website at www.chartindustries.com and in print to any stockholder who requests a copy. Requests for copies should be directed to Secretary, Chart Industries, Inc., 2200 Airport Industrial Drive, Suite 100, Ball Ground, Georgia 30107. We intend to disclose any amendments to the Code of Ethical Business Conduct or Officer Code of Ethics and any waiver of the Code of Ethical Business Conduct or Officer Code of Ethics granted to any Director or Executive Officer of the Company on our website.

Executive Officers

The name, age and positions of each Executive Officer of the Company as of February 28, 2024 are as follows:

Name	Age	Position
Jillian C. (Jill) Evanko	46	Chief Executive Officer and President (Principal Executive Officer)
Joseph R. (Joe) Brinkman	54	Vice President and Chief Financial Officer (Principal Financial Officer)
Gerald F. (Gerry) Vinci	58	Vice President, Chief Human Resources Officer
Herbert G. (Herb) Hotchkiss	53	Vice President, General Counsel and Secretary
Joseph A. (Joe) Belling	54	Chief Commercial Officer
Brian P. Bostrom	50	Chief Technology Officer

Jillian C. (Jill) Evanko was appointed Chief Executive Officer and President on June 12, 2018 and served as Chief Financial Officer from March 1, 2017 until January 14, 2019 and from August 29, 2019 until March 16, 2021. Ms. Evanko joined Chart on February 13, 2017 as Vice President of Finance. Prior to joining Chart, Ms. Evanko served as the Vice President and Chief Financial Officer of Truck-Lite Co., LLC, a manufacturer of lighting and specialty products for the truck and commercial vehicle industries, since October 2016. Prior to that, she held multiple executive positions at Dover Corporation (NYSE: DOV), a diversified global manufacturer, and its subsidiaries, including the role of Vice President and Chief Financial Officer of Dover Fluids since January 2014. Prior to joining Dover in 2004, Ms. Evanko worked in valuation services at Arthur Andersen, LLP and also held audit and accounting roles for Honeywell and Sony Corporation of America. Ms. Evanko also serves as a director of Parker-Hannifin Corporation (NYSE: PH).

Joseph R. (Joe) Brinkman was appointed our Vice President and Chief Financial Officer on October 1, 2021. Prior to his appointment, Mr. Brinkman was Vice President and General Manager of Industrial Gas Products, the Company's largest business. In his 24 years with the Company Mr. Brinkman has held various roles including Materials Manager, Director of Global Sourcing and most recently Vice President & General Manager of Bulk Gas Products.

Gerald F. (Gerry) Vinci was appointed our Vice President and Chief Human Resources Officer and has served in that capacity since December 5, 2016, when he joined Chart. Mr. Vinci was designated an executive officer of Chart on August 23, 2017. Prior to joining Chart, Mr. Vinci held various executive Human Resources roles at Dover Corporation (NYSE:DOV), a diversified global manufacturer, from February 2013 to November 2016, including Vice President, Human Resources for Dover Engineered Systems and Dover Refrigeration and Food Equipment Segments. From 1997 to 2013, Mr. Vinci served in numerous Human Resources executive roles and as Senior Counsel for Harsco Corporation (NYSE:HSC). Prior to that, Mr. Vinci was an attorney for Sunoco, Inc.(NYSE:SUN).

Herbert G. (Herb) Hotchkiss was appointed Vice President, General Counsel and Secretary on March 3, 2019. Prior to joining Chart, Mr. Hotchkiss spent over 11 years at Truck-Lite Co., LLC, a manufacturer of lighting and specialty products for the truck and commercial vehicle industries, as Vice President and Corporate Counsel. Prior to joining Truck-Lite, Mr. Hotchkiss worked for Blair Corporation as its Vice President and General Counsel. Prior to joining Blair Corporation, Mr.

Hotchkiss was employed as a Cleveland attorney, working as corporate associate at Calfee, Halter & Griswold LLP and Hahn, Loeser & Parks LLP.

Joseph A. (Joe) Belling was appointed Chief Commercial Officer on August 11, 2020. Prior to his appointment, Mr. Belling held various roles at Chart, most recently as President of the Chart Energy and Chemicals (E&C) segment and prior to that as President of E&C Cryogenics and VP/GM of Chart's Brazed Aluminum Heat Exchangers (BAHX) business. Prior to joining Chart, Mr. Belling served in various roles of increasing responsibility at Trane Technologies (NYSE: TT), a multinational corporation specializing in the HVAC industry. Mr. Belling was also employed by ALTEC International, which transitioned into Chart Energy and Chemicals.

Brian P. Bostrom was appointed Chief Technology Officer on January 9, 2023. Mr. Bostrom joined Chart in 1994. During his 28 years with the Company, Mr. Bostrom has held numerous engineering roles, including his most recent role of President of Global Engineering. As Chief Technology Officer, Mr. Bostrom has responsibility for all global engineering activities and advancement and commercialization of global product applications across the Company. He will also continue to be a leader in developing the Company's engineering depth and capabilities. Mr. Bostrom holds an engineering degree from the University of Minnesota, is a member of the Compressed Gas Association and a member of the 2019 inaugural class of Chart Fellows.

Set forth below is a list of the members of our Board of Directors as of February 28, 2024:

Directors

SINGLETON B. MCALLISTER (2)

Chairman of the Board
Of Counsel and Senior Advisor
Husch Blackwell LLP
Law firm

JILLIAN C. EVANKO

President, Chief Executive Officer and Director Chart Industries, Inc.

ANDREW R. CICHOCKI (1)(3)

Retired Chief Operating Officer Airgas, Inc.

Supplier of gases, welding equipment and supplies, and safety products

PAULA M. HARRIS (1) (3)

Senior Vice President of Community Affairs and Foundation Executive Director Houston Astros Major league baseball club

LINDA A. HARTY $^{(2)(3)}$

Retired Finance Executive

Medtronic

Global company specializing in medical technology, services and solutions

PAUL E. MAHONEY (1) (2)

President of Production and Automation Technologies

ChampionX

Global provider of chemistry solutions and highly engineered equipment and technologies for the oil and gas industry

MICHAEL L. MOLININI (1)(3)

Retired Chief Executive Officer and President

Airgas, Inc.

Supplier of gases, welding equipment and supplies, and safety products

DAVID M. SAGEHORN (1)(3)

Retired Executive Vice President and Chief Financial Officer

Oshkosh Corporation

Global producer of specialty trucks, truck bodies, and access equipment used in defense, construction and service markets

SPENCER S. STILES (1) (2)

Group President

Stryker Corporation

Global company specializing in medical technology products and services

ROGER A. STRAUCH (2)

Chairman

The Roda Group

Early-stage venture capital group focused on investment opportunities that address the consequences of climate change and increased demand for low carbon energy

Item 11. Executive Compensation

The information required by Item 402 of Regulation S-K is set forth in the 2024 Proxy Statement under the heading "Executive and Director Compensation," which information is incorporated herein by reference. The information required by Items 407(e)(4) and 407(e)(5) of Regulation S-K is set forth in the 2024 Proxy Statement under the headings "Compensation Committee Interlocks and Insider Participation" and "Compensation Committee Report," respectively, which information is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item is set forth in the 2024 Proxy Statement under the headings "Security Ownership of Certain Beneficial Owners" and "Equity Compensation Plan Information," which information is incorporated herein by reference.

Item 13. Certain Relationships, Related Transactions, and Director Independence

The information required by this item is set forth in the 2024 Proxy Statement under the headings "Related Party Transactions" and "Director Independence," which information is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required by this item is set forth in the 2024 Proxy Statement under the heading "Principal Accounting Fees and Services," which information is incorporated herein by reference.

⁽¹⁾ Compensation Committee

⁽²⁾ Nominations and Corporate Governance Committee

⁽³⁾ Audit Committee

PART IV

Item 15. Exhibits and Financial Statement Schedules

- (a) The following documents are filed as part of this 2023 Annual Report on Form 10-K:
- 1. *Financial Statements*. The following consolidated financial statements of the Company and its subsidiaries and the reports of the Company's independent registered public accounting firm are incorporated by reference in Item 8:

Reports of Independent Registered Public Accounting Firm (PCAOB ID No. 34)

Consolidated Balance Sheets

Consolidated Statements of Income

Consolidated Statements of Comprehensive Income

Consolidated Statements of Cash Flows

Consolidated Statements of Equity

Notes to Consolidated Financial Statements

2. *Financial Statement Schedules*. The following additional information should be read in conjunction with the consolidated financial statements:

Schedule II Valuation and Qualifying Accounts for the Years Ended December 31, 2023, 2022 and 2021.

All other financial statement schedules have been omitted since they are either not required, not applicable, or the information is otherwise included.

3. Exhibits. See the Index to Exhibits at page E-1 of this Annual Report on Form 10-K.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15/(d) 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. By: /s/ Jillian C. Evanko Jillian C. Evanko Chief Executive Officer and President (Principal Executive Officer) Date: February 28, 2024 Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated. By: Chairman of the Board, Director /s/ Singleton B. McAllister Singleton B. McAllister Chief Executive Officer. President and a Director /s/ Jillian C. Evanko (Principal Executive Officer) Jillian C. Evanko Vice President and Chief Financial Officer /s/ Joseph R. Brinkman (Principal Financial Officer) Joseph R. Brinkman Director /s/ Andrew R. Cichocki Andrew R. Cichocki Director /s/ Paula M. Harris Paula M. Harris Director /s/ Linda A. Harty Linda A. Harty Director /s/ Paul E. Mahoney Paul E. Mahoney Director /s/ Michael L. Molinini Michael L. Molinini Director /s/ David M. Sagehorn David M. Sagehorn Director /s/ Spencer S. Stiles **Spencer Stiles** Director /s/ Roger A. Strauch Roger A. Strauch

53

Date: February 28, 2024

INDEX TO FINANCIAL STATEMENTS

Audited Consolidated Financial Statements:

Reports of Independent Registered Public Accounting Firm	F-1
Consolidated Balance Sheets	F-5
Consolidated Statements of Income	F-7
Consolidated Statements of Comprehensive Income	F-9
Consolidated Statements of Cash Flows	F-10
Consolidated Statements of Equity	F-12
Notes to Consolidated Financial Statements	F-14

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Chart Industries, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Chart Industries, Inc. and subsidiaries (the "Company") as of December 31, 2023 and 2022, the related consolidated statements of income, comprehensive income, equity, and cash flows, for each of the three years in the period ended December 31, 2023, and the related notes and the schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control* — *Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 28, 2024, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Revenue—Contracts Recognized Over Time—Refer to Notes 2 and 5 to the financial statements

Critical Audit Matter Description

As of December 31, 2023, net sales were \$3,352.5 million, of which \$2,146.7 million was recognized over time. For contracts that contain language that transfers control to the customer over time, revenue is recognized as the Company satisfies the performance obligations by an allocation of the transaction price to the accounting period computed using input methods such as costs incurred. The input method measures progress toward the satisfaction of the performance obligation by multiplying the transaction price allocated to the performance obligation by the percentage of incurred inputs as of the balance sheet date to the total estimated inputs at completion after giving effect to the most current estimates.

We identified revenue associated with in-process contracts recognized over time as a critical audit matter because of the judgments necessary for management to estimate total inputs used to recognize revenue for these contracts. Management's estimates of total inputs are subjective in nature resulting in a higher degree of audit effort and judgment. Changes in estimated inputs could have a significant impact on the timing of revenue recognition.

Our audit procedures related to estimates of total inputs used to recognize revenue over time for in-process contracts included the following, among others:

- We tested the effectiveness of controls over certain revenue contracts recognized over time, including management's controls over the estimates of total inputs.
- We selected a sample of in-process revenue contracts recognized over time and performed the following:
 - Tested the accuracy and completeness of the inputs incurred to date.
 - Evaluated the estimates of total inputs by:
 - Comparing estimates of total inputs to the original project budget and understanding changes in estimates.
 - Testing the accuracy of the remaining estimated costs by selecting costs, vouching the costs to supplier contracts or other supporting documents, and evaluating whether the estimated costs are appropriate.
 - Evaluating management's ability to achieve the estimates of total inputs by performing corroborating
 inquiries with the Company's project managers, engineers, and other relevant site personnel to
 understand the progress to date and the estimate of total inputs.
 - Comparing management's estimates for the selected contracts to inputs of similar contracts, when applicable.
- We evaluated management's ability to estimate total inputs accurately by comparing actual inputs to management's historical estimates for contracts that have been fulfilled.

Goodwill — Refer to Notes 2 and 9 to the financial statements

Critical Audit Matter Description

The Company's evaluation of goodwill for impairment involves the comparison of the fair value of each reporting unit to its carrying value annually in the fourth quarter or whenever events or changes in circumstances indicate that an evaluation should be completed. The Company determines the fair value of its reporting units using the income and market approaches. The determination of the fair value using the income approach requires management to make significant estimates and assumptions related to forecasts of future cash flows and discount rates. The determination of the fair value using the market approach requires management to make significant assumptions related to pricing multiples derived from similar companies. Changes to the assumptions and estimates may result in a significantly different estimate of the fair value of the reporting units, which could result in a different assessment of the recoverability of goodwill. The goodwill balance was \$2,809.3 million as of October 1, 2023 (the annual impairment testing date), of which \$198.4 million, \$451.3 million, \$577.2 million, and \$1,582.4 million was allocated to the Cryo Tank Solutions, Heat Transfer Systems, Specialty Products, and Repair, Service & Leasing reporting units exceeded their carrying values as of the measurement date and, therefore, no impairment was recognized.

We identified goodwill for Repair, Service & Leasing and Cryo Tank Solutions as a critical audit matter because of the significant estimates and assumptions management makes to estimate the fair value of the reporting unit, the sensitivity of the valuation to changes in the assumptions, specifically related to the discount rate used in the income approach and the selection of pricing multiples for similar companies used in the market approach. This required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists, when performing audit procedures to evaluate the reasonableness of these assumptions.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the selection of pricing multiples and discount rate included the following, among others:

- We tested the effectiveness of controls over the determination of the discount rate and the selection of pricing multiples.
- With the assistance of our fair value specialists, we evaluated the reasonableness of the (1) valuation methodology and (2) valuation assumptions, specifically the discount rate and pricing multiples by:

- Testing the source information underlying the determination of the discount rate and pricing multiples and testing the mathematical accuracy of the calculation.
- Developing a range of independent estimates and comparing those to the discount rate and pricing multiples selected by management.

Business Combinations - Refer to Notes 2 and 14 to the financial statements

Critical Audit Matter Description

The Company completed the acquisition of Howden for \$4,387.4 million on March 17, 2023. The Company accounted for this acquisition under the acquisition method of accounting for business combinations. Accordingly, the purchase price was allocated to the assets acquired and liabilities assumed based on their respective fair values, including a customer relationship intangible of \$1,588.0 million, technology intangibles of \$311.0 million, and trade name intangibles of \$498.0 million. Management estimated the fair value of the customer relationship intangible asset using the multi-period excess earnings method and estimated the fair value of the technology and trade name intangibles using the relief from royalty method. The determination of fair value of these assets involved management making significant estimates and assumptions related to the discount rate and royalty rate.

We identified the initial valuation of the customer relationship intangible, technology intangibles and trade name intangibles for Howden as a critical audit matter. A high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists, was required when performing audit procedures to evaluate the reasonableness of management's selected discount rate used in determining the fair value for the customer relationship intangible, technology intangibles, and trade name intangibles and royalty rate used in determining the fair value for the technology intangibles and trade name intangibles.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the selection of the discount rate for the customer relationship intangible, technology intangibles, and trade name intangibles and royalty rate for the technology intangibles and trade name intangibles included the following, among others:

- We tested the effectiveness of controls over the valuation of the customer relationship intangible, technology intangibles and trade name intangibles, specifically management's controls over the selection of the discount rates and royalty rates.
- With the assistance of our fair value specialists, we evaluated the reasonableness of the (1) valuation methodologies, (2) discount rate, and (3) royalty rate by:
 - Testing the source information underlying the determination of the discount rate and royalty rate and testing the mathematical accuracy of the calculation.
 - Developing a range of independent estimates and comparing those to the discount rates and royalty rates selected by management.

/s/ Deloitte & Touche LLP Atlanta, Georgia February 28, 2024

We have served as the Company's auditor since 2019.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Chart Industries, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Chart Industries, Inc. and subsidiaries (the "Company") as of December 31, 2023, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2023, of the Company and our report dated February 28, 2024, expressed an unqualified opinion on those financial statements.

As described in Management's Report on Internal Control Over Financial Reporting, management excluded from its assessment the internal control over financial reporting at Howden, which was acquired on March 17, 2023 and whose combined financial statements constitute \$6,005.0 million and \$4,058.7 million of total and net assets, respectively, as of December 31, 2023, and \$1,537.9 million and \$188.5 million of sales and operating income, respectively, for the year then ended. Accordingly, our audit did not include the internal control over financial reporting at Howden.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte & Touche LLP Atlanta, Georgia February 28, 2024

CHART INDUSTRIES, INC. AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS

(Dollars in millions, except per share amounts)

	Decem	ber 31,	,
	2023		2022
ASSETS			
Current Assets			
Cash and cash equivalents	\$ 188.3	\$	663.6
Restricted cash	12.8		1,941.7
Accounts receivable, less allowances of \$5.9 and \$4.5, respectively	758.9		278.4
Inventories, net	576.3		357.9
Unbilled contract revenue	481.7		133.7
Prepaid expenses	74.9		37.5
Insurance receivable	_		234.4
Other current assets	121.5		43.7
Total Current Assets	 2,214.4		3,690.9
Property, plant and equipment, net	837.6		430.0
Goodwill	2,906.8		992.0
Identifiable intangible assets, net	2,791.9		535.3
Equity method investments	109.9		93.0
Investments in equity securities	91.2		96.5
Other assets	150.6		64.2
TOTAL ASSETS	\$ 9,102.4	\$	5,901.9
LIABILITIES AND EQUITY			
Current Liabilities			
Accounts payable	811.0		211.1
Customer advances and billings in excess of contract revenue	376.6		170.6
Accrued salaries, wages and benefits	81.5		31.5
Accrued interest	92.5		10.2
Accrued income taxes	60.0		3.5
Current portion of warranty reserve	29.4		4.1
Current portion of long-term debt	258.5		256.9
Operating lease liabilities, current	18.5		5.4
Accrued legal settlement	_		305.6
Other current liabilities	138.2		82.7
Total Current Liabilities	1,866.2		1,081.6
Long-term debt	3,576.4		2,039.8
Long-term deferred tax liabilities	568.2		46.1
Accrued pension liabilities	6.7		0.9
Operating lease liabilities, non-current	50.7		15.6
Other long-term liabilities	95.2		33.6
Total Liabilities	6,163.4		3,217.6

CHART INDUSTRIES, INC. AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS

(Dollars in millions, except per share amounts)

	Decem	ber 31,
	2023	2022
Equity		
Preferred stock, par value \$0.01 per share, \$1,000 aggregate liquidation preference — 10,000,000 shares authorized, 402,500 shares issued and outstanding at December 31, 2023 and 2022, respectively	_	_
Common stock, par value \$0.01 per share — 150,000,000 shares authorized, 42,754,241 and 42,563,032 shares issued and outstanding at December 31, 2023 and 2022, respectively	0.4	0.4
Additional paid-in capital	1,872.5	1,850.2
Treasury stock; 760,782 shares at both December 31, 2023 and 2022	(19.3)	(19.3)
Retained earnings	922.1	902.2
Accumulated other comprehensive income (loss)	10.8	(58.0)
Total Chart Industries, Inc. Shareholders' Equity	2,786.5	2,675.5
Noncontrolling interests	152.5	8.8
Total Equity	2,939.0	2,684.3
Total Liabilities and Equity	\$ 9,102.4	\$ 5,901.9

The accompanying notes are an integral part of these consolidated financial statements.

CHART INDUSTRIES, INC. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF INCOME

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

	Year Ended December					31,			
		2023		2022		2021			
Sales	\$	3,352.5	\$	1,612.4	\$	1,317.7			
Cost of sales		2,312.1		1,205.0		993.5			
Gross profit		1,040.4		407.4		324.2			
Selling, general and administrative expenses		486.3		214.5		196.8			
Amortization expense		163.4		41.4		38.9			
Operating expenses		649.7		255.9		235.7			
Operating income		390.7		151.5		88.5			
Acquisition related finance fees		26.1		37.0		_			
Interest expense, net		271.9		28.8		10.7			
Financing costs amortization		17.2		2.9		8.3			
Loss on extinguishment of debt		7.8		_		_			
Unrealized loss (gain) on investment in equity securities		14.4		(13.1)		(3.2)			
Realized gain on equity method investments		_		(0.3)		_			
Realized gain on investment in equity securities		_		_		(2.6)			
Foreign currency (gain) loss		(4.1)		(0.8)		0.9			
Other (income) expense, net		(0.6)		(1.9)		0.3			
Income from continuing operations before income taxes and equity in earnings of unconsolidated affiliates, net		58.0		98.9		74.1			
Income tax expense (benefit):									
Current		82.3		17.6		21.4			
Deferred		(79.3)		(1.7)		(7.9)			
Income tax expense, net		3.0		15.9		13.5			
Income from continuing operations before equity in earnings of unconsolidated affiliates, net		55.0		83.0		60.6			
Equity in earnings (loss) of unconsolidated affiliates, net		2.5		(0.4)		0.3			
Net income from continuing operations		57.5		82.6		60.9			
Loss from discontinued operations, net of tax		(0.6)		(57.6)		_			
Net income		56.9		25.0		60.9			
Less: Income attributable to noncontrolling interests of continuing operations, net of taxes		9.6		1.0		1.8			
Net income attributable to Chart Industries	\$	47.3	\$	24.0	\$	59.1			

CHART INDUSTRIES, INC. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF INCOME

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

	Year Ended December 31,					
		2023		2022		2021
Amounts attributable to Chart common stockholders						
Income from continuing operations	\$	47.9	\$	81.6	\$	59.1
Less: Mandatory convertible preferred stock dividend requirement		27.3		1.4		_
Income from continuing operations attributable to Chart		20.6		80.2		59.1
Loss from discontinued operations, net of tax		(0.6)		(57.6)		_
Net income attributable to Chart common stockholders	\$	20.0	\$	22.6	\$	59.1
Basic earnings per common share attributable to Chart Industries, Inc	•					
Income from continuing operations	\$	0.49	\$	2.21	\$	1.66
Loss from discontinued operations		(0.01)		(1.59)		
Net income attributable to Chart Industries, Inc.	\$	0.48	\$	0.62	\$	1.66
Diluted earnings per common share attributable to Chart Industries, Inc.						
Income from continuing operations	\$	0.44	\$	1.92	\$	1.44
Loss from discontinued operations		(0.01)		(1.38)		
Net income attributable to Chart Industries, Inc.	\$	0.43	\$	0.54	\$	1.44
Weighted-average number of common shares outstanding:						
Basic		41.97		36.25		35.61
Diluted		46.82		41.80		41.11

The accompanying notes are an integral part of these consolidated financial statements.

CHART INDUSTRIES, INC. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (Dollars in millions)

	Year Ended December 31,					
		2023		2022		2021
Net income	\$	56.9	\$	25.0	\$	60.9
Other comprehensive income (loss):						
Foreign currency translation adjustments		63.7		(35.3)		(29.0)
Defined benefit pension plan:						
Actuarial gain (loss) on remeasurement		5.8		(1.7)		5.9
Amortization of net loss		0.9		0.5		1.0
Defined benefit pension plan		6.7		(1.2)		6.9
Other comprehensive income (loss), before tax		70.4		(36.5)		(22.1)
Income tax (expense) benefit related to defined benefit pension plan		(1.6)		0.2		(2.0)
Other comprehensive income (loss), net of taxes		68.8		(36.3)		(24.1)
Comprehensive income (loss)		125.7		(11.3)		36.8
Less: Comprehensive income attributable to noncontrolling interests, net of taxes		(9.6)		(1.0)		(1.8)
Comprehensive income (loss) attributable to Chart Industries, Inc.	\$	116.1	\$	(12.3)	\$	35.0

The accompanying notes are an integral part of these consolidated financial statements.

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

	Ye	ear Ended Decemb	er 31,
	2023	2022	2021
OPERATING ACTIVITIES			
Net income	\$ 56.9	\$ 25.0	\$ 60.9
Less: Loss from discontinued operations, net of tax	(0.6	(57.6)	
Income from continuing operations	57.5	82.6	60.9
Adjustments to reconcile net income to net cash provided by operating activities:			
Bridge loan facility fees	26.1		_
Depreciation and amortization	231.1	81.9	80.6
Employee share-based compensation expense	12.6	10.6	11.2
Financing costs amortization	17.2	2.9	8.3
Realized gain on equity method investment	_	- (0.3)	_
Unrealized foreign currency transaction gain	(3.8	(4.1)	(1.1)
Unrealized loss (gain) on investments in equity securities	14.4	(13.1)	(3.2)
Realized gain on investments in equity securities	_		(2.6)
Equity in (earnings) loss of unconsolidated affiliates	(2.7	0.5	(0.3)
Deferred income tax benefit	(79.3	(1.7)	(7.9)
Other non-cash operating activities	(4.1	11.3	(4.8)
Changes in assets and liabilities, net of acquisitions:			
Accounts receivable	(76.5	(45.3)	(31.2)
Inventories	20.8	(48.7)	(78.1)
Unbilled contract revenues and other assets	(157.0	(84.9)	(71.2)
Accounts payable and other liabilities (1)	236.7	61.2	(10.4)
Customer advances and billings in excess of contract revenue	(58.2	2) 27.9	28.5
Net Cash Provided By (Used In) Continuing Operating Activities	234.8	80.8	(21.3)
Net Cash Used In Discontinued Operating Activities	(67.6	<u> </u>	_
Net Cash Provided By (Used In) Operating Activities	167.2	80.8	(21.3)
INVESTING ACTIVITIES			
Acquisition of business, net of cash acquired	(4,322.3	(25.8)	(205.1)
Proceeds from sale of businesses, net of cash divested	474.8	_	_
Capital expenditures	(135.6	(74.2)	(52.7)
Investments	(11.6	(9.9)	(103.9)
Cash received from settlement of cross-currency swap agreement	_	9.4	_
Proceeds from sale of assets	8.6	<u> </u>	_
Government grants and other	(1.4	(1.1)	0.5
Net Cash Used In Continuing Investing Activities	(3,987.5	(101.6)	(361.2)
Net Cash Used In Discontinued Investing Activities	(2.6	<u> </u>	_
Net Cash Used In Investing Activities	(3,990.1	(101.6)	(361.2)

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

	Year	Ended December	31,
	2023	2022	2021
FINANCING ACTIVITIES			
Borrowings on senior secured and senior unsecured notes		1,940.0	_
Borrowings on credit facilities	1,895.1	635.3	1,361.1
Repayments on credit facilities	(1,901.2)	(1,128.2)	(873.6)
Borrowings on term loan	1,747.3	_	_
Repayments on term loan	(158.3)		(103.1)
Payments for debt issuance costs	(136.2)	(4.7)	(3.0)
Payment of contingent consideration	(4.4)		_
Proceeds from issuance of common stock, net	11.7	675.5	
Proceeds from issuance of preferred stock, net	_	388.4	_
Payments for equity issuance costs		(0.7)	
Proceeds from exercise of stock options	1.0	2.2	6.9
Common stock repurchases from share-based compensation plans	(3.0)	(3.6)	(6.4)
Dividend distribution to noncontrolling interests	(12.2)		_
Dividends paid on mandatory convertible preferred stock	(27.3)		_
Net Cash Provided By Financing Activities	1,412.5	2,504.2	381.9
Effect of exchange rate changes on cash and cash equivalents	6.2	(0.5)	(3.1)
Net decrease in cash, cash equivalents, restricted cash, and restricted cash equivalents	(2,404.2)	2,482.9	(3.7)
Cash, cash equivalents, restricted cash, and restricted cash equivalents at beginning of period	2,605.3	122.4	126.1
CASH, CASH EQUIVALENTS, RESTRICTED CASH, AND RESTRICTED CASH EQUIVALENTS AT END OF PERIOD $^{(2)}$	\$ 201.1	\$ 2,605.3	\$ 122.4

⁽¹⁾ Includes \$37.0 of acquisition related financing fees for the year ended December 31, 2022.

The accompanying notes are an integral part of these consolidated financial statements.

Includes restricted cash and restricted cash equivalents of \$12.8, \$1,941.7 and \$0.2 classified within restricted cash on our consolidated balance sheets as of December 31, 2023, 2022 and 2021, respectively. For further information regarding restricted cash and restricted cash equivalents balances, refer to Note 10, "Debt and Credit Arrangements."

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

	Common Stock	n Stock	Preferred Stock	d Stock						
	Shares Outstanding	Amount	Shares Outstanding	Amount	Additional Paid-in Capital	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interests	Total Shareholders' Equity
Balance at December 31, 2020	36.19	\$ 0.4		S -	\$ 780.8	(19.3)	\$ 808.4	\$ 2.4	\$ 6.6	\$ 1,579.3
Net income					1		59.1		1.8	6.09
Cumulative effect of accounting change (1)	l	l	1	I	(36.9)	I	10.7	I	I	(26.2)
Other comprehensive loss								(24.1)		(24.1)
Share-based compensation expense	I	I	I	I	11.2	I	I	I	I	11.2
Common stock issued from share-based compensation plans	0.26	1		1	6.9	I				6.9
Common stock repurchases from share-based compensation plans	(0.04)	l	1	I	(6.4)	I	1	I	I	(6.4)
Acquisition of Earthly Labs Inc.	0.14				23.4					23.4
Other					1				0.2	0.2
Balance at December 31, 2021	36.55	0.4			779.0	(19.3)	878.2	(21.7)	8.6	1,625.2
Net income							24.0		1.0	25.0
Other comprehensive loss							1	(36.3)		(36.3)
Common stock issuances, net equity of issuance costs	5.92				675.1					675.1
Preferred stock issuance, net of equity issuance costs			0.4		388.1					388.1
Share-based compensation expense					10.6					10.6
Common stock issued from share-based compensation plans	0.11		1		2.2	I				2.2
Common stock repurchases from share-based compensation plans	(0.02)			1	(3.6)	l				(3.6)
Acquisition of Earthly Labs Inc.					(1.2)					(1.2)
Other									(0.8)	(0.8)
Balance at December 31, 2022	42.56	0.4	0.4		1,850.2	(19.3)	902.2	(58.0)	8.8	2,684.3
Net income							47.3		9.6	56.9
Other comprehensive income	I	I	I	I	I	I	I	8.89	I	8.89
Common stock issuance, net of equity issuance costs	0.10	1		1	11.7	l				11.7
Share-based compensation expense					12.6	l				12.6
Common stock issued from share- based compensation plans	0.11			1	1.0	l				1.0
Common stock repurchases from share-based compensation plans	(0.02)				(3.0)					(3.0)
Preferred stock dividends	1	1	I	1	1	I	(27.3)	1	1	(27.3)

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

	Common Stock	n Stock	Preferred Stock	ed Stock						
	Shares Outstanding	Shares Shares Outstanding Amount Outstanding	Shares Outstanding	Amount	Additional Paid-in Capital	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Noncontrollir Interests	Total ng Shareholders' Equity
Purchase of noncontrolling interest					1			1	146.3	146.3
Dividend distribution to noncontrolling interest	I	I	I	I	I	I	I	I	(12.2)	(12.2)
Other							(0.1)			(0.1)
Balance at December 31, 2023	42.75	\$ 0.4	0.4	-	\$ 1,872.5	\$ (19.3)	\$ 922.1	\$ 10.8	\$ 152.5	\$ 2,939.0

Cumulative effect of change in accounting principle refers to the impact of the adoption of Accounting Standards Update 2020-06, "Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entities Own Equity (Subtopic 815-40)" in relation to our convertible notes due November 2024. Ξ

The accompanying notes are an integral part of these consolidated financial statements.

CHART INDUSTRIES, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

NOTE 1 — Nature of Operations and Principles of Consolidation

Nature of Operations: We are a leading independent global leader in the design, engineering, and manufacturing of process technologies and equipment for gas and liquid molecule handling for the Nexus of Clean™ − clean power, clean water, clean food, and clean industrials, regardless of molecule. Our unique product portfolio across both stationary and rotating equipment is used in every phase of the liquid gas supply chain, including upfront engineering, service and repair. Being at the forefront of the clean energy transition, Chart is a leading provider of technology, equipment and services related to liquefied natural gas, hydrogen, biogas, carbon capture and water treatment, among other applications. We are committed to excellence in environmental, social and corporate governance (ESG) issues both for our company as well as our customers. With over 64 global manufacturing locations and over 50 service centers from the United States to Asia, India and Europe, we maintain accountability and transparency to our team members, suppliers, customers and communities.

On March 17, 2023, we completed the acquisition of Howden ("Howden"), a leading global provider of mission critical air and gas handling products and services, from affiliates of KPS Capital Partners, LP. Results of operations include results of Howden from the date of acquisition and exclude RootsTM business financial results for our entire ownership period of March 17, 2023 through the divestiture date, August 18, 2023. The results of RootsTM are presented as discontinued operations in the consolidated statements of income and comprehensive income and have been excluded from both continuing operations and segment results for the year ended December 31, 2023. Furthermore, in 2023 we closed the sale of our American Fan, Cryo Diffusion and Cofimco fans businesses. See Note 3, "Discontinued Operations and Other Businesses Sold" for further information regarding these divestitures and Note 14, "Business Combinations", for further information regarding the acquisition of Howden (the "Howden Acquisition").

Principles of Consolidation: The consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP") and include the accounts of Chart Industries, Inc. and its subsidiaries. Intercompany accounts and transactions are eliminated in consolidation.

Reclassifications: Certain amounts have been reclassified within the balance sheet as of December 31, 2022 and the consolidated statement of cash flows for year ended December 31, 2022 to conform with the current period presentation.

NOTE 2 — Significant Accounting Policies

Use of Estimates: The preparation of consolidated financial statements in conformity with GAAP 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 consolidated 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 based on a number of factors including the current macroeconomic conditions such as inflation and supply chain disruptions, as well as risks set forth under Item 1A, "Risk Factors" of this Annual Report on Form 10-K.

Cash, Cash Equivalents, Restricted Cash, and Restricted Cash Equivalents: We consider all investments with an initial maturity of three months or less when purchased to be cash equivalents. Restricted cash and restricted cash equivalents are included within restricted cash as of December 31, 2023 and 2022 in the accompanying consolidated balance sheets. For further information regarding restricted cash and restricted cash equivalents balances, refer to Note 10, "Debt and Credit Arrangements."

Accounts Receivable, Net of Allowances: Accounts receivable includes amounts billed and currently due from customers. The amounts due are stated at their net estimated realizable value. We maintain an allowance for credit losses to provide for the estimated amount of receivables that will not be collected. The allowance is based upon an assessment of customer creditworthiness, historical payment experience, the age of outstanding receivables and collateral to the extent applicable. In addition, we estimate expected credit losses based on historical loss information then adjust the estimates based on current, reasonable and supportable forecast economic conditions. Past-due trade receivable balances are written off when our internal collection efforts have been unsuccessful. As a practical expedient, we do not adjust the promised amount of consideration for the effects of a significant financing component when we expect, at contract inception, that the period between our transfer of a promised product or service to a customer and when the customer pays for that product or service will be one year or less. We do not typically include extended payment terms in our contracts with customers.

CHART INDUSTRIES, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (Dollars and shares in millions, except per share amounts)

Inventories: Inventories are stated at the lower of cost or net realizable value with cost being determined by the first-in, first-out ("FIFO") method. We determine inventory valuation reserves based on a combination of factors. In circumstances where we are aware of a specific problem in the valuation of a certain item, a specific reserve is recorded to reduce the item to its net realizable value. We also recognize reserves based on the actual usage in recent history and projected usage in the near-term.

Unbilled Contract Revenue: Unbilled contract revenue represents contract assets resulting from revenue recognized over time in excess of the amount billed to the customer and the amount billed to the customer is not just subject to the passage of time. Billing requirements vary by contract but are generally structured around the completion of certain milestones. These contract assets are generally classified as current.

Property, Plant and Equipment: Capital expenditures for property, plant and equipment are recorded at cost. Expenditures for maintenance and repairs are charged to expense as incurred, whereas major improvements that extend the useful life are capitalized. The cost of applicable assets is depreciated over their estimated useful lives. Depreciation is computed using the straight-line method for financial reporting purposes and accelerated methods for income tax purposes.

Lessee Accounting: 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 for operating leases. Operating leases are recognized as right-of-use ("ROU") assets and are included within property, plant and equipment, net, and lease liabilities are included in operating lease liabilities, current and operating lease liabilities, non-current in our consolidated balance sheets. Finance leases are recognized as ROU assets and are included within other assets. They are then amortized over the lesser of the lease term or useful economic life of the underlying asset. Operating lease liabilities are included as separate line items within the consolidated balance sheets. Finance lease liabilities are included within other current liabilities and other liabilities. 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. Lease ROU assets and liabilities are recognized on the lease 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 lease commencement date in determining the present value of lease payments.

Lessor Accounting: Similar to lessee accounting, at lease inception we determine if an arrangement is a lease. The net investment of our lease receivables is measured at the commencement date as the present value of the lease payments not yet received. Operating leases are reported at cost as equipment leased to others within property, plant and equipment, net in our consolidated balance sheets and depreciated based on their useful lives on a straight-line basis. Sales from sales-type and operating leases are presented net of sales tax and other related taxes. Interest income is recognized over the lease term using the effective interest method and is classified as interest expense, net in our consolidated statements of income. Lease payments from operating leases are recorded as income on a straight-line basis over the lease term.

Long-lived Assets: We monitor our property, plant, equipment, and finite-lived intangible assets for impairment indicators on an ongoing basis. Assets are grouped and tested at the lowest level for which identifiable cash flows are available. If impairment indicators exist, we perform the required analysis and record impairment charges, if applicable. In conducting our analysis, we compare the undiscounted cash flows expected to be generated from the long-lived assets to the related net book values. If the undiscounted cash flows exceed the net book value, the long-lived assets are considered not to be impaired. If the net book value exceeds the undiscounted cash flows, an impairment loss is measured and recognized. An impairment loss is measured as the difference between the net book value and the fair value of the long-lived assets. Fair value is estimated from discounted future net cash flows (for assets held and used) or net realizable value (for assets held for sale). Changes in economic or operating conditions impacting these estimates and assumptions could result in the impairment of long-lived assets. We amortize intangible assets that have finite lives over their estimated useful lives.

Goodwill and Indefinite-Lived Intangible Assets: Goodwill is recognized as the excess cost of an acquired entity over the net amount assigned to assets acquired and liabilities assumed. We do not amortize goodwill or indefinite-lived intangible assets, but review them for impairment annually in the fourth quarter or whenever events or changes in circumstances indicate that an evaluation should be completed.

Goodwill is analyzed on a reporting unit basis. The reporting units are the same as our operating and reportable segments, which are as follows: Cryo Tank Solutions, Heat Transfer Systems, Specialty Products and Repair, Service & Leasing. We first evaluate qualitative factors, such as macroeconomic conditions and our overall financial performance to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. We then evaluate

CHART INDUSTRIES, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (Dollars and shares in millions, except per share amounts)

how significant each of the identified factors could be to the fair value or carrying amount of a reporting unit and weigh these factors in totality in forming a conclusion of whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount (the "Step 0 Test"). If we determine that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, the first step of the goodwill impairment test is not necessary. Otherwise, we would proceed to the first step of the goodwill impairment test.

Alternatively, we may also bypass the Step 0 Test and proceed directly to the first step of the goodwill impairment test. Under the first step ("Step 1"), we estimate the fair value of the reporting units by considering income and market approaches to develop fair value estimates, which are weighted to arrive at a fair value estimate for each reporting unit. With respect to the income approach, a model has been developed to estimate the fair value of each reporting unit. This fair value model incorporates estimates of future cash flows, estimates of allocations of certain assets and cash flows among reporting units, estimates of future growth rates and management's judgment regarding the applicable discount rates to use to discount such estimates of cash flows. With respect to the market approach, a guideline company method is employed whereby pricing multiples are derived from companies with similar assets or businesses to estimate fair value of each reporting unit. If the fair value of the reporting unit exceeds the carrying amount of the net assets assigned to that reporting unit, then goodwill is not impaired and no further testing is required. However, if the fair value of the reporting unit is less than its carrying amount, the impairment charge is based on the excess of a reporting unit's carrying amount over its fair value (i.e., we would measure the charge based on the result from Step 1).

In order to assess the reasonableness of the calculated fair values of the reporting units, we also compare the sum of the reporting units' fair values to the market capitalization and calculate an implied control premium (the excess of the sum of the reporting units' fair values over the market capitalization). We evaluate the control premium by comparing it to control premiums of recent comparable transactions. If the implied control premium is not reasonable in light of this assessment, we reevaluate the fair value estimates of the reporting units by adjusting the discount rates and other assumptions as necessary.

Changes to the assumptions and estimates used throughout the steps described above may result in a significantly different estimate of the fair value of the reporting units, which could result in a different assessment of the recoverability of goodwill and result in future impairment charges.

With respect to indefinite-lived intangible assets, we first evaluate relevant events and circumstances to determine whether it is more likely than not that the fair value of an indefinite-lived intangible asset is less than its carrying amount. If, in weighing all relevant events and circumstances in totality, we determine that it is more likely than not that an indefinite-lived intangible asset is not impaired, no further action is necessary. Otherwise, we would determine the fair value of indefinite-lived intangible assets and perform a quantitative impairment assessment by comparing the indefinite-lived intangible asset's fair value to its carrying amount. We may bypass such a qualitative assessment and proceed directly to the quantitative assessment. We estimate the fair value of the indefinite-lived assets using the income approach. This may include the relief from royalty method or use of a model similar to the one described above related to goodwill which estimates the future cash flows attributed to the indefinite-lived intangible asset and then discounting these cash flows back to a present value. Under the relief from royalty method, fair value is estimated by discounting the royalty savings, as well as any tax benefits related to ownership to a present value. The fair value from either approach is compared to the carrying value and an impairment is recorded if the fair value is determined to be less than the carrying value.

Equity Method Investments: Investments, including certain of our joint ventures, where Chart has the ability to exercise significant influence over, but does not possess control, are accounted for using the equity method of accounting. Judgment regarding the level of influence over each investment includes considering key factors such as our ownership interest, our representation on the investee's board of directors and participation in policy-making decisions. We recognize the equity method investee's proportionate share of the earnings and losses and classify as equity in earnings of unconsolidated affiliates, net in our consolidated statements of income and comprehensive income. We evaluate our equity method investments for impairment whenever events or changes in circumstances indicate that the carrying amounts of such investments may not be recoverable. If a decline in the value of an equity method investment is determined to be other than temporary, an impairment loss is recognized in earnings for the amount by which the carrying amount of the investment exceeds its estimated fair value.

Investments in Equity Securities: We measure certain of our investments in equity securities where we have no significant influence and generally less than 20% ownership interest at fair value on a recurring basis according to the fair value hierarchy as defined below. We reassess measurement options for these investments on a quarterly basis. Mark-to-market fair value adjustments in these investments in equity securities are classified as unrealized loss (gain) on investments in equity securities

${\it CHART\ INDUSTRIES, INC.\ AND\ SUBSIDIARIES } \\ {\it NOTES\ TO\ CONSOLIDATED\ FINANCIAL\ STATEMENTS\ -- (Continued) }$

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

in our consolidated statements of income and comprehensive income. Investments in equity securities for which there is no readily determinable fair value are measured at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer.

Customer Advances and Billings in Excess of Contract Revenue: Our contract liabilities consist of advance customer payments, billings in excess of revenue recognized and deferred revenue. Our contract assets and liabilities are reported in a net position on a contract-by-contract basis at the end of each reporting period. We classify advance customer payments and billings in excess of revenue recognized as current. We classify deferred revenue as current or non-current based on the timing of when we expect to recognize revenue. The current portion of deferred revenue is included in customer advances and billings in excess of contract revenue in our consolidated balance sheets. Long-term deferred revenue is included in other long-term liabilities in our consolidated balance sheets.

Convertible Debt: The \$258.7 principal amount of the convertible notes due November 2024 is classified as a current liability in the consolidated balance sheet at December 31, 2023, and was also classified as a current liability in the consolidated balance sheet at December 31, 2022, since the holders of the convertible notes due November 2024 could have potentially converted their notes at their option during the three month period subsequent to December 31, 2022. We amortize debt issuance costs over the term of the 2024 Notes using the effective interest method.

We use the if-converted method to compute diluted earnings per share for our convertible notes due November 2024 such that the denominator includes incremental shares that would be issued upon conversion. Refer to Note 10, "Debt and Credit Arrangements" for further discussion of our convertible notes.

Preferred Stock and Dividends: Preferred stock is evaluated to determine balance sheet classification, and all conversion and redemption features are evaluated for bifurcation treatment. Proceeds received net of issuance costs are recognized on the settlement date. Cash dividends become a liability once declared. Income available to common stockholders is computed by deducting from net income the dividends accumulated and earned during the period on cumulative preferred stock.

Financial Instruments: The fair values of cash equivalents, accounts receivable, accounts payable and short-term bank debt approximate their carrying amount because of the short maturity of these instruments.

To minimize credit risk from trade receivables, we review the financial condition of potential customers in relation to established credit requirements before sales credit is extended and monitor the financial condition and payment history of customers to help ensure timely collections and to minimize losses. Additionally, for certain domestic and foreign customers, we require advance payments, letters of credit, bankers' acceptances, and other such guarantees of payment. Certain customers also require us to issue letters of credit or performance bonds, particularly in instances where advance payments are involved, as a condition of placing the order.

Fair Value Measurements: We measure our financial assets and liabilities at fair value on a recurring basis using a threetier fair value hierarchy, which prioritizes the inputs used in the valuation methodologies. The three levels of inputs used to measure fair value are as follows:

- **Level 1** Valuations based on quoted prices for identical assets and liabilities in active markets.
- Level 2 Valuations based on observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data.
- Level 3 Valuations based on unobservable inputs reflecting our own assumptions, consistent with reasonably available assumptions made by other market participants. These valuations require significant judgment.

Derivative Financial Instruments: We utilize certain derivative financial instruments to enhance our ability to manage foreign currency risk that exists as part of ongoing business operations. Derivative instruments are entered into for periods consistent with related underlying exposures and do not constitute positions independent of those exposures. We do not enter into contracts for speculative purposes nor are we a party to any leveraged derivative instrument. We are exposed to foreign currency exchange risk as a result of transactions in currencies other than the functional currency of certain subsidiaries. We utilize foreign currency forward purchase and sale contracts to manage the volatility associated with foreign currency transactions in the normal course of business. Contracts typically have maturities of less than one year. Principal currencies include the U.S. dollar, the euro, the Chinese yuan, the Czech koruna, the Australian dollar, the British pound, the Canadian dollar, the Indian rupee, the Chilean peso, and South African rand. Our foreign currency forward contracts do not qualify as

CHART INDUSTRIES, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued) (Dollars and shares in millions, except per share amounts)

hedges as defined by accounting guidance. Foreign currency forward contracts are measured at fair value and recorded on the consolidated balance sheets as other long-term liabilities, other current liabilities, other assets or other current assets. Changes in their fair value are recorded in the consolidated statements of income as foreign currency gains or losses. Our foreign currency forward contracts are not exchange traded instruments and, accordingly, the valuation is performed using Level 2 inputs as defined above. Gains or losses on settled or expired contracts are recorded in the consolidated statements of income as foreign currency gains or losses.

We enter into a combination of cross-currency swaps and foreign exchange collars as a net investment hedge of our investments in certain international subsidiaries that use the euro as their functional currency in order to reduce the volatility caused by changes in exchange rates. Our cross-currency swaps and foreign exchange collars are measured at fair value and recorded on the consolidated balance sheets within other assets or other long-term liabilities. Changes in fair value are recorded as foreign currency translation adjustments within accumulated other comprehensive loss. See Note 10, "Debt and Credit Arrangements," for further information regarding the cross-currency swaps and foreign exchange collars.

Our derivative contracts are subject to master netting arrangements or agreements between the Company and each counterparty for the net settlement of all contracts through a single payment in a single currency in the event of a default or termination of any one contract with that certain counterparty. It is our practice to recognize the gross amounts in the consolidated balance sheets.

Product Warranties: We provide product warranties with varying terms and durations for the majority of our products. We estimate product warranty costs and accrue for these costs as products are sold with a charge to cost of sales. Factors considered in estimating warranty costs include historical and projected warranty claims, historical and projected cost-perclaim, and knowledge of specific product issues that are outside of typical experience. Warranty accruals are evaluated and adjusted as necessary based on actual claims experience and changes in future claim and cost estimates.

Business Combinations: We account for business combinations in accordance with Accounting Standards Codification ("ASC") ASC 805, "Business Combinations." We recognize and measure identifiable assets acquired and liabilities assumed based on their estimated fair values. The excess of the consideration transferred over the fair value of the net assets acquired, including identifiable intangible assets, is assigned to goodwill. As additional information becomes available, we may 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.

Identifiable finite-lived intangible assets generally consist of customer relationships, unpatented technology, patents and trademarks and trade names and are amortized over their estimated useful lives which generally range from 2 to 15 years. Identifiable indefinite-lived intangible assets generally consist of trademarks and trade names and are subject to impairment testing on at least an annual basis. We estimate the fair value of identifiable intangible assets under income approaches where the fair value models incorporate estimates of future cash flows, estimates of allocations of certain assets and cash flows, estimates of future growth rates, and management's judgment regarding the applicable discount rates to use to discount such estimates of cash flows. As such, acquisitions are classified as Level 3 fair value hierarchy measurements and disclosures.

We expense transaction related costs, including legal, consulting, accounting and other costs, in the periods in which the costs are incurred.

Revenue Recognition: Revenue is recognized when (or as) we satisfy performance obligations by transferring a promised good or service, an asset, to a customer. An asset is transferred to a customer when, or as, the customer obtains control over that asset. In most contracts, the transaction price includes both fixed and variable consideration. The variable consideration contained within our contracts with customers includes discounts, rebates, refunds, credits, price concessions, incentives, performance bonuses, penalties and other similar items. When a contract includes variable consideration, we evaluate the estimate of the variable consideration to determine whether the estimate needs to be constrained; therefore, we include the variable consideration in the transaction price only to the extent that it is probable that a significant reversal of the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Variable consideration estimates are updated at each reporting date. When a contract includes multiple performance obligations, the contract price is allocated among the performance obligations based upon the stand alone selling prices. When the period between when we transfer a promised good or service to a customer and when the customer pays for that good or service is expected, at contract inception, to be one year or less, we do not adjust for the effects of a significant financing component.

In certain contracts, we are engaged to engineer and build highly-customized products and systems. In these circumstances, we produce an asset with no alternative use and have a right to payment for performance completed to date. For these contracts, revenue is recognized as we satisfy the performance obligations by an allocation of the transaction price to the accounting period computed using input methods such as costs incurred. Input methods recognize revenue on the basis of the entity's efforts or inputs to the satisfaction of a performance obligation relative to the total expected inputs to the satisfaction of that performance obligation. The costs incurred input method measures progress toward the satisfaction of the performance obligation by multiplying the transaction price of the performance obligation by the percentage of incurred costs as of the balance sheet date to the total estimated costs at completion after giving effect to the most current estimates. Timing of amounts billed on contracts varies from contract to contract and could cause significant variation in working capital needs. Revisions to estimated cost to complete that result from inefficiencies in our performance that were not expected in the pricing of the contract are expensed in the period in which these inefficiencies become known. Contract modifications can change a contract's scope, price, or both. Approved contract modifications are accounted for as either a separate contract or as part of the existing contract depending on the nature of the modification.

For other contracts, where contract language does not meet the over time recognition requirements, the contract with the customer contains language that transfers control to the customer at a point in time. For these contracts, revenue is recognized when we satisfy our performance obligation to the customer. Timing of amounts billed on contracts varies from contract to contract. The specific point in time when control transfers depends on the contract with the customer, contract terms that provide for a present obligation to pay, physical possession, legal title, risk and rewards of ownership, acceptance of the asset, and bill-and-hold arrangements may impact the point in time when control transfers to the customer. We recognize revenue under bill-and-hold arrangements when control transfers and the reason for the arrangement is substantive, the product is separately identified as belonging to the customer, the product is ready for physical transfer and we do not have the ability to use the product or direct it to another customer.

Incremental contract costs are expensed when incurred when the amortization period of the asset that would have been recognized is one year or less; otherwise, incremental contract costs are recognized as an asset and amortized over time as promised goods and services are transferred to a customer. When losses are expected to be incurred on a contract, we recognize the entire anticipated loss in the accounting period when the loss becomes evident. The loss is recognized when the current estimate of the consideration we expect to receive, modified to include unconstrained variable consideration instead of constrained variable consideration, is less than the current estimate of total costs for the contract.

Taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction that are collected by us from a customer, are excluded from revenue.

Shipping and handling fee revenues and the related expenses are reported as fulfillment revenues and expenses for all customers. Shipping and handling costs associated with outbound freight are accounted for as fulfillment costs and are included in cost of sales. Amounts billed to customers for shipping are classified as sales, and the related costs are classified as cost of sales on the consolidated statements of income.

Cost of Sales: Manufacturing expenses associated with sales are included in cost of sales. Cost of sales includes all materials, direct and indirect labor, inbound freight, purchasing and receiving, inspection, internal transfers, and distribution and warehousing of inventory. In addition, shop supplies, facility maintenance costs, manufacturing engineering, project management, and depreciation expense for assets used in the manufacturing process are included in cost of sales on the consolidated statements of income.

Selling, General and Administrative ("SG&A") Expenses: SG&A expenses include selling, marketing, customer service, product management and other administrative expenses not directly supporting the manufacturing process, as well as depreciation expense associated with non-manufacturing assets. In addition, SG&A expenses include corporate operating expenses for executive management, accounting, tax, treasury, corporate development, human resources, information technology, investor relations, legal, internal audit and risk management.

Advertising Costs: We incurred advertising costs of \$6.7, \$3.5, and \$3.9 for the years ended December 31, 2023, 2022, and 2021, respectively. Such costs are expensed as incurred and included in SG&A expenses in the consolidated statements of income.

Research and Development Costs: We incurred research and development costs of \$23.3, \$13.5, and \$12.7 for the years ended December 31, 2023, 2022, and 2021, respectively. Such costs are expensed as incurred and included in SG&A expenses in the consolidated statements of income.

Foreign Currency Translation: The functional currency for the majority of our foreign operations is the applicable local currency. The translation from the applicable foreign currencies to U.S. dollars is performed for asset and liability accounts using exchange rates in effect at the balance sheet date and for revenue and expense accounts using the average exchange rate during the period. The resulting translation adjustments are recorded as a component of other comprehensive (loss) income in the consolidated statements of comprehensive income. Certain of our foreign entities remeasure from local to functional currencies, which is then translated to the reporting currency of the Company. Remeasurement from local to functional currencies is included in cost of sales or foreign currency loss in the consolidated statements of income. Gains or losses resulting from foreign currency transactions are charged to net income in the consolidated statements of income as incurred.

Income Taxes: The Company and its U.S. subsidiaries file a consolidated federal income tax return. Deferred income taxes are provided for temporary differences between financial reporting and the consolidated tax return in accordance with the liability method. A valuation allowance is provided against net deferred tax assets when conditions indicate that it is more likely than not that the benefit related to such assets will not be realized. In assessing the need for a valuation allowance against deferred tax assets, we consider all available evidence, including past operating results, estimates of future taxable income, and the feasibility of tax planning strategies. In the event that we change our determination as to the amount of deferred tax assets that can be realized, the valuation allowance will be adjusted with a corresponding impact to the provision for income taxes in the period in which such determination is made.

We utilize a two-step approach for the recognition and measurement of uncertain tax positions. The first step is to evaluate the tax position and determine whether it is more likely than not that the position will be sustained upon examination by tax authorities. The second step is to measure the tax benefit as the largest amount that is more likely than not of being realized upon settlement.

Interest and penalties related to income taxes are accounted for as income tax expense in the consolidated statements of income.

We are subjected to a tax on Global Intangible Low Taxed Income ("GILTI"), which we record as a period cost as incurred.

Share-based Compensation: We measure share-based compensation expense for share-based payments to employees and directors, including grants of employee stock options, restricted stock, restricted stock units and performance units based on the grant-date fair value. The fair value of stock options is calculated using the Black-Scholes pricing model and is recognized on an accelerated basis over the vesting period. The grant-date fair value calculation under the Black-Scholes pricing model requires the use of variables such as exercise term of the option, future volatility, dividend yield, and risk-free interest rate. The fair value of restricted stock and restricted stock units is based on Chart's market price on the date of grant and is generally recognized on an accelerated basis over the vesting period. The fair value of performance units is based on Chart's market price on the date of grant and pre-determined performance and market conditions as determined by the Compensation Committee of the Board of Directors and is recognized on a straight-line basis over the performance measurement period based on the probability that the performance and market conditions will be achieved. We reassess the vesting probability of performance units each reporting period and adjust share-based compensation expense based on our probability assessment. Share-based compensation expense for all awards considers estimated forfeitures.

During the year, we may repurchase shares of common stock from equity plan participants to satisfy tax withholding obligations relating to the vesting or payment of equity awards. All such repurchased shares are retired in the period in which the repurchases occur.

Defined Benefit Pension Plans: We sponsor a defined benefit pension plan which includes the Chart Pension Plan, which has been frozen since February 2006 and multiple defined benefit pension plans that were acquired as part of the Howden Acquisition.

The funded status is measured as the difference between the fair value of the plan assets and the projected benefit obligation. The change in the funded status of the plan is recognized in the year in which the change occurs through accumulated other comprehensive (loss) income. Our funding policy is to contribute at least the minimum funding amounts

required by law. Management has chosen policies according to accounting guidance that allow the use of a calculated value of plan assets, which generally reduces the volatility of expense (income) from changes in pension liability discount rates and the performance of the pension plans' assets.

Recently Issued Accounting Standards (Not Yet Adopted): In December 2023, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures." The amendments in this update enhance the transparency and decision usefulness of income tax disclosures. This update enhances the rate reconciliation by requiring an entity to disclose specific categories in the rate reconciliation and provide additional information for reconciling items that meet a quantitative threshold. The update also requires an entity to disclose on an annual basis enhanced information about income taxes paid, income from continuing operations before income tax expense (or benefit) disaggregated between domestic and foreign, and income tax expense (or benefit) from continuing operations disaggregated by federal (national), state, and foreign. The amendments in this update are effective for fiscal years beginning after December 15, 2024. Early adoption is permitted for annual financial statements that have not yet been issued or made available for issuance. We are currently assessing the effect this ASU will have on our disclosures.

In November 2023, the FASB issued ASU 2023-07, "Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures." The amendments in this update improve reportable segment disclosure requirements through enhanced disclosures about significant segments expenses. Among other things, this update requires an entity to disclose significant segment expenses that are regularly provided to the chief operating decision maker ("CODM") and included within each reported measure of segment profit or loss. The update also requires entities to disclose other segment items, provide all annual disclosures about a reportable segment's profit and loss and assets currently required by this Topic in interim periods, disclose the title and position of our CODM, and an explanation of how the CODM uses the reported measures of segment profit or loss in assessing segment performance and deciding how to allocate resources. The amendments in this update are effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted. We are currently assessing the effect this ASU will have on our financial position, results of operations, and disclosures.

In June 2022, the FASB issued ASU 2022-03, "Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions." The amendments in this update clarify that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the security and, therefore, is not considered in measuring fair value. The amendments also clarify that an entity cannot recognize and measure a contractual sale restriction and adds additional disclosures for equity securities subject to contractual sale restrictions. The amendments in this update are effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. We do not expect this ASU to have a material impact on our financial position, results of operations, and disclosures.

Recently Adopted Accounting Standards: In March 2022, the FASB issued ASU 2022-02, "Financial Instruments—Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures." For public business entities, the amendments in this update require that an entity disclose current-period gross write-offs by year of origination for financing receivables and net investments in leases within the scope of Subtopic 326-20. The amendments in this update were effective for Chart for fiscal years beginning after December 15, 2022. We adopted this guidance effective January 1, 2023. The adoption of this guidance did not have a material impact on our financial position, results of operations or disclosures.

In October 2021, the FASB issued ASU 2021-08, "Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers." The amendments in this update require that an entity (acquirer) recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with Topic 606. For public business entities, the amendments in this update are effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. We adopted this guidance effective April 1, 2022. The adoption of this guidance did not have a material impact on our financial position, results of operations or disclosures.

In March 2020, the FASB issued ASU 2020-04, "Reference Rate Reform (Topic 848), Facilitation of the Effects of Reference Rate Reform on Financial Reporting," and in January 2021, the FASB subsequently issued ASU 2021-01, "Reference Rate Reform (Topic 848): Scope." ASU 2020-04 and the subsequent modifications are identified as ASC 848 ("ASC 848"). ASC 848 simplifies the accounting for modifying contracts (including those in hedging relationships) that refer to LIBOR and other interbank offered rates that are expected to be discontinued due to reference rate reform. The amendments in ASC 848 are effective for all entities as of March 12, 2020 through December 31, 2022. An entity may elect to apply the amendments for contract modifications by Topic or Industry Subtopic as of any date from the beginning of an interim period

that includes or is subsequent to March 12, 2020, or prospectively from a date within an interim period that includes or is subsequent to March 12, 2020, up to the date that the financial statements are available to be issued. Once elected for a Topic or an Industry Subtopic, the amendments in ASC 848 must be applied prospectively for all eligible contract modifications for that Topic or Industry Subtopic. Chart transitioned away from LIBOR rates on our debt facilities in early 2023 at which time we adopted this guidance. The adoption of this guidance did not have a material impact on our financial position, results of operations or disclosures.

NOTE 3 — Discontinued Operations and Other Businesses Sold

RootsTM Divestiture

On June 11, 2023, we signed a definitive agreement to divest our Roots™ ("Roots") business, which we acquired as part of the Howden Acquisition and is within the Specialty Products, Cryo Tank Solutions and Repair, Service & Leasing segments, to Ingersoll Rand Inc. (NYSE: IR) ("buyer"). Pursuant to the Purchase Agreement and subject to the terms and conditions set forth therein, the business was sold to the buyer for a base purchase price of \$300.0, subject to customary adjustments. The sale was completed on August 18, 2023 with proceeds totaling \$291.9 after customary estimated closing working capital adjustments. The purchase price is subject to an additional net working capital adjustment, which is expected to settle in the first half of 2024.

We previously determined that our Roots business qualified for discontinued operations and as such, the financial results of the Roots business are reflected in our consolidated statements of income and comprehensive income as discontinued operations for our entire ownership period of March 17, 2023 through August 18, 2023.

We recognized a pre-tax gain on sale of \$5.0 for the year ended December 31, 2023.

Summarized Financial Information of Discontinued Operations

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

	Year Ended December 31,							
	2	023 (1)		2022 ⁽³⁾				
Sales	\$	58.8	\$	_				
Cost of sales		41.4						
Gross profit		17.4		_				
Selling, general, and administrative expenses		7.4		74.8				
Operating income		10.0		(74.8)				
Other expenses:								
Interest expense, net		8.9		_				
Foreign currency loss		0.1		_				
Other expense, net		9.0		_				
Income (loss) before income taxes		1.0		(74.8)				
Income tax expense (benefit)		1.2		(17.2)				
Loss from discontinued operations before gain on sale of business		(0.2)		(57.6)				
Loss on sale of business, net of \$5.4 taxes (2)		0.4		_				
Total loss from discontinued operations, net of tax	\$	(0.6)	\$	(57.6)				

⁽¹⁾ The Roots business was acquired on March 17, 2023 and held for sale until the sale was completed on August 18, 2023.

There was no income from discontinued operations for the year ended December 31, 2021.

⁽²⁾ The gain on sale of the Roots business was \$5.0 before taxes for the year ended December 31, 2023.

⁽³⁾ Loss from discontinued operations, net of tax for the year ended December 31, 2022 relates to the divestiture of our cryobiological products business and the associated legal claims that Chart retained after the divestiture. We recognized a contingent liability and related legal fees and other third party expenses net of an insurance receivable and income taxes during the year ended December 31, 2022. See Note 21, "Commitments and Contingencies" for further information.

Other Businesses Sold

On October 26, 2023, we signed and closed on the divestiture of our American Fan business for \$111.0 all-cash to Arcline Investment Management, L.P with net proceeds totaling \$109.8 after customary estimated closing working capital adjustments. The purchase price is subject to an additional net working capital adjustment. We recognized a pre-tax gain on sale of \$7.6, which is recorded within other income in the consolidated statement of income for the year ended December 31, 2023. American Fans operated within all four of our segments.

On October 26, 2023, we signed definitive documentation with respect to the sale of our Cryo Diffusion business for euro 4.25 million (equivalent to \$4.5). The sale completed on October 31, 2023 and we recognized a pre-tax loss on sale of euro 5.7 million (equivalent to \$6.1), which is recorded within other income in the consolidated statement of income for the year ended December 31, 2023. Cryo Diffusion operated within our Cryo Tank Solutions, Heat Transfer Systems and Repair, Service & Leasing segments.

On July 26, 2023, we signed a definitive agreement to sell our Cofimco fans business ("Cofimco") to PX3 Partners, the London headquartered private equity firm, for a base purchase price of \$73.6 computed as the previously announced \$80.0 purchase price less purchaser's due diligence expenses and an amount equal to \$5.6 which represents an estimate of net financial debt of Cofimco (as defined in the sale and purchase agreement). The purchase price is subject to an additional net working capital adjustment. The sale completed on October 31, 2023, and we recognized a pre-tax gain on sale of \$3.1, which is recorded within other income in the consolidated statement of income for the year ended December 31, 2023. Cofimco operated within our Heat Transfer Systems and Repair, Service & Leasing segments.

Financial results of the American Fan business, Cofimco and Cryo Diffusion business are reported in continuing operations for the periods of Chart ownership.

NOTE 4 — Segment and Geographic Information

Our reportable segments, which are also our operating segments, are as follows: Cryo Tank Solutions, Heat Transfer Systems, Specialty Products and Repair, Service & Leasing. Our Cryo Tank Solutions segment, which has principal operations in the United States, Europe and Asia serves most geographic regions around the globe, supplying bulk, microbulk and mobile equipment used in the storage, distribution, vaporization, and application of industrial gases and certain hydrocarbons. Our Heat Transfer Systems segment, with principal operations in the United States and Europe, also serves most geographic regions globally, supplying mission critical engineered equipment and systems used in the separation, liquefaction, and purification of hydrocarbon and industrial gases that span gas-to-liquid applications. Operating globally, our Specialty Products segment supplies products used in specialty end-market applications including hydrogen, LNG, biofuels, carbon capture, food and beverage, aerospace, lasers and water treatment, among others. Our Heat Transfer Systems, Specialty Products and Cryo Tank Solutions segments also include products from the Howden Acquisition such as compressors, blowers and fans, rotary heaters and steam turbines. Our Repair, Service & Leasing segment provides installation, service, repair, maintenance, refurbishment, and digital monitoring of Chart's products globally in addition to providing equipment leasing solutions.

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.

We evaluate performance and allocate resources based on operating income as determined in our consolidated statements of income.

Segment Financial Information

			Year	End	ed Decembe	r 31, 2	.023				
	yo Tank olutions	Heat Fransfer Systems	pecialty roducts		Repair, Service & Leasing		rsegment ninations	C	orporate	Co	nsolidated
Sales	\$ 640.8	\$ 891.2	\$ 819.9	\$	1,029.2	\$	(28.6)	\$		\$	3,352.5
Depreciation and amortization expense	23.2	32.6	24.7		145.1		_		5.5		231.1
Operating income (loss) (1)(2)	54.5	175.8	119.7		203.3		_		(162.6)		390.7

			Year	Ende	d December	r 31, 2	2022			
	yo Tank olutions	Heat ransfer systems	pecialty roducts	S	Repair, ervice & Leasing		ersegment minations	Corporate	Co	onsolidated
Sales	\$ 504.3	\$ 462.7	\$ 448.3	\$	209.6	\$	(12.5)	\$	\$	1,612.4
Depreciation and amortization expense	16.7	29.3	16.4		17.1			2.4		81.9
Operating income (loss) (1)(2)	54.0	51.7	72.9		51.0		_	(78.1)		151.5

			Year 1	Ende	d December	· 31, 2	021				
	yo Tank olutions	Heat Fransfer Systems	pecialty roducts	S	Repair, ervice & Leasing		rsegment ninations	Co	rporate	Co	nsolidated
Sales	\$ 447.4	\$ 262.7	\$ 432.9	\$	187.0	\$	(12.3)	\$		\$	1,317.7
Depreciation and amortization expense	14.9	37.6	15.1		11.3		_		1.7		80.6
Operating income (loss) (1) (2)	52.9	(12.3)	94.1		23.3		_		(69.5)		88.5

⁽¹⁾ Restructuring costs (credits) for the years ended:

- December 31, 2023 were \$13.5 (\$5.2 Corporate, \$4.0 Repair, Service & Leasing, \$1.8 Specialty Products, \$1.6 Cryo Tank Solutions and \$0.9 Heat Transfer Systems);
- December 31, 2022 were \$(1.0) (\$(1.4) Repair, Service & Leasing, \$0.3 Heat Transfer Systems and \$0.1 Cryo Tank Solutions); and
- December 31, 2021 were \$3.5 (\$1.7 Heat Transfer Systems, \$1.5 Repair, Service & Leasing and \$0.3 Cryo Tank Solutions).
- Acquisition-related contingent consideration credits in our Specialty Products segment related to our 2020 acquisitions of Sustainable Energy Solutions, Inc. ("SES") and BlueInGreen, LLC ("BIG") and for Maintenance Partners NV in our Repair, Service and Leasing segment, assumed as part of the Howden Acquisition, for the years ended:
 - December 31, 2023 were \$(8.7) (\$(8.5) Specialty Products and \$(0.2) Repair, Service & Leasing); and
 - December 31, 2022 were \$(3.9) Specialty Products.

Sales by Geography

Rest of the World

Total

Net sales by geographic area are reported by the destination of sales.

					Yea	r Ended D	ecen	nber 31, 202	3			
		yo Tank olutions		Heat ransfer systems		pecialty roducts	S	Repair, ervice & Leasing		rsegment ninations	Со	nsolidated
North America (1)	\$	309.5	\$	594.0	\$	307.6	\$	317.6	\$	(13.1)	\$	1,515.6
Europe, Middle East, Africa and India		210.0		115.3		230.3		468.4		(9.9)		1,014.1
Asia-Pacific (2)		114.4		163.8		266.3		203.3		(5.1)		742.7
Rest of the World		6.9		18.1		15.7		39.9		(0.5)		80.1
Total	\$	640.8	\$	891.2	\$	819.9	\$	1,029.2	\$	(28.6)	\$	3,352.5
	Year Ended Decen					ıber 31, 202	2					
		yo Tank olutions	Heat Transfer Systems		Specialty Products		Repair, Service & Leasing		Intersegment Eliminations		Co	nsolidated
North America (1)	\$	214.8	\$	323.5	\$	302.2	\$	147.0	\$	(6.6)	\$	980.9
Europe, Middle East, Africa and India		185.7		97.5		113.2		41.9		(3.9)		434.4
Asia-Pacific (2)		98.1		40.1		32.2		19.3		(1.8)		187.9
Rest of the World		5.7		1.6		0.7		1.4		(0.2)		9.2
Total	\$	504.3	\$	462.7	\$	448.3	\$	209.6	\$	(12.5)	\$	1,612.4
		-			Yea	r Ended D	ecen	ıber 31, 202	1			
		yo Tank olutions		Heat ransfer ystems		pecialty roducts	S	Repair, ervice & Leasing		rsegment ninations	Co	nsolidated
North America (1)	\$	178.3	\$	181.1	\$	193.2	\$	118.6	\$	(5.4)	\$	665.8
Europe, Middle East, Africa and India		155.2		28.6		204.1		36.4		(4.5)		419.8
Asia-Pacific (2)		109.9		51.6		33.9		30.6		(2.3)		223.7

1.4

262.7

1.7

432.9

1.4

187.0 \$

(0.1)

(12.3)

8.4

4.0

No single customer accounted for more than 10% of consolidated sales for any of the periods presented in the tables above.

⁽¹⁾ Consolidated sales in the United States were \$1,387.7, \$938.5 and \$585.9 for the years ended December 31, 2023, 2022 and 2021, respectively and represent 41.4%, 58.2% and 44.5% of consolidated sales for the same periods, respectively.

⁽²⁾ Consolidated sales in China were \$460.9, \$58.3 and \$136.2 for the years ended December 31, 2023, 2022 and 2021, respectively and represent 13.7%, 3.6% and 10.3% of consolidated sales for the same periods, respectively.

Total Assets

Corporate assets mainly include cash and cash equivalents and long-term deferred income taxes as well as certain corporate-specific property, plant and equipment, net and certain investments. Our allocation methodology for property, plant and equipment, net of the reportable segments differs from our allocation method of depreciation expense of a reportable segment and therefore, depreciation expense does not entirely align with the related depreciable assets of the reportable segments. Furthermore, since finite-lived intangible assets are excluded from total assets of reportable segments while amortization expense is allocated to each of our reportable segments, amortization expense by segment inherently does not align with the related amortizable intangible assets of the reportable segments.

	 Decem	ber 31	l,
	2023		2022
Cryo Tank Solutions	\$ 706.1	\$	382.0
Heat Transfer Systems	560.7		298.6
Specialty Products	647.8		429.8
Repair, Service & Leasing	950.1		182.1
Total assets of reportable segments	2,864.7		1,292.5
Goodwill (1)	2,906.8		992.0
Identifiable intangible assets, net (1)	2,791.9		535.3
Corporate	539.0		2,830.7
Insurance receivable, net of tax	<u> </u>		251.4
Total assets	\$ 9,102.4	\$	5,901.9

⁽¹⁾ See Note 9, "Goodwill and Intangible Assets," for further information related to goodwill and identifiable intangible assets, net.

Geographic Information

	Property, plant and Decem	equipment, net as of other 31,
	 2023	2022
United States	\$ 356.9	\$ 262.0
Foreign		
Germany	106.7	16.3
China	106.4	49.3
Italy	54.6	56.4
Czech Republic	34.0	26.6
India	34.0	19.3
Other foreign countries	145.0	0.1
Total Foreign	480.7	168.0
Total	\$ 837.6	\$ 430.0

NOTE 5 — Revenue

Disaggregation of Revenue

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

Year Ended December 31, 2023

132.4

432.9

67.9

187.0

(1.6)

(12.3)

482.0

1,317.7

		yo Tank lutions		t Transfer ystems		Specialty Products			rsegment ninations	Co	nsolidated
Point in time	\$	444.7	\$	27.4	\$	148.4	\$	603.3	\$ (18.0)	\$	1,205.8
Over time		196.1		863.8		671.5		425.9	(10.6)		2,146.7
Total	\$	640.8	\$	891.2	\$	819.9	\$	1,029.2	\$ (28.6)	\$	3,352.5
	Year Ended Dece						emb	er 31, 2022			
		yo Tank lutions		t Transfer ystems		Specialty Products		Repair, ervice and Leasing	rsegment ninations	Co	nsolidated
Point in time	\$	443.4	\$	27.3	\$	214.8	\$	104.4	\$ (8.8)	\$	781.1
Over time		60.9		435.4		233.5		105.2	(3.7)		831.3
Total	\$	504.3	\$	462.7	\$	448.3	\$	209.6	\$ (12.5)	\$	1,612.4
	Year Ended December 31, 2										
		yo Tank lutions		t Transfer ystems		Specialty Products	S	Repair, Service & Leasing	rsegment ninations	Со	nsolidated
Point in time	\$	407.6	\$	19.2	\$	300.5	\$	119.1	\$ (10.7)	\$	835.7

Refer to Note 4, "Segment and Geographic Information," for a table of revenue by reportable segment disaggregated by geography.

243.5

262.7

Contract Balances

Over time

Total

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

39.8

447.4

	 Decem	ber 31	,
	 2023		2022
Contract assets			
Accounts receivable, net of allowances	\$ 758.9	\$	278.4
Unbilled contract revenue	481.7		133.7
Contract liabilities			
Customer advances and billings in excess of contract revenue	\$ 376.6	\$	170.6

Revenue recognized for the years ended December 31, 2023 and 2022, that was included in the contract liabilities balance at the beginning of each year was \$116.0 and \$127.8, respectively. The amount of revenue recognized during the year ended December 31, 2023 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. The increases in contract assets and contract liabilities as of December 31, 2023 compared to December 31, 2022 were driven by additional volume resulting from the Howden Acquisition in 2023.

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 December 31, 2023, the estimated revenue expected to be recognized in the future related to remaining performance obligations was \$4,278.8, which is equivalent to our backlog. We expect to recognize revenue on approximately 63% of the remaining performance obligations over the next 12 months with the remaining balance recognized over the next few years thereafter.

NOTE 6 — Investments

Equity Method Investments

The following table represents the activity in equity method investments:

	Equity Method Investments (1) (2) (3)
Balance at December 31, 2021	\$ 99.6
New investments	0.5
Realized gain on equity method investment	0.3
Reclassification due to acquisition of investee	(0.5)
Equity in loss (1)(2)(3)	(0.5)
Foreign currency translation loss	(6.4)
Balance at December 31, 2022	\$ 93.0
New investments (4)	15.3
Equity in earnings (1) (2) (3)	2.7
Foreign currency translation gain	1.0
Dividend received from equity method investment	(2.1)
Balance at December 31, 2023	\$ 109.9

⁽¹⁾ Cryomotive: Our equity method investment in Cryomotive GmbH ("Cryomotive") was \$4.7 and \$4.9 at December 31, 2023 and 2022, respectively. Equity in loss of unconsolidated affiliates, net of this investment was \$0.5, \$1.7, and \$0.6 for the years ended December 31, 2023, 2022, and 2021, respectively. The equity in loss is classified in equity in earnings (loss) of unconsolidated affiliates, net in the consolidated statements of income and comprehensive income.

Liberty LNG: Additionally, we have a 25% ownership interest in Liberty LNG, which totaled \$2.7 and \$2.9 at December 31, 2023 and 2022, respectively. For the years ended December 31, 2023, 2022 and 2021, equity in earnings of this investment was \$0.1, \$0.5 and \$0.3, respectively. Equity in earnings of this investment is classified in equity in earnings (loss) of unconsolidated affiliates, net in the statements of income for the years ended December 31, 2023 and 2022. We received dividends in the amount of \$0.4 for the year ended December 31, 2023.

⁽²⁾ HTEC: Our equity method investment in HTEC Hydrogen Technology & Energy Corporation ("HTEC") was \$82.3 and \$80.8 at December 31, 2023 and 2022, respectively. Equity in (loss) earnings of unconsolidated affiliates, net of this investment of \$(0.2), \$(0.4), and \$0.2 for the years ended December 31, 2023, 2022, and 2021, respectively. Equity in (loss) earnings of this investment is classified in equity in earnings (loss) of unconsolidated affiliates, net in the statements of income for the years ended December 31, 2023, 2022, and 2021.

⁽³⁾ Hudson Products: Also included in our equity method investments is a 50% ownership interest in a joint venture with Hudson Products de Mexico S.A. de CV which totaled \$4.7 and \$4.0 at December 31, 2023 and 2022, respectively. This investment is operated and managed by our joint venture partner and as such, we do not have control over the joint venture and therefore it is not consolidated. We recognized equity in earnings of this investment of \$0.9, \$1.1 and \$0.5 for the years ended December 31, 2023, 2022 and 2021, respectively. Equity in earnings of this investment is classified in equity in earnings (loss) of unconsolidated affiliates, net in the statements of income for the years ended December 31, 2023, 2022, and 2021. We received dividends in the amount of \$0.2 for the year ended December 31, 2023.

${\it CHART\ INDUSTRIES, INC.\ AND\ SUBSIDIARIES } \\ {\it NOTES\ TO\ CONSOLIDATED\ FINANCIAL\ STATEMENTS\ -- (Continued) }$

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

Additionally, we have an investment in an unconsolidated affiliate, Lien Hwa Lox Cryogenic Equipment Corporation (Taiwan), of \$0.4 for all periods presented.

(4) *Hylium Industries*: During the first quarter of 2023, we completed an investment for a 50% ownership interest in Hylium Industries, Inc. ("Hylium") for \$2.3. Our equity method investment in Hylium was \$2.2 at December 31, 2023.

L&T Howden Private Ltd ("LTH"): In connection with the Howden Acquisition, we recorded a 49.9% ownership interest in a joint venture in L&T Howden Private Ltd at a fair value of \$12.0. Our equity method investment in LTH was \$11.7 at December 31, 2023. Equity in earnings, net for this investment was \$1.4 for the year ended December 31, 2023. Equity in earnings of this investment is classified in equity in earnings (loss) of unconsolidated affiliates, net in the statements of income for the year ended December 31, 2023. We also received a dividend payment from this investee in the amount of \$1.5 during the year ended December 31, 2023.

Investments in equity securities

The following table represents the activity in investments in equity securities:

	Equit	estment in y Securities, evel 1 (1)	Equity S	ment in ecurities, el 2 (1)	Equity	stments in y Securities, Others ⁽²⁾	 vestments in ity Securities Total
Balance at December 31, 2021	\$	31.3	\$	6.2	\$	40.3	\$ 77.8
New investments				_		9.4	9.4
(Decrease) increase in fair value of investments in equity securities		(11.8)		1.6		23.3	13.1
Foreign currency translation adjustments and other		(2.3)				(1.5)	(3.8)
Balance at December 31, 2022	\$	17.2	\$	7.8	\$	71.5	\$ 96.5
New investments (3)		_				8.7	8.7
Decrease in fair value of investments in equity securities		(12.7)		(1.7)		_	(14.4)
Foreign currency translation adjustments and other		0.3				0.1	0.4
Balance at December 31, 2023	\$	4.8	\$	6.1	\$	80.3	\$ 91.2

⁽¹⁾ McPhy: Investment in equity securities Level 1 includes our investment in McPhy (Euronext Paris: MCPHY – ISIN; FR0011742329). McPhy's common stock trades on the Euronext Paris stock exchange and therefore we measure our investment in McPhy using Level 1 fair value inputs. The fair value of our investment in McPhy was \$4.8 and \$17.2 at December 31, 2023 and 2022, respectively. For the years ended December 31, 2023, 2022 and 2021, we recognized an unrealized loss of \$12.7, \$11.8 and \$19.7, respectively, in our investment in McPhy.

- (2) *Transform:* The fair value of our investment in Transform Materials LLC ("Transform Materials") was \$25.1 at December 31, 2023 and 2022, respectively.
 - Svante: The fair value of our investment in Svante Inc. ("Svante") was \$38.5 at both December 31, 2023 and 2022.
- (3) *Hy24:* Our investment in Hy24 is measured at fair value using the net asset value ("NAV") per share practical expedient and is not classified in the fair value hierarchy. The fair value of our investment in Hy24 was \$4.1 and \$0.9 at December 31, 2023 and 2022, respectively. See "Hy24 (f/k/a FiveT Hydrogen Fund and Clean H2 Infra Fund)" below for further information.
 - Gold Hydrogen LLC: The fair value of our investment in Gold Hydrogen LLC ("Gold Hydrogen") was \$2.0 at both December 31, 2023 and 2022.

Avina: During the fourth quarter of 2022, we completed an investment in Avina Clean Hydrogen Inc. ("Avina") in the amount of \$5.0. During the third quarter of 2023, Chart completed the purchase of additional shares of series A preferred

Stabilis: Investment in equity securities Level 2 includes our investment in Stabilis Energy, Inc. (NasdaqCM: SLNG) ("Stabilis"). Stabilis represents an instrument with quoted prices that trades less frequently than certain of our other exchange-traded instruments and therefore we measure our investment in Stabilis using Level 2 fair value inputs. The fair value of Stabilis was \$6.1 and \$7.8 at December 31, 2023 and 2022, respectively. For the years ended December 31, 2023, 2022 and 2021 we recognized unrealized loss of \$1.7 and an unrealized gain of \$1.6 and \$2.2, respectively, in our investment in Stabilis.

CHART INDUSTRIES, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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

stock of Avina in accordance with the original Avina stock purchase agreement for total consideration of \$5.0. The fair value of investment in Avina was \$10.0 at both December 31, 2023 and 2022.

Our investments in Transform Materials, Svante, Hy24, Gold Hydrogen and Avina represent equity instruments without a readily determinable fair value. These investments are measured at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for an identical or a similar investment of the same issuer.

Co-Investment Agreement

On September 7, 2021, we entered into a Co-investment agreement with I Squared Capital ("ISQ"), an infrastructure-focused private equity firm (the "Co-Investment Agreement"), pursuant to which Chart and ISQ have agreed to the following:

- In the following circumstances, ISQ shall have the right but not the obligation to require Chart to purchase all (and not less than all) of the shares of HTEC common stock acquired as part of ISQ's investment described above (the "Put Option"):
 - i. the third anniversary of the Closing Date,
 - ii. the date Chart undergoes a change of control (subject to certain exceptions),
 - iii. the date upon which Chart, during the period from the Closing Date through the third anniversary of the Closing Date, has made certain distributions to its shareholders (including cash or other dividends, or via a spin-off transaction), in excess of \$900.0,
 - iv. the date, if any, upon which our leverage ratio exceeds certain thresholds and
 - v. the date, if any, of a bankruptcy event (including certain insolvency-related actions) involving Chart.
- In the event that ISQ exercises its Put Option, we shall pay to ISQ an amount in cash in exchange for the HTEC common stock then held by ISQ such that ISQ shall realize the greater of (i) an internal rate of return of 10% and (ii) a multiple on ISQ's invested capital of 1.65x.
- Conversely, at any time after the third anniversary of the Closing Date, we shall have the right to purchase from ISQ up to 20% of the shares of HTEC common stock acquired as part of the ISQ Investment. In exchange for the common stock, we shall pay ISQ the greater of (i) an internal rate of return of 12.5% and (ii) a multiple on ISQ's invested capital of 1.65x.
- In addition, we shall have (i) a right of first offer: if ISQ desires to transfer any of its HTEC common stock to any third party, we shall have the right to first offer provided that upon notice, we shall have the option to make a first offer to purchase the offered interest in cash exclusively and (ii) a right of first refusal: if ISQ desires to sell its HTEC common stock to any third party pursuant to a definitive agreement therewith, we shall have the right of first refusal provided that the purchase consideration paid by Chart to ISQ upon our exercise of such right of first refusal must be equal to 102% of the purchase consideration agreed to be paid by such third party.
- The Co-Investment Agreement shall terminate automatically upon the consummation of an initial public offering by HTEC of its common stock.

Accounting Treatment of Put and Call Options

We record the Put and Call Options (together "the Options") at fair value and record any change in fair value through earnings at each reporting period. The fair value of the Options was not material on the Closing Date or at December 31, 2023.

Hy24 (f/k/a FiveT Hydrogen Fund and Clean H2 Infra Fund)

As previously announced on April 5, 2021, we were admitted as an anchor investor in Hy24 (the "Hydrogen Fund"). Hy24 is a joint venture between Ardian, a European investment house, and FiveT Hydrogen, a new investment manager specialized purely on clean hydrogen investments. Investments to date include a green steel manufacturing plant that integrates green H2 located in Sweden, upstream e-Methanol and sustainable aviation fuel production in Europe, and green hydrogen production projects (electrolysis) in Europe. Our investment year to date is euro 3.2 million (equivalent to \$3.4) making our unfunded commitment euro 44.1 million (equivalent to \$48.7). During the twelve months ended December 31, 2023 there was a return of capital of \$0.3 from Hy24.

The fund manager of the Hydrogen Fund (the "Management Company") established a Limited Partners Advisory Committee (the "LPAC") which consults with and helps advise the Management Company with respect to certain key decisions governing the fund that the Management Company shall make. The LPAC is comprised of up to fifteen (15) members, the

majority of whom are chosen by certain industrial investors and who are (i) representatives of the anchor investors and (ii) subject to any remaining available seats, representatives of the non-anchor investors selected by the Management Company.

Class A1 Shares, which we hold, are entitled to the return of any associated paid-up capital contributions (excluding any subscription premium or default interest, if any), the Preferred Return calculated thereon as described below, and their share of the Hydrogen Fund's capital gain beyond the Preferred Return in accordance with the order of distributions in the by-laws of the Hydrogen Fund (in each case to the extent of available funds). The "Preferred Return" equals an annual interest rate of seven percent (7%) if fifteen percent (15%) of the Hydrogen Fund's aggregate capital commitments from all investors is invested in strategic investments; provided, however, that such seven percent (7%) interest rate shall be reduced in a linear fashion to six and one-half percent (6.5%) if twenty percent (20%) of the Hydrogen Fund's aggregate capital commitments from all investors is invested in strategic investments. The Management Company currently expects that the Hydrogen Fund will attract aggregate capital commitments equal to its hard cap of euro 1.8 billion.

The Hydrogen Fund shall determine the net asset value of each class of its shares at the end of each quarter (including the Class A1 Shares that we hold), which will be used to record the fair value of our investment.

The Hydrogen Fund will have a term of twelve (12) years, commencing from December 16, 2021, subject to certain potential extensions. Investors cannot request the redemption of their shares by the Hydrogen Fund at any time prior to the final liquidation of the fund. Capital calls will be made by the Management Company in accordance with investment opportunities and the financing needs of the Hydrogen Fund's activities.

The Management Company is required to send capital call requests to investors at least ten (10) business days prior to their deadline for payment. In the event that, following any capital call made by the Management Company, an investor of the Hydrogen Fund does not timely fund all or any portion of its capital commitment required thereby, such investor will be charged interest thereon equal to the Preferred Return plus one-half percent (0.5%), and shall not be entitled to receive distributions from the Hydrogen Fund until it is no longer delinquent.

NOTE 7 — Inventories

The following table summarizes the components of inventory:

		Decem	ber 31,		
	2023				
Raw materials and supplies	\$	274.8	\$	218.9	
Work in process		155.4		57.8	
Finished goods		146.1		81.2	
Total inventories, net	\$	576.3	\$	357.9	

The allowance for excess and obsolete inventory balance at December 31, 2023 and 2022 was \$9.9 and \$8.2, respectively.

NOTE 8 — Property, Plant and Equipment

The following table summarizes the components of property, plant and equipment:

		December 31,							
Classification	Estimated Useful Life		2023		2022				
Land and buildings	20-35 years	\$	526.9	\$	353.5				
Machinery and equipment	3-12 years		361.6		247.8				
Computer equipment, furniture and fixtures	3-7 years		75.1		43.1				
Right-of-use assets			90.4		46.9				
Construction in process			142.9		66.5				
Total property, plant and equipment, gross			1,196.9		757.8				
Less: accumulated depreciation			(359.3)		(327.8)				
Total property, plant and equipment, net		\$	837.6	\$	430.0				

Depreciation expense was \$67.7, \$40.5 and \$41.7 for the years ended December 31, 2023, 2022, and 2021, respectively. Capital expenditures of \$28.4 are included in accounts payable in our consolidated balance sheet at December 31, 2023.

NOTE 9 — Goodwill and Intangible Assets

Goodwill

The following table represents the activity in goodwill net of accumulated goodwill impairment loss ("goodwill, net") and accumulated goodwill impairment loss by segment for 2023:

	Cryo T Soluti		at Transfer Systems		Specialty Products		Repair, Service & Leasing				onsolidated
Goodwill, net balance at December 31, 2022	\$	79.1	\$ 430.5	\$	304.0	\$	178.4	\$	992.0		
Foreign currency translation adjustments and other		3.3	0.8		_		0.1		4.2		
Goodwill acquired during the year (1)	:	204.2	59.1		304.4		1,517.6		2,085.3		
Divestitures (2)		(67.3)	(10.0))	(40.6)		(57.2)		(175.1)		
Purchase price adjustment (3)		_	_		0.1		0.3		0.4		
Goodwill, net balance at December 31, 2023	\$	219.3	\$ 480.4	\$	567.9	\$	1,639.2	\$	2,906.8		
Accumulated goodwill impairment loss at December 31, 2022	\$	23.5	\$ 49.3	\$	35.8	\$	20.4	\$	129.0		
Accumulated goodwill impairment loss at December 31, 2023	\$	23.5	\$ 49.3	\$	35.8	\$	20.4	\$	129.0		

⁽¹⁾ Goodwill acquired during the period was \$2,085.3. All goodwill acquired during the period is related to the Howden Acquisition.

⁽²⁾ Refer to Note 3, "Discontinued Operations and Other Businesses Sold" for information regarding divestitures.

Ouring the year ended December 31, 2023, we recorded purchase price adjustment which increased goodwill by \$0.1 in our Specialty Products segment related to the 2022 acquisition of Fronti Fabrications, Inc. ("Fronti) and increased goodwill by \$0.3 in our Repair, Service & Leasing segment related to the 2022 acquisition of CSC Cryogenic Service Center AB ("CSC"). For further information regarding goodwill acquired and the purchase price adjustments during the period refer to Note 14, "Business Combinations."

The following table represents the activity in goodwill net of accumulated goodwill impairment loss ("goodwill, net") and accumulated goodwill impairment loss by segment for 2022 ⁽¹⁾:

	o Tank utions	at Transfer Systems	Specialty Products	epair, Service & Leasing	Corporate		Co	onsolidated
Goodwill, net balance at December 31, 2021	\$ 84.9	\$ 433.6	\$ 300.9	\$ 175.2	\$	_	\$	994.6
Foreign currency translation adjustments and other	(5.8)	(3.1)	(0.3)	0.3		_		(8.9)
Goodwill acquired during the period (1)(2)	_	_	15.4	3.1		_		18.5
Purchase price adjustments (3)	_	_	(12.0)	(0.2)		_		(12.2)
Goodwill, net balance at December 31, 2022	\$ 79.1	\$ 430.5	\$ 304.0	\$ 178.4	\$		\$	992.0
Accumulated goodwill impairment loss at December 31, 2021	\$ 23.5	\$ 49.3	\$ 35.8	\$ 20.4	\$	_	\$	129.0
Accumulated goodwill impairment loss at December 31, 2022	\$ 23.5	\$ 49.3	\$ 35.8	\$ 20.4	\$	_	\$	129.0

For further information regarding goodwill acquired and the purchase price adjustments during the period refer to Note 14, "Business Combinations."

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):

		December 31, 2023					December 31, 2022				
	Estimated Useful Life		Gross Carrying Amount		Accumulated Amortization		Gross Carrying Amount		ccumulated mortization		
Finite-lived intangible assets:											
Customer relationships	4 to 18 years	\$	1,836.4	\$	(185.2)	\$	311.5	\$	(104.6)		
Technology	5 to 18 years		496.7		(78.8)		202.5		(44.8)		
Patents, backlog and other	2 to 10 years		138.6		(35.6)		6.8		(2.0)		
Trademarks and trade names	5 to 23 years		3.3		(1.9)		2.5		(1.7)		
Land use rights	50 years		10.2		(1.9)		10.4		(1.7)		
Total finite-lived intangible assets		\$	2,485.2	\$	(303.4)	\$	533.7	\$	(154.8)		
Indefinite-lived intangible assets:											
Trademarks and trade names		\$	610.1	\$	_	\$	156.4	\$	_		
Total intangible assets		\$	3,095.3	\$	(303.4)	\$	690.1	\$	(154.8)		

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

Goodwill acquired during the period was \$18.5. Goodwill acquired during the period for the Fronti and AdEdge India acquisitions of \$14.3 and \$1.1, respectively, was allocated to our Specialty Products segment. Goodwill acquired during the period for our CSC acquisition of \$3.1 was allocated to our Repair, Service & Leasing segment.

Ouring the year ended December 31, 2022, we recorded purchase price adjustments that decreased goodwill by \$12.0 in our Specialty Products segment related to the Earthly Labs Inc., L.A. Turbine and AdEdge acquisitions and by \$0.2 in our Repair, Service & Leasing segment. For further information regarding goodwill acquired and the purchase price adjustments during the period refer to Note 14 "Business Combinations."

${\it CHART\ INDUSTRIES, INC.\ AND\ SUBSIDIARIES } \\ {\it NOTES\ TO\ CONSOLIDATED\ FINANCIAL\ STATEMENTS\ -- (Continued) }$

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

(2) Accumulated indefinite-lived intangible assets impairment loss was \$16.0 at both December 31, 2023 and 2022.

Amortization expense for intangible assets subject to amortization was \$163.4, \$41.4 and \$38.9 for the years ended December 31, 2023, 2022, and 2021, respectively. We estimate amortization expense to be recognized during the next five years as follows:

For the Year Ending December 31,

2024	\$ 190.8
2025	189.7
2026	154.5
2027	143.1
2028	139.1

See Note 14, "Business Combinations," for further information related to intangible assets acquired.

Government Grants

During the fourth quarter 2021, we were selected by the U.S. Department of Energy ("DOE") for funding of up to \$5.0 to engineer and build our Cryogenic Carbon CaptureTM system for a cement plant. During the project's duration, the DOE shall reimburse us in cash for approved expenses we incur. This project began on February 1, 2022, and as of December 31, 2023, we have received \$0.3 in reimbursed expenses related to these 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 the 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 consolidated balance sheets as follows:

	 December 31,					
	 2023		2022			
Current	\$ 0.5	\$	0.5			
Long-term	 5.7		6.1			
Total	\$ 6.2	\$	6.6			

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

NOTE 10 — Debt and Credit Arrangements

Summary of Outstanding Borrowings

The following table represents the components of our borrowings:

	December 31,				
	2023			2022	
Senior secured and senior unsecured notes:					
Principal amount, senior secured notes due 2030 (1)	\$	1,460.0	\$	1,460.0	
Principal amount, senior unsecured notes due 2031 (1)		510.0		510.0	
Unamortized discount		(26.9)		(29.9)	
Unamortized debt issuance costs		(32.9)		(4.8)	
Senior secured and senior unsecured notes, net of unamortized discount and debt issuance costs		1,910.2		1,935.3	
Senior secured revolving credit facilities and term loans:					
Term loans due March 2030 (2)		1,631.0		_	
Senior secured revolving credit facility due October 2026 (3)(4)		102.8		104.5	
Unamortized discount		(35.8)		_	
Unamortized debt issuance costs		(32.5)		_	
Senior secured revolving credit facility and term loan, net of unamortized discount and debt issuance costs		1,665.5		104.5	
Convertible notes due November 2024:					
Principal amount		258.7		258.8	
Unamortized debt issuance costs		(0.9)		(1.9)	
Convertible notes due November 2024, net of unamortized debt issuance costs		257.8		256.9	
Other debt facilities (5)		1.4		_	
Total debt, net of unamortized debt issuance costs		3,834.9		2,296.7	
Less: current maturities (6)		258.5		256.9	
Long-term debt	\$	3,576.4	\$	2,039.8	

The senior secured notes due 2030 (the "Secured Notes") and senior unsecured notes due 2031 (the "Unsecured Notes") bear interest at rates of 7.500% and 9.500% per year, respectively. Interest is payable semi-annually on January 1 and July 1 of each year, commencing July 1, 2023. The Secured Notes mature on January 1, 2030, and the Unsecured Notes mature on January 1, 2031.

A term loan due March 2030 was drawn prior to December 31, 2023 in conjunction with the Howden Acquisition. On June 30, 2023, we drew \$250.0 on an incremental term loan due March 2030. As of December 31, 2023, there were \$1,631.0 in borrowings outstanding under term loans due March 2030 bearing an interest rate of 8.7%. See below for more information.

⁽³⁾ As of December 31, 2023, there were \$102.8 in borrowings outstanding under the senior secured revolving credit facility due October 2026 bearing an interest rate of 6.2% (3.4% as of December 31, 2022) and \$272.0 in letters of credit and bank guarantees outstanding supported by the senior secured revolving credit facility due 2026. As of December 31, 2023, the senior secured revolving credit facility due 2026 had availability of \$625.2.

⁽⁴⁾ A portion of borrowings outstanding under our senior secured revolving credit facility due 2026 are denominated in euros ("EUR Revolver Borrowings"). EUR Revolver Borrowings outstanding were euro 88.5 million (equivalent to \$97.8) at December 31, 2023 and euro 98.0 million (equivalent to \$104.5) at December 31, 2022. During the year ended December 31, 2023, we recognized an unrealized foreign currency loss of \$3.2, relative to the translation of the EUR Revolver

CHART INDUSTRIES, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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

Borrowings outstanding. During the year ended December 31, 2022, we recognized unrealized foreign currency gain of \$3.7, respectively, relative to the translation of the EUR Revolver Borrowings outstanding. This unrealized foreign currency loss (gain) is classified within foreign currency loss (gain) in the consolidated statements of income and comprehensive income for all periods presented.

- (5) Other debt facilities relate to a few local debt facilities that we assumed through the Howden Acquisition.
- Our convertible notes due November 2024, net of unamortized debt issuance costs, are included in current maturities for both periods presented. Also included in current maturities for the current period are \$0.6 of other debt facilities.

The following table represents the scheduled maturities for our borrowings, excluding unamortized debt issuance costs, for the next five years:

For th	ne Y	ear En	ded D	ecemb	er 3	31.	
--------	------	--------	-------	-------	------	-----	--

2024	\$ 259.4
2025	_
2026	102.8
2027	_
2028	_
Thereafter	 3,601.7
Total	\$ 3,963.9

Cash paid for interest during the years ended December 31, 2023, 2022 and 2021 was \$219.8, \$25.7 and \$11.7, respectively.

Senior Secured and Unsecured Notes

On December 22, 2022, we completed the issuance and sale of (i) \$1,460.0 aggregate principal amount of 7.500% Secured Notes at an issue price of 98.661% and (ii) \$510.0 aggregate principal amount of 9.500% Unsecured Notes (together with the Secured Notes, the "Notes"), at an issue price of 97.949%. The Notes were issued to finance the Howden Acquisition. Chart deposited the gross proceeds from the offering of each series of Notes into an escrow account (each, an "Escrow Account"). The funds were held in the respective Escrow Account until certain release conditions were met including the consummation of the Howden Acquisition (the "Escrow Release Conditions"). As such, the proceeds were presented separately from cash and cash equivalents as restricted cash in the December 31, 2022 consolidated balance sheet.

The Notes are fully and unconditionally guaranteed by each of Chart's wholly owned domestic restricted subsidiaries that is a borrower or a guarantor under Chart's fifth amended and restated credit agreement, dated as of October 18, 2021 (as amended, restated, supplemented, or otherwise modified from time to time, the "Credit Agreement"). The Secured Notes and the related guarantees are secured by first-priority liens on substantially all of the assets of the Company and the Guarantors, subject to certain exceptions.

We may redeem either series of the Notes, in whole or in part, at any time on or after January 1, 2026, at the redemption prices set forth in the respective indentures. We may also redeem up to 40% of the aggregate principal amount of each series of the Notes on or prior to January 1, 2026, in an amount not to exceed the net cash proceeds from certain equity offerings at the redemption prices set forth in the respective indentures. Prior to January 1, 2026, we may redeem some or all of either series of the Notes at a price which includes the applicable "make-whole" premium set forth in the respective indentures.

If Chart experiences a change of control (as defined in the respective indentures), the Notes are able to be redeemed by the holders at 101%, plus accrued and unpaid interest, if any, to (but not including) the date the Notes are purchased.

We recorded a \$30.0 debt discount and \$36.8 in deferred debt issuance costs associated with the Notes, which are being amortized over the term of the Notes using the effective interest method. We incurred \$32.0 and \$4.8 of deferred debt issuance costs during the year ended December 31, 2023 and 2022, respectively. We recorded \$3.8 in financing costs amortization associated with the Notes for the year ended December 31, 2023. Financing costs amortization associated with the Notes were immaterial for the year ended December 31, 2022.

CHART INDUSTRIES, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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

The following table summarizes the interest accretion of the Notes discount and contractual interest coupon associated with the Notes:

		Year Ended December 31,					
	20			2022			
Notes, interest accretion of senior notes discount	\$	3.0	\$	0.1			
Secured Notes, 7.5% contractual interest coupon		109.7		3.0			
Unsecured Notes, 9.5% contractual interest coupon		48.6		1.3			
Notes, total interest expense	\$	161.3	\$	4.4			

Senior Secured Revolving Credit Facility and Term Loans

Senior Secured Revolving Credit Facility

On November 21, 2022, we entered into an amendment ("Amendment No. 1") to our Credit Agreement, which amended our senior secured revolving credit facility ("SSRCF"). The Credit Agreement provides for a Senior Secured Revolving Credit Facility (the "Amended SSRCF"), which matures on October 19, 2026.

- The Amended SSRCF has a borrowing capacity of \$1,000.0 and includes a sub limit for letters of credit that is the greater of (x) \$350.0 and (y) \$150.0 plus (1) the Dollar Amount (as of the Amended Closing Date) of the Assumed Letters of Credit plus (2) the Dollar Amount of any Letters of Credit issued on the Amendment Closing Date, a \$200.0 sub limit for discretionary letters of credit and a \$100.0 sub-limit for swingline loans.
- We may, subject to the satisfaction of certain conditions, request one or more new commitments and/or increase in the amount of the Amended SSRCF. Each incremental term commitment and incremental revolving commitment shall be in an aggregate principal amount that is not less than \$10.0 and shall be in an increment of \$1.0 to the extent existing or new lenders agree to provide such increased or additional commitments, as applicable.
- The Amended SSRCF bears interest at a base rate plus an applicable margin determined on a leveraged-based scale which (before giving effect to the sustainability pricing adjustments described below) ranges from 25 to 125 basis points for base rate loans and 125 to 225 basis points for Secured Overnight Financing Rate ("SOFR") loans.
- The applicable margin described above is subject to further adjustments based on the reductions in the ratio between (i) the total greenhouse gas emissions, measured in metric tons CO2e, of Chart and its subsidiaries during such calendar year and (ii) the aggregate revenue, measured in U.S. Dollars, of Chart and its subsidiaries during such calendar year. These additional pricing adjustments range from an addition of 0.05% to a reduction of 0.05% in the applicable margin described above.
- We are required to pay commitment fees on any unused commitments under the SSRCF which, before giving effect to the sustainability fee adjustments (as described below), is determined on a leverage-based sliding scale ranging from 20 to 35 basis points.
- The commitment fees described above are also subject to sustainability fee adjustments based on the aforementioned ratio. The sustainability fee adjustments range from an addition of 0.01% to a reduction of 0.01%.
- Interest and fees are payable on a quarterly basis (or if earlier, at the end of each interest period for SOFR loans).

Significant financial covenants for the Amended SSRCF include financial maintenance covenants that, as of the last day of any fiscal quarter ending on and after September 30, 2021, (i) require the ratio of the amount of Chart and its subsidiaries' consolidated total net indebtedness to consolidated EBITDA to be less than the Maximum Total Net Leverage Ratio Levels and (ii) require the ratio of the amount of Chart and its subsidiaries' consolidated EBITDA to consolidated cash interest expense to be greater than the Minimum Interest Coverage Ratio Levels. The Amended SSRCF includes 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 December 31, 2023, we were in compliance with all covenants.

The Amended SSRCF also contains customary events of default. If such an event of default occurs, the lenders thereunder would be entitled to take various actions, including the acceleration of amounts due and all actions permitted to be taken by a secured creditor. The Amended SSRCF is guaranteed by Chart and substantially all of its U.S. subsidiaries, and secured by

substantially all of the assets of Chart and its U.S. subsidiaries and 65% of the capital stock of our material non-U.S. subsidiaries (as defined by the Credit Agreement) that are owned by U.S. subsidiaries.

During 2022, we recorded \$1.5 in deferred debt issuance costs related to the Amended SSRCF and included \$7.1 in unamortized debt issuance costs from previous credit facilities. During the first quarter of 2023, we recorded an additional \$0.4 in deferred debt issuance costs related to the Amended SSRCF.

On March 16, 2023, we entered into an amendment ("Amendment No. 2") under the Credit Agreement. Amendment No. 2 updates the benchmark interest rate provisions to replace the London interbank offered rate (LIBOR) with a term rate based on the Secured Overnight Financing Rate (Term SOFR) as the reference rate for purposes of calculating interest under the terms of the Credit Agreement.

We recorded \$0.4 in deferred debt issuance costs related to Amendment No. 2 and Amendment No. 3 further described under "Term Loans" below. Deferred debt issuance costs related to the Amended SSRCF are presented in other assets in the consolidated balance sheets and are being amortized over the five-year term of the Amended SSRCF. At December 31, 2023 and 2022, unamortized debt issuance costs associated with the Amended SSRCF were \$6.4 and \$8.4, respectively.

Term Loans

On October 2, 2023, we entered into an amendment ("Amendment No. 5") under the Credit Agreement. Among other things, as more fully set forth therein, Amendment No. 5 reduces the interest rate margins applicable to the term loan facility by 50 basis points from 2.75% to 2.25%, in the case of base rate loans, and from 3.75% to 3.25%, in the case of Secured Overnight Financing Rate (SOFR) loans. Amendment No. 5 is a "Refinancing Amendment" permitted under the terms of Credit Agreement. Except as amended by Amendment No. 5, the remaining terms of the Credit Agreement remain in full force and effect.

In connection with the Howden Acquisition, we borrowed incremental term loans in the aggregate principal amount of \$1,534.8 under the Credit Agreement ("Amendment No. 3 Term Loan"). Amendment No. 4 provided for the incurrence of incremental term loans in the aggregate principal amount of \$250.0 to be used for general corporate purposes, including to pay down our Amended SSRCF without any resulting change to leverage ("Amendment No. 4 Term Loan"). On October 2, 2023, Chart refinanced the remaining aggregate principal amounts of both the Amendment No. 3 Term Loan and Amendment No. 4 Term Loan plus accrued interest in exchange for term loans in the aggregate principal amount of \$1,781.0 ("Amendment No. 5 Term Loan") which matures on March 18, 2030 and bears interest at the Term SOFR Rate plus 0.10%, plus an applicable margin of 3.25%, provided that if the adjusted rate is less than 0.50%, the rate will be deemed to be 0.50%, and are payable in equal quarterly installments beginning on December 31, 2023 in an amount equal to 0.25% of the aggregate principal amount. On December 4, 2023, Chart voluntarily prepaid a portion of the Amendment No. 5 Term Loan in the amount of \$150.0, which effectively prepaid all equal quarterly installments for the life of the loan, and as of December 31, 2023, the aggregate principal amount of \$1,631.0 is due at the March 18, 2030 maturity date.

Chart may elect the interest rate for the Amendment No. 5 Term Loan equal to (i) Adjusted Term SOFR (Term SOFR plus a credit spread adjustment of 0.10%; provided that Adjusted Term SOFR shall not be less than 0.50%) plus the Applicable Margin (3.25%), or (ii) the Alternate Base Rate (a rate per annum equal to the greatest of (a) the rate of interest last quoted by The Wall Street Journal in the U.S. as the prime rate, (b) the NYFRB Rate in effect plus 0.50%, (c) Adjusted Term SOFR for a one month Interest Period plus 1.00%, and (d) 1.50%) plus the Applicable Margin (2.25%). Chart may elect interest periods of 1, 3, or 6 months. Interest shall be payable in arrears for (a) for loans accruing interest at a rate based on Adjusted Term SOFR, at the end of each interest period and, for interest periods of greater than three months, every three months, and on the applicable maturity date and (b) for loans accruing interest based on the Alternate Base Rate, quarterly in arrears and on the applicable maturity date.

The allowance of incremental facilities is substantially identical to those in the Amended SSRCF, except (i) to permit the incurrence of a standalone letter of credit facility and (ii) that if the yield of any incremental facility that is in a U.S. dollar denominated term loan facility that is secured by liens on the collateral that is incurred within twelve months after the Closing Date, the applicable margins for the Amendment No. 5 Term Loan may increase under certain circumstances. Additionally, the refinancing facilities are substantially identical to those set forth in the Amended SSRCF.

Prepayments are mandatory only in the following circumstances: (i) after certain non-ordinary course asset sales or other non-ordinary course dispositions of property occur, unless (a) the net cash proceeds are reinvested (or committed to be

reinvested) in the business within 12 months, and if so committed to be reinvested, are actually reinvested within 6 months after the initial 12-month period or (b) a portion of the net cash proceeds are used to ratably prepay any indebtedness that is equal in seniority to the Amendment No. 5 Term Loan, (ii) beginning January 1, 2025, 50% of excess cash flow of Chart and its subsidiaries as calculated for the prior fiscal year shall be used to prepay the term loans due 2030, subject to step-downs on the required percentage of excess cash flow based on the Total Net Leverage Ratio and (iii) 100% of the net cash proceeds of issuances of debt obligations of Chart and our restricted subsidiaries after the Closing Date, except for a portion of such net cash proceeds that are used to ratably prepay any indebtedness that is equal in seniority to the Amendment No. 5 Term Loan.

Chart may prepay the Amendment No. 5 Term Loan in whole or in part at any time without penalty or premium, with the exception of a repricing event with respect to all or any portion of the term loans due 2030 that occurs on or before the date that is six months after the Closing Date.

The Amendment No. 5 Term Loan will be equal in right of payment with any other senior indebtedness of Chart and, if needed, shall be subject to an equal intercreditor agreement with respect to the Amended SSRCF.

The Amendment No. 5 Term Loan is guaranteed by each wholly-owned domestic subsidiary that is also a guarantor under the Amended SSRCF.

Significant financial covenants and customary events of default for the Amendment No. 5 Term Loan is substantially identical to those in the Amended SSRCF.

We initially recorded \$38.9 in debt discount and \$37.2 in deferred debt issuance costs associated with the term loans due 2030, which are being amortized over the applicable term using the effective interest method. As a result of the events of both the October 2, 2023 Credit Agreement amendment (Amendment No. 5) and the December 4, 2023 partial prepayment of the Amendment No. 5 Term Loan, we recognized a loss on extinguishment of debt of \$7.8 for the year ended December 31, 2023. A further \$0.3 in new debt issuance costs were immediately expensed and classified as financing costs amortization in the statement of income for the year ended December 31, 2023. The unamortized debt discount and deferred debt issuance costs are \$35.8 and \$32.5, respectively, as of December 31, 2023. We recorded \$3.5 in interest accretion of the term loans due March 2030 discount for the year ended December 31, 2023.

The following table summarizes interest expense and financing costs amortization related to the Amended SSRCF and term loans due March 2030:

	Year Ended Decembe					r 31,		
		2023		2022		2021		
Interest expense, senior secured revolving credit facilities due October 2026	\$	27.7	\$	23.4	\$	2.5		
Interest expense, term loan due June 2024		_		_		1.8		
Interest expense, term loans due March 2030		119.5		_				
Interest expense, senior secured revolving credit facilities due June 2024				_		4.7		
Total interest expense	\$	147.2	\$	23.4	\$	9.0		
Financing costs amortization, senior secured revolving credit facility due October 2026	\$	2.3	\$	1.9	\$	0.4		
Financing costs amortization, term loans due March 2030		3.6		_		_		
Financing costs amortization, senior secured revolving facility and term loan due June 2024, write off of unamortized deferred debt issuance costs		_		_		3.8		
Financing cost amortization, new debt issuance costs immediately charged to net income		_		_		0.3		
Financing costs amortization, senior secured revolving credit facility and term loan due June 2024		_		_		2.9		
Total financing costs amortization	\$	5.9	\$	1.9	\$	7.4		

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"). On December 31, 2020, we entered into the First Supplemental Indenture (the "Supplemental Indenture") to the Indenture, between Chart and Wells Fargo Bank, National Association, as trustee, governing the 2024 Notes. Pursuant to the Supplemental Indenture, Chart irrevocably elected (i) to eliminate Chart's option to elect Physical Settlement (as defined in the Indenture) on any conversion of 2024 Notes that occurs on or after the date of the Supplemental Indenture and (ii) that, with respect to any Combination Settlement (as defined in the Indenture) for a conversion of 2024 Notes, the Specified Dollar Amount (as defined in the Indenture) that will be settled in cash per \$1,000 principal amount of the Notes shall be no lower than \$1,000. 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 either (1) cash or (2) cash for the principal amount of the 2024 Notes and any combination of cash and shares for the excess settlement amount above the principal amount of the 2024 Notes, at our election (subject to, and in accordance with, the settlement provisions of the Indenture and Supplemental 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 \$136.33 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 \$341.9 at December 31, 2023. 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. 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.

As of January 1, 2024, the 2024 Notes continue to be convertible at the option of the shareholders. This conversion right, which will remain available until March 31, 2024, 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 trading days during the last 30 trading days ending on December 31, 2023. We will reassess the convertibility of the 2024 Notes on a quarterly basis. The \$258.7 principal amount of the 2024 Notes is due in November 2024 and was classified as a current liability in the consolidated balance sheet at December 31, 2023. As of December 31, 2022, the 2024 Notes were convertible at the option of the holders, therefore the \$258.8 principal amount of the 2024 Notes was also classified as a current liability in the consolidated balance sheet at December 31, 2022. There have been no significant conversions as of the date of this filing.

CHART INDUSTRIES, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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

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

	Year Ended December 31,							
	2	2023 2022			2021			
2024 Notes, 1.0% contractual interest coupon, 1.5% for 2022	\$	2.4	\$	4.0	\$	2.6		
2024 Notes, financing costs amortization	\$	1.0	\$	0.9	\$	0.9		

Convertible Note Hedge and Warrant Transactions Associated with the 2024 Notes

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") which relate to 4.41 shares of our common stock and represents the number of shares of our common stock underlying the 2024 Notes. These Note Hedge Transactions are expected to reduce the potential dilution upon any future conversion of the 2024 Notes to the extent that the market price per share of our common stock exceeds the conversion price of \$58.725 per share. 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.

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.

Committed Bridge Loan Facility

On November 8, 2022, in connection with the execution of the agreement to acquire Howden, the Company entered into a debt commitment letter with JPMorgan Chase Bank, N.A. and Morgan Stanley Senior Funding, Inc. (the "Commitment Parties"), pursuant to which, and subject to the terms and conditions, the Commitment Parties agreed to provide approximately \$3.375 billion in aggregate principal amount of senior bridge loans under a 364-day senior bridge loan credit facility (the "Bridge Facility"). We did not draw on the Bridge Facility, as we secured permanent financing prior to the close of the Howden Acquisition. There is no remaining availability following the close of the Howden Acquisition, and the Bridge Facility has been terminated.

Bridge Facility fees of \$26.1 were incurred during the first quarter of 2023 upon successful closing of the Howden Acquisition and classified in acquisition related finance fees in the consolidated statement of income for the year ended December 31, 2023. We also incurred \$29.5 in Bridge Facility fees during the year ended December 31, 2022 and paid the total of \$55.6 in Bridge Facility fees at the close of the Howden Acquisition.

Interest Expense, Net

Gross interest expense related to debt for the year ended December 31, 2023 was \$299.0 and included \$109.7, \$48.6 and \$119.5 in interest related to our Secured Notes, Unsecured Notes and term loans due 2030, respectively. Gross interest expense for the year ended December 31, 2023 included \$2.4 interest expense related to our convertible notes due November 2024 and \$27.7 in interest related to borrowings on our senior secured revolving credit facility due 2026.

The increase in gross interest expense was partially offset by \$21.5 in interest income on deposits, for the year ended December 31, 2023, respectively. This income was primarily earned from deposit of proceeds from the senior secured notes due 2030, senior unsecured notes due 2031, common stock and preferred stock offerings into interest bearing accounts until the consummation of the Howden Acquisition.

CHART INDUSTRIES, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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

Other Debt Facilities

In various markets where we do business, we have local credit facilities to meet local working capital demands, fund letters of credit and bank guarantees, and support other short-term cash requirements. The facilities generally have variable interest rates and are denominated in local currency but may, in some cases, facilitate borrowings in multiple currencies. As of December 31, 2023, we had additional capacity of U.S. dollar equivalent \$87.6.

Certain of our other debt facilities allow us to request bank guarantees and letters of credit. None of these facilities allow revolving credit borrowings. We have letters of credit and bank guarantees outside of our Credit Agreement that totaled USD equivalents \$134.3 and \$45.7 as of December 31, 2023 and 2022, respectively.

Restricted Cash

As of December 31, 2023, we had \$12.8 cash classified as restricted cash on our consolidated balance sheet, which primarily relates to Howden Thomassen Compressors B.V., a wholly-owned subsidiary of Chart, to secure guarantees. As of December 31, 2022 we had restricted cash of \$1,941.7 from the proceeds of the Secured Notes and Unsecured Notes which was used to fund the Howden Acquisition.

Fair Value Disclosures

The following table summarizes the fair value of our actively quoted debt instruments as a percentage of their par value (1):

	December 3	١,
	2023	2022
Convertible notes due November 2024	234 %	201 %
Senior secured notes due 2030	105 %	101 %
Senior unsecured notes due 2031	109 %	103 %
Term loans due March 2030	100 %	— %

The 2024 Notes, Secured Notes, Unsecured Notes and term loans due 2030 are actively quoted instruments and, accordingly, their fair values were determined using Level 1 inputs.

The carrying amounts of borrowings outstanding on our senior secured revolving credit facility approximate fair value, as the interest rate is variable and reflective of market rates (categorized as Level 2 of the fair value hierarchy).

NOTE 11 — Shareholders' Equity

Series B Mandatory Convertible Preferred Stock

On December 13, 2022, we completed a preferred stock offering, through which Chart issued and sold 8.050 million depositary shares, each representing a 1/20th interest in a share of Chart's 6.75% Series B Mandatory Convertible Preferred Stock, liquidation preference \$1,000.00 per share, par value \$0.01 per share (the "Mandatory Convertible Preferred Stock"). The amount issued included 1.050 million depositary shares issued pursuant to the exercise in full of the option granted to the underwriters to purchase additional depositary shares. We received gross proceeds of \$402.5 from the issuance of shares less \$14.4 of equity issuance costs. The proceeds were used to fund the acquisition of Howden.

Dividends. Dividends on the Mandatory Convertible Preferred Stock will be payable on a cumulative basis when, as and if declared at an annual rate of 6.75% on the liquidation value of \$1,000 per share. Chart may pay declared dividends in cash or, subject to certain limitations, in shares of common stock, or in any combination of cash and shares of common stock on March 15, June 15, September 15 and December 15 of each year, commencing on March 15, 2023 and ending on, and including, December 15, 2025. We declared and paid \$27.3 in dividends for the year ended December 31, 2023. The accumulated but undeclared amount of dividends as of December 31, 2022 was \$1.4. Both amounts of \$27.3 and \$1.4 are treated as a reduction to income attributable to common shareholders in the computation of earnings per share for the years ended December 31, 2023 and 2022, respectively.

Mandatory Conversion. Unless earlier converted, each share of the Mandatory Convertible Preferred Stock will automatically convert on the mandatory conversion date, which is expected to be December 15, 2025, into not less than 7.0520

CHART INDUSTRIES, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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

and not more than 8.4620 shares of common stock per share of Mandatory Convertible Preferred Stock, depending on the applicable market value and subject to certain anti-dilution adjustments. Correspondingly, the conversion rate per depositary share will be not less than 0.3526 and not more than 0.4231 shares of common stock per depositary share. The conversion rate will be determined based on a preceding 20-day volume-weighted-average-price of common stock.

The following table illustrates the conversion rate per share of the Mandatory Convertible Preferred Stock, subject to certain anti-dilution adjustments, based on the applicable market value of the common stock:

Applicable Market Value of Common Stock	Conversion Rate per Share of Mandatory Convertible Preferred Stock
Greater than \$141.8037 (threshold appreciation price)	7.0520 shares of common stock
Equal to or less than \$141.8037 but greater than or equal to \$118.1754	Between 7.0520 and 8.4620 shares of common stock, determined by dividing \$1,000 by the applicable market value
Less than \$118.1754 (initial price)	8.4620 shares of common stock

The following table illustrates the conversion rate per depositary share, subject to certain anti-dilution adjustments, based on the applicable market value of the common stock:

Applicable Market Value of Common Stock	Conversion Rate per Depositary Share
Greater than \$141.8037 (threshold appreciation price)	0.3526 shares of common stock
Equal to or less than \$141.8037 but greater than or equal to \$118.1754	Between 0.3526 and 0.4231 shares of common stock, determined by dividing \$50 by the applicable market value
Less than \$118.1754 (initial price)	0.4231 shares of common stock

Optional Conversion of the Holder. Other than during a fundamental change conversion period, at any time prior to December 15, 2025, a holder of the Mandatory Convertible Preferred Stock may elect to convert such holder's shares of Mandatory Convertible Preferred Stock, in whole or in part, at the Minimum Conversion Rate of 7.0520 shares of common stock per share of Mandatory Convertible Preferred Stock (equivalent to 0.3526 shares of common stock per depositary share), subject to certain anti-dilution and other adjustments. Because each depositary share represents a 1/20th fractional interest in a share of Mandatory Convertible Preferred Stock, a holder of depositary shares may convert its depositary shares only in lots of 20 depositary shares.

Fundamental Change Conversion. If a fundamental change occurs on or prior to December 15, 2025, holders of the Mandatory Convertible Preferred Stock will have the right to convert their shares of Mandatory Convertible Preferred Stock, in whole or in part, into shares of common stock at the fundamental change conversion rate during the period beginning on, and including, the effective date of such fundamental change and ending on, and including, the earlier of (a) the date that is 20 calendar days after such effective date (or, if later, the date that is 20 calendar days after holders receive notice of such fundamental change) and (b) December 15, 2025. Holders who convert shares of the Mandatory Convertible Preferred Stock during that period will also receive a make-whole dividend amount comprised of a fundamental change dividend make-whole amount, and to the extent there is any, the accumulated dividend amount. Because each depositary share represents a 1/20th fractional interest in a share of the Series B Preferred Stock, a holder of depositary shares may convert its depositary shares upon a fundamental change only in lots of 20 depositary shares.

Ranking. The Mandatory Convertible Preferred Stock, with respect to anticipated dividends and distributions upon Chart's liquidation or dissolution, or winding-up of Chart's affairs, ranks or will rank:

- senior to our common stock and each other class or series of capital stock issued after the initial issue date of the Mandatory Convertible Preferred Stock, the terms of which do not expressly provide that such capital stock ranks either senior to the Mandatory Convertible Preferred Stock or on a parity with Mandatory Convertible Preferred Stock;
- equal with any class or series of capital stock issued after the initial issue date the terms of which expressly provide that such capital stock will rank equal with the Mandatory Convertible Preferred Stock:
- junior to the Series A Preferred Stock, if issued, and each other class or series of capital stock issued after the initial issue date that is expressly made senior to the Mandatory Convertible Preferred Stock;

- junior to our existing and future indebtedness; and
- structurally subordinated to any existing and future indebtedness of our subsidiaries as well as the capital stock of our subsidiaries held by third parties.

Voting Rights. Holders of Mandatory Convertible Preferred Stock generally will not have voting rights. Whenever dividends on shares of Mandatory Convertible Preferred Stock have not been declared and paid for six or more dividend periods (including, for the avoidance of doubt, the dividend period beginning on, and including, the initial issue date and ending on, but excluding, March 15, 2023), whether or not for consecutive dividend periods, the holders of such shares of Mandatory Convertible Preferred Stock, voting together as a single class with holders of all other series of voting preferred stock of equal rank, then outstanding, will be entitled at our next annual or special meeting of stockholders to vote for the election of a total of two additional members of our board of directors, subject to certain limitations. This right will terminate if and when all accumulated and unpaid dividends have been paid in full, or declared and a sum sufficient for such payment shall have been set aside. Upon such termination, the term of office of each preferred stock director so elected will terminate at such time and the number of directors on our board of directors will automatically decrease by two, subject to the revesting of such rights in the event of each subsequent nonpayment.

Embedded Derivatives. There are no material embedded derivatives that meet the criteria for bifurcation and separate accounting pursuant to ASC 815-15, Embedded Derivatives.

Common Stock

On December 13, 2022, we completed a public offering (the "2022 Equity Offering"), through which Chart issued and sold 5.924 million shares of common stock, \$0.01 par value per share. We received gross proceeds of \$700.0 from the issuance of shares less \$24.9 of equity issuance costs.

On January 10, 2023, we completed a public offering (the "Partial Greenshoe"), through which Chart issued and sold 0.11 shares of common stock, \$0.01 par value per share. We received gross proceeds of \$12.1 from the issuance of shares less \$0.4 of equity issuance costs. Proceeds from both the 2022 Equity Offering and Partial Greenshoe were used to fund the Howden Acquisition.

NOTE 12 — Financial Instruments and Derivative Financial Instruments

Concentrations of Credit Risks: We sell our products primarily to gas producers, distributors, and end-users across energy, industrial, power, HVAC and refining applications in countries throughout the world. Approximately 59%, 42%, and 56% of sales were to customers in foreign countries in 2023, 2022, and 2021, respectively.

In 2023, 2022, and 2021, no single customer accounted for more than 10% of consolidated sales. Sales to our top ten customers accounted for 25%, 38% and 39% of consolidated sales in 2023, 2022, and 2021, respectively. Our sales to particular customers fluctuate from period to period, but our large industrial gas producer and distributor customers tend to be a consistently substantial source of revenue for us.

We are subject to concentrations of credit risk with respect to our cash and cash equivalents, restricted cash and restricted cash equivalents and forward foreign currency exchange contracts. To minimize credit risk from these financial instruments, we enter into arrangements with major banks and other quality financial institutions and invest only in high-quality instruments. We do not expect any counterparties to fail to meet their obligations.

Derivatives and **Hedging**

We utilize a combination of cross-currency swaps and foreign exchange collars (together the "Foreign Exchange Collar Contracts") as a net investment hedge of a portion of our investments in certain international subsidiaries that use the euro as their functional currency in order to reduce the volatility caused by changes in exchange rates. As a result of our acquisition of Howden, we are also a party to foreign currency contracts not designated as hedging instruments (the "Foreign Currency Contracts") which are used to mitigate the risk associated with cash management activities and customer forward sale agreements denominated in currencies other than the applicable local currency, and to match costs and expected revenues where production facilities have a different currency than the selling currency.

${\it CHART\ INDUSTRIES, INC.\ AND\ SUBSIDIARIES } \\ {\it NOTES\ TO\ CONSOLIDATED\ FINANCIAL\ STATEMENTS\ -- (Continued) }$

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

Our Foreign Currency Contracts are measured at fair value with changes in fair value recorded within foreign currency (gain) loss. We classify cash flows related to our Foreign Currency Contracts as operating activities within our consolidated statements of cash flows. The notional value of our Foreign Currency Contracts was \$393.5 as of December 31, 2023. Our derivative contracts are entered into with major financial institutions in order to reduce credit risk and risk of nonperformance by third parties. We believe the credit risks with respect to the counterparties, and the foreign currency risks that would not be hedged if the counterparties fail to fulfill their obligations under the contract, are not material in view of our understanding of the financial strength of the counterparties. Our derivative contracts are not exchange traded instruments and their fair value is determined using the cash flows of the contracts, discount rates to account for the passage of time, implied volatility, current foreign exchange market data and credit risk, which are all based on inputs readily available in public markets and categorized as Level 2 fair value hierarchy measurements.

The following table represents the fair value of our asset and liability derivatives:

		Asset Derivatives			Liability Derivative				es	
			nber 31, 023	December 31, 2022			December 31, 2023			mber 31, 2022
Derivatives designated as net investment hedge	Balance Sheet Location	Fair	Value	Fa	ir Value	Balance Sheet Location	Fai	r Value	Fai	r Value
Foreign Exchange Collar Contracts (1)	Other assets	\$	_	\$	_	Other long- term liabilities	\$	6.0	\$	2.7
Total derivatives designated as net investment hedge								6.0		2.7
Derivatives not designated as hedges										
Foreign Currency Contracts	Other current assets		1.8		_	Other current liabilities		2.7		_
	0.1		0.1			Other long- term				
Foreign Currency Contracts	Other assets		0.1			liabilities				
Total derivatives not designated as hedges			1.9					2.7		
Total derivatives		\$	1.9	\$			\$	8.7	\$	2.7

⁽¹⁾ Represents foreign exchange swaps and foreign exchange options.

The following table represents the net effect derivative instruments designated in hedging relationships had on accumulated other comprehensive loss on the consolidated statements of income and comprehensive income:

	Year Ended December 31,			
Derivatives designated as net investment hedge	202	3	202	2
Foreign Exchange Collar Contracts (1) (2)	\$	2.6	\$	5.2

Our designated derivative instruments are highly effective. As such, there were no gains or losses recognized immediately in income related to hedge ineffectiveness during the year ended December 31, 2023.

The following table represents the effect that derivative instruments not designated as hedges had on net income:

		Year Ended D	December 31,
Derivatives not designated as hedges	Location of (gain) recognized in income	2023	2022
Foreign Currency Contracts	Foreign currency (gain)	\$ (3.3)	\$ —

⁽²⁾ Represents foreign exchange swaps and foreign exchange options.

The following table represents interest income, included within interest expense, net on the consolidated statements of income and comprehensive income related to amounts excluded from the assessment of hedge effectiveness for derivative instruments designated as net investment hedges:

	Year Ended December 31,			
Derivatives designated as net investment hedge	2023 202			2022
Foreign Exchange Collar Contracts (1) (2)	\$	1.6	\$	1.3

⁽¹⁾ Represents amount excluded from effectiveness testing. Our Foreign Exchange Collar Contracts are designated with terms based on the spot rate of the euro. Future changes in the components related to the spot change on the notional will be recorded in other comprehensive income and remain there until the hedged subsidiaries are substantially liquidated. All coupon payments are classified in interest expense, net in the consolidated statements of income and comprehensive income, and the initial value of excluded components currently recorded in accumulated other comprehensive loss as a foreign currency translation adjustment are amortized to interest expense, net over the remaining term of the Foreign Exchange Contract.

NOTE 13 — 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 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 consolidated balance sheets.

The following table represents changes in our consolidated warranty reserve:

	Year Ended December 31,					
		2023		2022		2021
Beginning balance	\$	4.1	\$	10.5	\$	11.9
Acquired warranty reserve		35.7		_		_
Accrued warranty expense		2.6		1.5		5.0
Warranty usage		(11.2)		(7.9)		(6.4)
Foreign exchange translation effect		0.6		_		_
Ending balance	\$	31.8	\$	4.1	\$	10.5

NOTE 14 — Business Combinations

Howden Acquisition

On March 17, 2023, we completed the Howden Acquisition pursuant to the previously disclosed Equity Purchase Agreement dated as of November 9, 2022. The acquisition purchase price was \$4,387.4. We financed the purchase price for the Howden Acquisition with proceeds from borrowings under our Amended SSRCF, Amendment No. 3 Term Loan, common and preferred stock issuance and a private offering of Secured Notes and Unsecured Notes. See Note 10, "Debt and Credit Arrangements," for more information.

⁽²⁾ Represents foreign exchange swaps and foreign exchange options.

The following table shows the purchase price in accordance with ASC 805:

Description

Cash consideration to seller	\$ 2,788.3
Howden's debt settled at close	1,529.0
Settlement of seller transaction costs	67.2
Funds held in escrow	20.4
Working capital adjustment	 (17.5)
Total ASC 805 purchase price	\$ 4,387.4

Howden is a leading global provider of mission critical air and gas handling products providing service and support to customers around the world in highly diversified end markets and geographies. The combination of Chart and Howden is complementary and furthers our global leadership position in highly engineered process technologies and products serving the Nexus of CleanTM – clean power, clean water, clean food and clean industrials.

We estimated the preliminary fair value of acquired developed technology and trade names using the relief from royalty method. The preliminary fair values of acquired customer backlog and customer relationships were estimated using the multiperiod excess earnings method. Under both the relief from royalty and multi-period excess earnings methods, the fair value models incorporated estimates of future cash flows, estimates of allocations of certain assets and cash flows, estimates of future growth rates, and management's judgment regarding the applicable discount rates to use to discount such estimates of cash flows.

The excess of the purchase price over the preliminary estimated fair values is assigned to goodwill. The preliminary estimated goodwill was established due to expected cost and commercial synergies, anticipated growth of new customers, and expansion of equipment portfolio and process technology offerings. Goodwill recorded for the Howden 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 Howden Acquisition. Areas that are subject to change include evaluating income tax accounting considerations. We do not believe such revisions or changes will be material.

The preliminary estimated fair values of the assets acquired and liabilities assumed disclosed in this note are inclusive of businesses identified to be sold as of the acquisition date. On June 12, 2023, we signed a definitive agreement to divest our Roots business, which we acquired as part of the Howden Acquisition. We have categorized the assets and liabilities of these discontinued operations on separate lines in the table below. Please refer to Note 3, "Discontinued Operations and Other Businesses Sold."

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

	Prelimir Fr	nary Estimated air Value
Net assets acquired:		
Cash and cash equivalents	\$	62.5
Restricted cash		2.6
Accounts receivable		427.5
Inventories		260.0
Unbilled contract revenue		168.1
Prepaid expenses		51.9
Other current assets		103.3
Assets held for sale		225.7
Property, plant and equipment		325.1
Identifiable intangible assets		2,434.5
Equity method investments		12.0
Other assets		117.8
Accounts payable		(373.2)
Customer advances and billings in excess of contract revenue		(233.2)
Accrued salaries, wages and benefits		(103.0)
Accrued income taxes		(28.5)
Current portion of warranty reserve		(34.3)
Current portion of long-term debt (1)		(1.4)
Other current liabilities		(141.2)
Liabilities held for sale		(43.9)
Long-term deferred tax liabilities		(671.8)
Operating lease liabilities		(52.3)
Finance lease liabilities		(8.1)
Accrued pension liabilities		(6.0)
Other long-term liabilities		(45.7)
Total identifiable net assets assumed		2,448.4
Noncontrolling interest (2)		(146.3)
Goodwill (3)		2,085.3
Net assets acquired	\$	4,387.4
Assets acquired net of cash, cash equivalents and restricted cash	\$	4,322.3

⁽¹⁾ Represents the balance related to short term debt held in Other Debt Facilities. Refer to Note 10, "Debt and Credit Arrangements."

⁽²⁾ As part of the Howden Acquisition, we acquired a noncontrolling interest which owns 82% of Howden Hua Engineering Co., Ltd, an entity based in China which is valued at \$146.0.

⁽³⁾ Includes \$102.2 and \$49.7 allocated to the Roots and American Fan divestitures, respectively.

CHART INDUSTRIES, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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

The following table summarizes information regarding preliminary identifiable assets acquired in the Howden Acquisition:

	Estimated Useful Lives	Esti	reliminary mated Asset air Value
Finite-lived intangible assets acquired:			
Customer relationships	18 years	\$	1,533.0
Backlog	3 years		135.0
Technology	5 to 14 years		296.0
Total finite-lived intangible assets acquired		\$	1,964.0
Indefinite-lived intangible assets acquired:			
Trade names			470.5
Total intangible assets acquired		\$	2,434.5

Chart's consolidated financial statements include Howden's sales and operating income of \$1,537.9 and \$188.5, respectively, from date the of acquisition through December 31, 2023. We incurred \$4.9 and \$25.4 in transaction related costs during the fourth quarter of 2022 and the first quarter of 2023, respectively, related to the Howden Acquisition which were recorded in selling, general and administrative expenses on the consolidated statements of income and comprehensive income. No interest expense is allocated to Howden's net income for our period of ownership.

As part of the Howden Acquisition, we acquired defined benefit pension plans, which are predominately in Germany. As a result, we assumed pension assets of \$38.7 and pension liabilities of \$41.1, a net \$2.4 liability.

Unaudited Supplemental Pro Forma Information

The following unaudited pro forma combined financial information for the years ended December 31, 2023, 2022 and 2021 gives effect to the Howden Acquisition and the Roots and American Fan divestitures, as if both occurred on January 1, 2021. The unaudited pro forma information is not necessarily indicative of the results of operations that actually would have occurred under the ownership and management of the Company. In addition, the unaudited pro forma information is not intended to be a projection of future results and does not reflect any operating efficiencies or cost savings that might be achievable.

The following adjustments are reflected in the unaudited pro forma financial table below:

- the effect of increased interest expense related to the repayment of the Howden term loans, senior notes and revolving credit facility net of the additional borrowing on the Chart senior secured revolving credit facility and senior secured and unsecured notes,
- amortization of acquired intangible assets,
- an adjustment to reflect the change in the estimated income tax rate for federal and state purposes,
- nonrecurring acquisition-related expenses incurred by Howden prior to the close of and directly attributable to the
 Howden Acquisition were adjusted out of the pro forma net loss attributable to Chart Industries, Inc. from continuing
 operations for the periods presented, and
- nonrecurring acquisition-related expenses incurred by Chart and directly related to the Howden Acquisition were
 adjusted out of the pro forma net loss attributable to Chart Industries, Inc. from continuing operations for the periods
 presented.

	Year Ended December 31,						
		2023		2022		2021	
Pro forma sales from continuing operations	\$	3,657.7	\$	3,314.6	\$	2,893.8	
Pro forma net loss attributable to Chart Industries, Inc. from continuing operations		6.1		164.0		171.8	

Fronti Fabrications, Inc. Acquisition

On May 31, 2022, we acquired 100% of the equity interests of Fronti Fabrications, Inc. ("Fronti") for \$20.6 in cash or \$20.4 net of \$0.2 cash acquired. Fronti is a specialist in engineering, machining and welding for the cryogenic and gas

industries, and also supplies new build pressure vessels and cold boxes, and performs repairs with certification to American Society of Mechanical Engineers (ASME) code. The fair value of the total net assets acquired includes goodwill, identifiable intangible assets and other net assets at the date of acquisition in the amounts of \$14.4, \$5.3 and \$0.9, respectively (as previously reported \$14.3, \$5.3 and \$1.0, respectively). The purchase price allocation and all required purchase accounting adjustments were finalized in the second quarter of 2023.

CSC Cryogenic Service Center AB Acquisition

On May 16, 2022, we acquired 100% of the equity interests of CSC for approximately \$3.8 in cash (subject to certain customary adjustments). CSC brings a strong service footprint in the Nordic region with many overlapping customers to Chart, allowing us to broaden our service and repair presence geographically. The purchase price allocation and all required purchase accounting adjustments were finalized in the second quarter of 2023.

As defined in Note 2, "Significant Accounting Policies", 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 was determined based on inputs that are unobservable and significant to the overall fair value measurement. The preliminary fair value is based on estimates and assumptions made by management at the time of the acquisition. As such, the acquisitions are classified as Level 3 fair value hierarchy measurements and disclosures.

Contingent Consideration

The fair value of contingent consideration was \$16.9 for SES and \$3.2 for BIG at the date of acquisitions and was valued according to a discounted cash flow approach, which included assumptions regarding the probability of achieving certain targets and a discount rate applied to the potential payments.

Potential payments for SES, which range between \$0.0 and \$12.5, are measured between the period commencing January 1, 2024 and ending on December 31, 2028 based on the attainment of certain earnings targets. The earn-out period for BIG ended December 31, 2022, and we disbursed payment during the second quarter of 2023.

In connection with the Howden Acquisition, Chart assumed a deferred consideration liability of \$1.2 and an earn-out provision of \$1.7, in relation to Howden's acquisition of Maintenance Partners NV ("MP") on April 30, 2021. The earn-out period for MP ended April 30, 2023, and we disbursed payment during the third quarter of 2023.

Valuations are performed using Level 3 inputs as defined in Note 2, "Significant Accounting Policies" of our Annual Report on Form 10-K for the year ended December 31, 2023 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 consolidated balance sheets. Changes in fair value of contingent consideration, including accretion, are recorded as selling, general, and administrative expenses in the consolidated statements of income and comprehensive income.

The following table represents the changes to our contingent consideration liabilities:

	 SES	BIG	MP	Total
Balance at December 31, 2022	\$ 16.3	\$ 1.0	\$ _	\$ 17.3
(Decrease) increase in fair value of contingent consideration liabilities (1)(2)	(9.2)	0.7	(0.2)	(8.7)
Acquired contingent consideration liabilities	_	_	2.9	2.9
Payment of contingent consideration	 	(1.7)	 (2.7)	(4.4)
Balance at December 31, 2023	\$ 7.1	\$ 	\$ 	\$ 7.1

⁽¹⁾ For the year ended December 31, 2023, the fair value of contingent consideration related to SES decreased by \$9.2 (decreased by \$2.8 for the year ended December 31, 2022 and increased by \$2.2 for the year ended December 31, 2021). On December 31, 2023, the measurement period for technical milestones tranche of the SES earn-out, with potential payments that ranged from \$0.0 to \$12.5, was not met and resulted in a reduction of the fair value of contingent consideration during 2023.

${\it CHART\ INDUSTRIES, INC.\ AND\ SUBSIDIARIES } \\ {\it NOTES\ TO\ CONSOLIDATED\ FINANCIAL\ STATEMENTS\ -- (Continued) }$

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

For the year ended December 31, 2023, the fair value of contingent consideration related to BIG increased by \$0.7 (decreased by \$1.1 during both the years ended December 31, 2022 and 2021).

In connection with the Earthly Labs acquisition, Chart will pay to the sellers a royalty on sales of carbon capture units for residential use launched for sale to the public by Chart in an amount equal to 4% of such sales. Potential royalty payments shall be paid to the sellers during the three year period following Chart's launch of this product. This product has not yet been developed and as such, the fair value of the contingent consideration liability that arises from this arrangement was insignificant as of December 31, 2023 and 2022.

NOTE 15 — Accumulated Other Comprehensive Income (Loss)

Accumulated Other Comprehensive Income (Loss)

The components of accumulated other comprehensive income (loss) are as follows:

December 31, 2023						
Foreign currency translation adjustments		adjustn	nents, net of		mulated other chensive income (loss)	
\$	(50.5)	\$	(7.5)	\$	(58.0)	
	63.7		4.2		67.9	
	_		0.9		0.9	
	63.7		5.1		68.8	
\$	13.2	\$	(2.4)	\$	10.8	
		\$ (50.5) 63.7	Foreign currency translation adjustments \$ (50.5) \$ 63.7	translation adjustments adjustments, net of taxes \$ (50.5) \$ (7.5) 63.7 4.2 — 0.9 63.7 5.1	Foreign currency translation adjustments	

D. 21 2022

	December 31, 2022						
	Foreign cu translation ad		Pension l adjustmen tax	ts, net of	comprehen	ated other sive income ess)	
Beginning Balance	\$	(15.2)	\$	(6.5)	\$	(21.7)	
Other comprehensive loss		(35.3)		(1.5)		(36.8)	
Amounts reclassified from accumulated other comprehensive income (loss), net of income taxes				0.5		0.5	
Net current-period other comprehensive loss, net of taxes		(35.3)		(1.0)		(36.3)	
Ending Balance	\$	(50.5)	\$	(7.5)	\$	(58.0)	

Foreign currency translation adjustments includes translation adjustments and net investment hedge, net of taxes. See Note 12, "Financial Instruments and Derivative Financial Instruments," for further information related to the net investment hedge.

NOTE 16 — Earnings Per Share

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

Amounts attributable to Chart common stockholders 2023 2022 2021 Income from continuing operations \$ 47.9 \$ 81.6 \$ 59.1 Less: Mandatory convertible preferred stock dividend requirement Income from continuing operations attributable to Chart 27.3 1.4 — Income from continuing operations attributable to Chart 20.0 80.2 59.1 Loss from discontinued operations, net of tax (0.6) (57.6) — Net income attributable to Chart common stockholders \$ 20.0 22.6 \$ 59.1 Earnings per common share – basic: Income from continuing operations (0.01) (1.59) — Net income attributable to Chart Industries, Inc. \$ 0.48 0.62 \$ 1.66 Earnings per common share – diluted: S 0.48 0.62 \$ 1.66 Income from continuing operations \$ 0.44 1.92 \$ 1.44 Loss from discontinued operations \$ 0.44 1.92 \$ 1.44 Loss from discontinued operations \$ 0.44 1.92 \$ 1.44 Loss from discontinued operations \$ 0.44 1.92 \$ 1.44 <		Year Ended December 31,						
Income from continuing operations			2023		2022		2021	
Less: Mandatory convertible preferred stock dividend requirement 27.3 1.4 —	Amounts attributable to Chart common stockholders							
Income from continuing operations attributable to Chart Loss from discontinued operations, net of tax (0.6) (57.6) — Net income attributable to Chart common stockholders Earnings per common share – basic: Income from continuing operations Solve 10.01 (1.59) — Net income attributable to Chart Industries, Inc. Earnings per common share – diluted: Income from continuing operations Solve 10.01 (1.59) — Net income attributable to Chart Industries, Inc. Earnings per common share – diluted: Income from continuing operations Solve 10.01 (1.38) — Net income attributable to Chart Industries, Inc. Net income attributable to Chart Industries, Inc. Net income attributable to Chart Industries, Inc. Solve 10.01 (1.38) — Net income attributable to Chart Industries, Inc. Net income attributable to Chart Industries, Inc. Net income attributable to Chart Industries, Inc. Solve 10.01 (1.38) — Net income attributable to Chart Industries, Inc. Net income attributable to Chart Industries, Inc. Solve 10.01 (1.38) — Net income attributable to Chart Industries, Inc. Solve 10.01 (1.38) — Net income attributable to Chart Industries, Inc. Solve 10.01 (1.38) — Net income attributable to Chart Industries, Inc. Solve 10.01 (1.38) — Net income attributable to Chart Industries, Inc. Solve 10.01 (1.38) — Net income attributable to Chart Industries, Inc. Solve 10.01 (1.38) — Net income attributable to Chart Industries, Inc. Net income attributable to Chart Industries, Inc. Solve 10.01 (1.38) — Net income attributable to Chart Industries, Inc. Solve 10.01 (1.38) — Net income attributable to Chart Industries, Inc. Net income attributable to Chart Industries	Income from continuing operations	\$	47.9	\$	81.6	\$	59.1	
Loss from discontinued operations, net of tax Net income attributable to Chart common stockholders Earnings per common share – basic: Income from continuing operations Loss from discontinued operations (0.01) Net income attributable to Chart Industries, Inc. Solvential Solventia	Less: Mandatory convertible preferred stock dividend requirement		27.3		1.4		_	
Net income attributable to Chart common stockholders Earnings per common share – basic: Income from continuing operations Solution (0.01) (1.59) — Net income attributable to Chart Industries, Inc. Earnings per common share – diluted: Income from continuing operations Income from continuing operations Solution (0.01) (1.59) — Net income attributable to Chart Industries, Inc. Earnings per common share – diluted: Income from continuing operations Income from continuing operations Solution (0.01) (1.38) — Net income attributable to Chart Industries, Inc. Weighted average number of common shares outstanding – basic Incremental shares issuable upon assumed conversion and exercise of share-based awards Incremental shares issuable due to dilutive effect of the convertible notes Incremental shares issuable due to dilutive effect of the underwriters common shares option — 0.01 — Incremental shares issuable due to dilutive effect of the underwriters common shares option — 0.01 — Incremental shares issuable due to dilutive effect of the underwriters common shares option — 0.01 — Incremental shares issuable due to dilutive effect of the underwriters common shares option	Income from continuing operations attributable to Chart		20.6		80.2		59.1	
Earnings per common share – basic: Income from continuing operations Loss from discontinued operations Net income attributable to Chart Industries, Inc. Earnings per common share – diluted: Income from continuing operations Solutions Solutions Solutions Solutions Solutions Solutions Income from continuing operations Solutions Solutions Solutions Solutions Solutions Solutions Solutions Income attributable to Chart Industries, Inc. Solutions Solutions Solutions Solutions Solutions Solutions Income attributable to Chart Industries, Inc. Solutions Solutions Solutions Solutions Solutions Solutions Incremental shares issuable upon assumed conversion and exercise of share-based awards Incremental shares issuable due to dilutive effect of the convertible notes Incremental shares issuable due to dilutive effect of the underwriters Common shares option Solutions Solutions	Loss from discontinued operations, net of tax		(0.6)		(57.6)		_	
Income from continuing operations \$ 0.49 \$ 2.21 \$ 1.66 Loss from discontinued operations \$ (0.01) \$ (1.59) \$ — Net income attributable to Chart Industries, Inc. \$ 0.48 \$ 0.62 \$ 1.66 Earnings per common share — diluted: Income from continuing operations \$ 0.44 \$ 1.92 \$ 1.44 Loss from discontinued operations \$ (0.01) \$ (1.38) \$ — Net income attributable to Chart Industries, Inc. \$ 0.43 \$ 0.54 \$ 1.44 Weighted average number of common shares outstanding — basic \$ 0.20 \$ 0.26 \$ 0.34 Incremental shares issuable upon assumed conversion and exercise of share-based awards \$ 0.20 \$ 0.26 \$ 0.34 Incremental shares issuable due to dilutive effect of the convertible notes \$ 2.53 \$ 2.81 \$ 2.76 Incremental shares issuable due to dilutive effect of the underwriters common shares option \$ — 0.01 \$ —	Net income attributable to Chart common stockholders	\$	20.0	\$	22.6	\$	59.1	
Loss from discontinued operations (0.01) (1.59) — Net income attributable to Chart Industries, Inc. \$ 0.48 \$ 0.62 \$ 1.66 Earnings per common share – diluted: Income from continuing operations \$ 0.44 \$ 1.92 \$ 1.44 Loss from discontinued operations (0.01) (1.38) — Net income attributable to Chart Industries, Inc. \$ 0.43 \$ 0.54 \$ 1.44 Weighted average number of common shares outstanding – basic 41.97 36.25 35.61 Incremental shares issuable upon assumed conversion and exercise of share-based awards 0.20 0.26 0.34 Incremental shares issuable due to dilutive effect of the convertible notes 2.53 2.81 2.76 Incremental shares issuable due to dilutive effect of warrants 2.12 2.47 2.40 Incremental shares issuable due to dilutive effect of the underwriters common shares option — 0.01 —	Earnings per common share – basic:							
Net income attributable to Chart Industries, Inc. S	Income from continuing operations	\$	0.49	\$	2.21	\$	1.66	
Earnings per common share – diluted: Income from continuing operations \$ 0.44 \$ 1.92 \$ 1.44 Loss from discontinued operations (0.01) (1.38) — Net income attributable to Chart Industries, Inc. \$ 0.43 \$ 0.54 \$ 1.44 Weighted average number of common shares outstanding – basic 41.97 36.25 35.61 Incremental shares issuable upon assumed conversion and exercise of share-based awards 0.20 0.26 0.34 Incremental shares issuable due to dilutive effect of the convertible notes 2.53 2.81 2.76 Incremental shares issuable due to dilutive effect of the underwriters common shares option — 0.01 —	Loss from discontinued operations		(0.01)		(1.59)		_	
Income from continuing operations \$ 0.44 \$ 1.92 \$ 1.44 Loss from discontinued operations (0.01) (1.38) — Net income attributable to Chart Industries, Inc. \$ 0.43 \$ 0.54 \$ 1.44 Weighted average number of common shares outstanding – basic 41.97 36.25 35.61 Incremental shares issuable upon assumed conversion and exercise of share-based awards 0.20 0.26 0.34 Incremental shares issuable due to dilutive effect of the convertible notes 2.53 2.81 2.76 Incremental shares issuable due to dilutive effect of the underwriters common shares option — 0.01 —	Net income attributable to Chart Industries, Inc.	\$	0.48	\$	0.62	\$	1.66	
Income from continuing operations \$ 0.44 \$ 1.92 \$ 1.44 Loss from discontinued operations (0.01) (1.38) — Net income attributable to Chart Industries, Inc. \$ 0.43 \$ 0.54 \$ 1.44 Weighted average number of common shares outstanding – basic 41.97 36.25 35.61 Incremental shares issuable upon assumed conversion and exercise of share-based awards 0.20 0.26 0.34 Incremental shares issuable due to dilutive effect of the convertible notes 2.53 2.81 2.76 Incremental shares issuable due to dilutive effect of the underwriters common shares option — 0.01 —								
Loss from discontinued operations(0.01)(1.38)—Net income attributable to Chart Industries, Inc.\$ 0.43\$ 0.54\$ 1.44Weighted average number of common shares outstanding – basic41.9736.2535.61Incremental shares issuable upon assumed conversion and exercise of share-based awards0.200.260.34Incremental shares issuable due to dilutive effect of the convertible notes2.532.812.76Incremental shares issuable due to dilutive effect of warrants2.122.472.40Incremental shares issuable due to dilutive effect of the underwriters common shares option—0.01—	Earnings per common share – diluted:							
Net income attributable to Chart Industries, Inc.\$ 0.43\$ 0.54\$ 1.44Weighted average number of common shares outstanding – basic41.9736.2535.61Incremental shares issuable upon assumed conversion and exercise of share-based awards0.200.260.34Incremental shares issuable due to dilutive effect of the convertible notes2.532.812.76Incremental shares issuable due to dilutive effect of warrants2.122.472.40Incremental shares issuable due to dilutive effect of the underwriters common shares option—0.01—	Income from continuing operations	\$	0.44	\$	1.92	\$	1.44	
Weighted average number of common shares outstanding – basic 41.97 36.25 35.61 Incremental shares issuable upon assumed conversion and exercise of share-based awards 0.20 0.26 0.34 Incremental shares issuable due to dilutive effect of the convertible notes 2.53 2.81 2.76 Incremental shares issuable due to dilutive effect of warrants 2.12 2.47 2.40 Incremental shares issuable due to dilutive effect of the underwriters common shares option — 0.01 —	Loss from discontinued operations		(0.01)		(1.38)		_	
Incremental shares issuable upon assumed conversion and exercise of share-based awards O.20 O.26 O.34 Incremental shares issuable due to dilutive effect of the convertible notes Incremental shares issuable due to dilutive effect of warrants O.20 O.26 O.34 Incremental shares issuable due to dilutive effect of warrants O.21 O.34 Incremental shares issuable due to dilutive effect of warrants O.30 O.3	Net income attributable to Chart Industries, Inc.	\$	0.43	\$	0.54	\$	1.44	
Incremental shares issuable upon assumed conversion and exercise of share-based awards O.20 O.26 O.34 Incremental shares issuable due to dilutive effect of the convertible notes Incremental shares issuable due to dilutive effect of warrants O.20 O.26 O.34 Incremental shares issuable due to dilutive effect of warrants O.21 O.34 Incremental shares issuable due to dilutive effect of warrants O.30 O.3								
share-based awards Incremental shares issuable due to dilutive effect of the convertible notes 2.53 2.81 2.76 Incremental shares issuable due to dilutive effect of warrants 2.12 2.47 2.40 Incremental shares issuable due to dilutive effect of the underwriters common shares option — 0.01 —	Weighted average number of common shares outstanding – basic		41.97		36.25		35.61	
Incremental shares issuable due to dilutive effect of the convertible notes 2.53 2.81 2.76 Incremental shares issuable due to dilutive effect of warrants 2.12 2.47 2.40 Incremental shares issuable due to dilutive effect of the underwriters common shares option — 0.01 —	Incremental shares issuable upon assumed conversion and exercise of							
Incremental shares issuable due to dilutive effect of warrants 2.12 2.47 Incremental shares issuable due to dilutive effect of the underwriters common shares option — 0.01 —								
Incremental shares issuable due to dilutive effect of the underwriters common shares option	Incremental shares issuable due to dilutive effect of the convertible notes		2.53		2.81		2.76	
common shares option	Incremental shares issuable due to dilutive effect of warrants		2.12		2.47		2.40	
Weighted average number of common shares outstanding – diluted 46.82 41.80 41.11					0.01		_	
	Weighted average number of common shares outstanding – diluted		46.82		41.80		41.11	

Diluted earnings per share does not consider the following cumulative preferred stock dividends and potential common shares as the effect would be anti-dilutive:

	Year Ended December 31,						
	2023 2022				2021		
Numerator							
Mandatory convertible preferred stock dividend requirement (1)	\$	27.3	\$	1.4	\$	_	
Denominator							
Anti-dilutive shares, Share-based awards		0.09		0.06		0.03	
Anti-dilutive shares, Convertible note hedge and capped call transactions (2)		2.53		2.81		2.76	
Anti-dilutive shares, Mandatory convertible preferred stock (1)		3.03		0.17		_	
Total anti-dilutive securities		5.65		3.04		2.79	

We calculate the basic and diluted earnings per share based on net income, which approximates income available to common shareholders for each period. Earnings per share is calculated using the two-class method, which is an earnings allocation formula that determines the earnings per share for common stock and any participating securities according to dividends declared (whether paid or unpaid) and participation rights in undistributed earnings. The Series B Mandatory Convertible Preferred Stock and the 2024 Convertible Notes are participating securities. Undistributed earnings are not allocated to the participating securities because the participation features are discretionary. Net losses are not allocated to

the Series B Mandatory Convertible Preferred Stock, as it does not have a contractual obligation to share in the losses of Chart. Basic net income per share is computed by dividing net income available to common shareholders by the weighted average number of common shares outstanding for the period. Diluted net income per common share is computed by dividing net income available to common shareholders by the sum of the weighted average number of common shares outstanding and any dilutive non-participating securities for the period.

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 10, "Debt and Credit Arrangements."

NOTE 17 — Income Taxes

Income from Continuing Operations Before Income Taxes

Income from continuing operations before income taxes consists of the following:

	 For the Year Ended December 31,						
	 2023	2022		2021			
United States	\$ (100.9)	\$	31.1	\$	25.9		
Foreign	 158.9		67.8		48.2		
Income from continuing operations before income taxes	\$ 58.0	\$	98.9	\$	74.1		

Provision

Significant components of income tax expense (benefit), net are as follows:

	For the Year Ended December 31,					
	2023		2022	2021		
Current:						
Federal	\$	(15.5)	\$ (1.3)	\$ 1.7		
State and local		6.6	3.5	3.2		
Foreign		91.2	15.4	16.5		
Total current		82.3	17.6	21.4		
Deferred:						
Federal		1.5	(5.6)	(5.8)		
State and local		(1.8)	1.9	1.1		
Foreign		(79.0)	2.0	(3.2)		
Total deferred		(79.3)	(1.7)	(7.9)		
Total income tax expense, net	\$	3.0	\$ 15.9	\$ 13.5		

See Note 3, "Discontinued Operations and Other Businesses Sold" for the income (loss) from discontinued operations and related income taxes.

Effective Tax Rate Reconciliation

The reconciliation of income taxes computed at the U.S. federal statutory tax rate to income tax expense is as follows:

	Year Ended December 31,						
		2023	2022	2021			
Income tax expense at U.S. statutory rate	\$	12.2	\$ 20.8	\$ 15.6			
State income taxes, net of federal tax benefit		3.1	1.5	3.1			
Foreign withholding taxes		6.3	0.2	1.6			
U.S. taxation of international operations		18.7	1.4	(0.3)			
Effective tax rate differential of earnings outside of United States		2.8	1.7	1.8			
Change in valuation allowance		(2.0)	(11.6)	(5.9)			
Research & experimentation		(2.0)	(2.9)	(1.0)			
Provision to return		0.8	5.0	0.3			
Non-deductible items		0.1	0.4	2.4			
Change in uncertain tax positions		2.0	(0.3)	(0.2)			
Share-based compensation		0.1	(1.1)	(4.1)			
Capital (loss)		(40.5)	_	_			
Unremitted earnings not permanently reinvested		0.9	_	_			
Other items		0.5	0.8	0.2			
Income tax expense	\$	3.0	\$ 15.9	\$ 13.5			

We reclassified certain line items of the effective tax rate reconciliation for year ended December 31, 2021 and December 31, 2022 to correspond with the year ended December 31, 2023.

Deferred Taxes

Deferred income taxes reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to reverse. Significant components of our deferred tax assets and liabilities are as follows:

	December 31,			
	2023		2022	
Deferred tax assets ("DTA"):				
Accruals and reserves	\$ 48.2	\$	5.1	
Loss contingency	0.5		70.3	
Pensions	_		0.2	
Inventory	127.0		78.1	
Share-based compensation	2.6		2.3	
R&D Amortization	18.1		7.4	
Tax credit carryforwards	2.6		8.2	
Interest limitation carryover	126.8		5.5	
Foreign net operating loss carryforwards	36.0		8.7	
State net operating loss carryforwards	4.2		2.1	
Convertible notes	2.2		4.3	
Property, plant and equipment – net DTA	4.4		5.2	
Other – net DTA	2.2		2.9	
Total deferred tax assets before valuation allowances	374.8		200.3	
Valuation allowances	(90.3)		(5.4)	
Total deferred tax assets, net of valuation allowances	\$ 284.5	\$	194.9	
Deferred tax liabilities ("DTL"):	 			
Property, plant and equipment – net DTL	\$ 58.6	\$	26.0	
Goodwill and intangible assets	629.0		77.0	
Pensions	6.4		_	
Insurance receivable	_		53.5	
Unremitted earnings (APB23)	19.7		_	
Other – net DTL	0.6		3.1	
Investments	2.3		4.5	
Deferred revenue	123.5		72.0	
Total deferred tax liabilities	\$ 840.1	\$	236.1	
Net deferred tax liabilities	\$ 555.6	\$	41.2	
The net deferred tax liability is classified as follows:	 			
Other assets	\$ (12.6)	\$	(4.9)	
Long-term deferred tax liabilities	568.2		46.1	
Net deferred tax liabilities	\$ 555.6	\$	41.2	

We evaluate the recoverability of our deferred tax assets on a jurisdictional basis by considering whether deferred tax assets will be realized on a more likely than not basis. To the extent a portion or all of the applicable deferred tax assets do not meet the more likely than not threshold, a valuation allowance is recorded. As of December 31, 2023, we have valuation allowances totaling \$90.3 consisting primarily of our operations in the United Kingdom, France, and Belgium.

We have U.S. state net operating loss carryforwards of \$138.7 that may be carried forward indefinitely. As of December 31, 2023, we had \$145.6 foreign net operating loss carryforwards primarily in Belgium, France, and India subject to

local tax limitations. The foreign net operating losses can be carried forward indefinitely, except in applicable jurisdictions that make up less than 12% of available net operating losses. We have tax credit carryforwards of \$2.6.

Other Tax Information

We previously considered the earnings in our non-U.S. subsidiaries to be indefinitely reinvested and, accordingly, recorded no deferred income taxes. As a result of the Howden Acquisition during 2023, we have reevaluated our indefinite reinvestment assertion and have determined that we are partially reinvested. We are not permanently reinvested on \$247.9 of the undistributed earnings of our foreign subsidiaries. The remaining earnings continue to be indefinitely reinvested outside the United States. We have assessed a total deferred tax liability of \$19.7 as of December 31, 2023 on such earnings that have not been indefinitely reinvested. This is an increase of \$19.7 as compared to the deferred tax liability as of December 31, 2022. We have made no provision for U.S. income taxes or additional non-U.S. taxes on certain undistributed earnings of non-U.S. subsidiaries. These earnings could become subject to additional tax if we were to dividend those earnings or sell our interest in the non-U.S. subsidiary. We cannot practically determine the amount of additional taxes that might be payable on those earnings.

The Organization for Economic Co-operation and Development (OECD) has a framework to implement a global minimum corporate tax of 15% for companies with global revenues and profits above certain thresholds (referred to as Pillar 2), with certain aspects of Pillar 2 effective January 1, 2024, and other aspects effective January 1, 2025. While it is uncertain whether the United States will enact legislation to adopt Pillar 2, certain countries in which we operate have adopted legislation, and other countries are in the process of introducing legislation to implement Pillar 2. We do not expect Pillar 2 to have a material impact on our effective tax rate or our consolidated results of operation, financial position, and cash flows.

Cash paid for income taxes during the years ended December 31, 2023, 2022, and 2021 was \$49.7, \$27.0, and \$57.2, respectively.

Unrecognized Income Tax Benefits

We record a liability for unrecognized income tax benefits for the amount of benefit included in our previously filed income tax returns and in our financial results expected to be included in income tax returns to be filed for periods through the date of our Consolidated financial statements for income tax positions for which it is not more likely than not to be sustained upon examination by the respective tax authority.

The reconciliation of beginning to ending gross unrecognized tax benefits is as follows:

	Year Ended December 31,						
		2023		2022		2021	
Unrecognized tax benefits at beginning of the year	\$	0.7	\$	1.7	\$	1.9	
Additions for tax positions acquired during the current period		34.4		_		_	
Additions (reductions) for tax positions taken during the prior period		3.7		_		0.4	
Reductions relating to settlements with taxing authorities		(1.6)		(0.3)		_	
Lapse of statutes of limitation		(0.2)		(0.7)		(0.6)	
Unrecognized tax benefits at end of the year	\$	37.0	\$	0.7	\$	1.7	

We are routinely examined by tax authorities around the world. Tax examinations remain in process in multiple countries including but not limited to Denmark, France, Germany and India. We file numerous group and separate returns in U.S. federal and state jurisdictions as well as international jurisdictions. We are subject to income taxes in the U.S federal jurisdiction and various state and foreign jurisdictions. In the United States, tax years dating back to 2020 remain subject to examination. With some exceptions, other major tax jurisdictions generally are not subject to examinations for years beginning before 2009.

Included in the balance of unrecognized tax benefits at December 31, 2023 and 2022 was \$35.8 and \$0.5, respectively of income tax (benefit)/expenses, which, if ultimately recognized, would impact our annual effective tax rate.

We recognize interest accrued related to unrecognized tax benefits and penalties as income tax expense. We accrued approximately \$0.9 and \$0.1 of interest and penalties at December 31, 2023 and 2022, respectively We recognized a liability related to interest and penalties on unrecognized tax benefits of \$7.0 as of December 31, 2023, primarily related to tax positions acquired in the Howden Acquisition. The amount of interest and penalties related to years prior to 2023 is immaterial. Due to

the expiration of various statutes of limitation and anticipated payments, it is reasonably possible our unrecognized tax benefits at December 31, 2023 may decrease within the next twelve months by \$1.7.

NOTE 18 — Employee Benefit Plans

Defined Benefit Plans

We have a defined benefit pension plan which is frozen, that covers certain U.S. hourly and salary employees (the "Chart Plan"). The defined benefit plan provides benefits based primarily on the participants' years of service and compensation. The Retirement Plan for Union Employees of Smithco Engineering Inc. (the "Hudson Plan") merged into the Chart Plan as of February 28, 2021 (the "Hudson Plan merger").

Following the Howden Acquisition, we assumed responsibility for approximately ten additional defined benefit plans outside of the United States, which are predominantly in Germany (the "Howden Plans"). Upon acquisition, we recognized a net liability on our consolidated balance sheet.

The components of net periodic pension income are as follows:

		1	International Plans			
			Year Ended December 31,			
		2023	2022	2021		2023
Interest cost	\$	2.4	\$ 1.7	\$ 1.7	\$	1.2
Service cost	\$	_	\$ _	\$ _	\$	0.7
Expected return on plan assets		(3.3)	(4.3)	(3.8)		(1.3)
Amortization of net loss		0.9	0.5	1.0		_
Total net periodic pension income	\$		\$ (2.1)	\$ (1.1)	\$	0.6

Each component of net periodic pension income is included in selling, general and administrative expenses in the consolidated statements of income. The other changes in plan assets and projected benefit obligations recognized in other comprehensive (loss) income are as follows:

	U.S. Plans					International Plans		
	Year Ended December 31,					ear Ended ecember 31,		
		2023	20	022		2023		
Net actuarial (gain) loss	\$	(5.9)	\$	1.7	\$	0.1		
Net amortization		(0.9)		(0.5)		_		
Effect of foreign exchange rates		_		_		4.7		
Total recognized in other comprehensive (loss) income	\$	(6.8)	\$	1.2	\$	4.8		

The changes in the projected benefit obligation and plan assets, the funded status of the plans and the amounts recognized in the consolidated balance sheets are as follows:

	U.S. 1	International Plans	
	Decem	ber 31,	December 31,
	2023	2022	2023
Change in projected benefit obligation:			
Projected benefit obligation at beginning of year	\$ 50.0	\$ 63.5	\$ —
Acquisition of Howden (1)	_	_	41.1
Interest cost	2.4	1.7	1.2
Service cost	_	_	0.7
Benefits paid	(3.1)	(3.0)	(2.0)
Actuarial (gains) losses	(1.2)	(12.2)	0.4
Foreign exchange rate impact	 <u> </u>		1.6
Projected benefit obligation at year end	48.1	50.0	43.0
Accumulated benefit obligation at year end	48.1	50.0	41.2
Change in plan assets:			
Fair value of plan assets at beginning of year	49.1	61.9	_
Acquisition of Howden (1)	_	_	38.7
Actual return	8.0	(9.8)	1.6
Employer contributions	_	_	1.9
Benefits paid	(3.1)	(3.0)	(2.0)
Foreign exchange rate impact	 		1.6
Fair value of plan assets at year end	54.0	49.1	41.8
Funded status (Accrued pension asset (liability))	\$ 5.9	\$ (0.9)	\$ (1.2)
Amounts recognized on the consolidated balance sheet at December 31:			
Non-current assets	\$ 5.9	\$ —	\$ 5.8
Current liabilities	_	_	(0.3)
Non-current liabilities	_	(0.9)	(6.7)
Recognized accrued pension asset (liability)	\$ 5.9	\$ (0.9)	\$ (1.2)
Unrecognized actuarial loss recognized in accumulated other comprehensive loss	\$ 3.5	\$ 10.3	\$ 0.1

The 2023 changes in the projected benefit obligation and plan assets reflect the effect of the Howden Acquisition.

Non-current assets and current liabilities related to defined benefit plans are classified within other assets and accrued salaries, wages and benefits, respectively, in our consolidated balance sheets.

The estimated net periodic pension income for the Chart Plan that will be amortized from accumulated other comprehensive loss over the next fiscal year is \$0.8. The estimated net periodic pension income for the Howden Plans that will be amortized from accumulated other comprehensive loss over the next fiscal year is not material.

Howden Plans with accumulated benefit obligations in excess of plan assets consist of the following:

	Internation	onal Plans
	Decem	ber 31,
	20)23
Projected benefit obligation	\$	6.7
Accumulated benefit obligation		5.7
Fair value of plan assets		0.3

Howden Plans with projected benefit obligations in excess of plan assets consist of the following:

	Inte	ernational Plans
	I	December 31,
		2023
Projected benefit obligation	\$	10.2
Accumulated benefit obligation		8.4
Fair value of plan assets		3.4

The actuarial assumptions used in determining pension plan information are as follows:

_		International Plans		
	Year F	Year Ended December 31,		
	2023	2022	2021	2023
Assumptions used to determine the projected obligation at year end:				
Discount rate	5.0 %	4.9 %	2.7 %	3.4 %
Rate of increase in compensation levels for active pension plans	— %	<u> </u>	— %	4.1 %
Assumptions used to determine net periodic benefit cost:				
Discount rate	4.9 %	2.7 %	2.4 %	3.4 %
Expected long-term weighted-average rate of return on plan assets	7.0 %	7.0 %	7.0 %	4.5 %
Rate of increase in compensation levels for active pension plans	— %	— %	— %	4.1 %

U.S. Plans

The discount rate of the Chart Plan reflects the current rate at which the pension liabilities could be effectively settled at year end. In estimating this rate, we look to rates of return on high quality, fixed-income investments that receive one of the two highest ratings given by a recognized rating agency and the expected timing of benefit payments under the plan.

The expected return assumptions were developed using an averaging formula based upon the plans' investment guidelines, mix of asset classes, historical returns of equities and bonds, and expected future returns. We employ a total return investment approach whereby a mix of equities and fixed income investments are used to maximize the long-term return of plan assets for a prudent level of risk. Risk tolerance is established through careful consideration of short and long-term plan liabilities, plan funded status and corporate financial condition. The investment portfolio contains a diversified blend of equity

and fixed-income investments. Furthermore, equity investments are diversified across U.S. and non-U.S. stocks, as well as growth, value, and small and large capitalizations. Investment risk is measured and monitored on an ongoing basis through quarterly investment portfolio reviews, annual liability measurements, and periodic asset/liability studies.

International Plans

In determining discount rates for the Howden Plans, we utilize the single discount rate equivalent to discounting the expected future cash flows from each plan using the yields at each duration from a published yield curve as of the measurement date. The expected long-term rate of return on plan assets was based on our investment policy target allocation of the asset portfolio between various asset classes and the expected real returns of each asset class over various periods of time that are consistent with the long-term nature of the underlying obligations of these plans.

Our primary investment objective for the defined benefit pension plan assets is to provide a source of retirement income for the plans' participants and beneficiaries. The Chart Plan's target allocations by asset category and fair values of the plan assets by asset class at December 31 are as follows:

		U.S. Plans											
		Fair Value											
	Target Allocations by		To	tal			Lev	vel 2			Lev	vel 3	
Plan Assets:	Asset Category		2023		2022		2023		2022		2023		2022
Equity funds	30%	\$	16.5	\$	35.0	\$	16.5	\$	35.0	\$		\$	_
Fixed income funds	62%		34.0		13.0		34.0		13.0		_		_
Other investments	8%		3.5		1.1						3.5		1.1
Total		\$	54.0	\$	49.1	\$	50.5	\$	48.0	\$	3.5	\$	1.1

The plan assets are primarily invested in pooled separate funds. The fair values of equity securities and fixed income securities held in pooled separate funds are based on net asset value of the units of the funds as determined by the fund manager. These funds are similar in nature to retail mutual funds, but are typically more efficient for institutional investors. The fair value of pooled funds is determined by the value of the underlying assets held by the fund and the units outstanding. The value of the pooled funds is not directly observable, but is based on observable inputs. As such, these plan assets are valued using Level 2 inputs. Certain plan assets in the other investments asset category are invested in a general investment account where the fair value is derived from the liquidation value based on an actuarial formula as defined under terms of the investment contract. These plan assets were valued using unobservable inputs and, accordingly, the valuation was performed using Level 3 inputs.

The following table represents changes in the fair value of plan assets categorized as Level 3 from the preceding table:

	 U.S. Plans
Balance at December 31, 2021	\$ 2.0
Purchases, sales and settlements, net	(3.4)
Transfers, net	 2.5
Balance at December 31, 2022	1.1
Purchases, sales and settlements, net	(2.9)
Transfers, net	 5.3
Balance at December 31, 2023	\$ 3.5

The Howden Plans' target allocations by asset category and fair values of the plan assets by asset class at December 31 are as follows:

		International Plans						
			F	air Value				
	Target Allocations by	Total		Level 1		Level 2		
Plan Assets:	Asset Category	2023		2023		2023		
Cash and cash equivalents	0%	\$ 0.2	\$	0.2	\$	_		
Insurance contracts	7%	2.9		_		2.9		
Investments funds	93%	38.7		_		38.7		
Total		\$ 41.8	\$	0.2	\$	41.6		

The assets are invested with the goal of preserving principal while providing a reasonable real rate of return over the long term. Diversification of assets is achieved through strategic allocations to various asset classes in line with the investment guidelines of the plans. Actual allocations to each asset class vary due to periodic investment strategy changes, market value fluctuations, the length of time it takes to fully implement investment allocation positions, and the timing of benefit payments and contributions. The asset allocation is monitored and rebalanced as required, as frequently as on a quarterly basis in some instances. The plan assets are primarily invested in pooled separate funds. The fair values of equity securities and fixed income securities held in pooled separate funds are based on net asset value of the units of the funds as determined by the fund manager. These funds are similar in nature to retail mutual funds, but are typically more efficient for institutional investors. The fair value of pooled funds is determined by the value of the underlying assets held by the fund and the units outstanding. The value of the pooled funds is not directly observable, but is based on observable inputs. As such, these plan assets are valued using Level 2 inputs.

Our funding policy is to contribute at least the minimum funding amounts required by law. Based upon current actuarial estimates, we do not expect to contribute to our Chart Plan in the next five years. Expected contributions to our Howden Plans for the year ended December 31, 2024, related to plans as of December 31, 2023, are \$2.5. The following benefit payments are expected to be paid by the plan in each of the next five years and in the aggregate for the subsequent five years:

	U.S. Pl	ans	International Plans
2024	\$	3.5 \$	2.5
2025		3.6	2.2
2026		3.6	2.7
2027		3.6	2.2
2028		3.6	2.6
In aggregate during five years thereafter		17.5	12.6

Multi-Employer Plan

We contribute to a multi-employer plan for certain collective bargaining U.S. employees. The risks of participating in this multi-employer plan are different from a single employer plan in the following aspects:

- (a) Assets contributed to the multi-employer plan by one employer may be used to provide benefits to employees of other participating employers.
- (b) If a participating employer ceases contributing to the plan, the unfunded obligations of the plan may be inherited by the remaining participating employers.
- (c) If we choose to stop participating in the multi-employer plan, we may be required to pay those plans an amount based on the underfunded status of the plan, referred to as a withdrawal liability.

We have assessed and determined that the multi-employer plan to which we contribute is not significant to our financial statements. We do not expect to incur a withdrawal liability or expect to significantly increase our contribution over the remainder of the current contract period, which ends in February 2026. We made contributions to the bargaining unit supported multi-employer pension plan resulting in expense of \$0.7, \$0.6, and \$0.5 for the years ended December 31, 2023, 2022, and 2021, respectively.

Defined Contribution Plans

The Company also sponsors defined contribution plans at various locations globally. Company contributions to the plans are based on employee contributions and include a Company match and discretionary contributions. Expenses under the plan totaled \$18.2, \$6.8, and \$5.7 for the years ended December 31, 2023, 2022, and 2021, respectively.

Voluntary Deferred Income Plan

We provide additional retirement plan benefits to certain members of management under the Amended and Restated Chart Industries, Inc. Voluntary Deferred Income Plan. This is an unfunded plan. We recorded \$0.6, \$0.3, and \$0.1 of expense associated with this plan for the years ended December 31, 2023, 2022, and 2021, respectively.

NOTE 19 — Share-based Compensation

Under the 2017 Omnibus Equity Plan (the "2017 Omnibus Equity Plan") officers and employees (including our principal executive officer, principal financial officer and other "named executive officers") are eligible to be granted stock options, stock appreciation rights ("SARs"), restricted stock, restricted stock units ("RSUs"), performance shares and common shares. The maximum number of shares available for issuance is 1.70, which may be treasury shares or unissued shares. As of December 31, 2023, 0.26 stock options, 0.11 shares of restricted stock and RSUs, and 0.07 performance units were outstanding under the 2017 Omnibus Equity Plan.

Under the Amended and Restated 2009 Omnibus Equity Plan ("2009 Omnibus Equity Plan") which was originally approved by our shareholders in May 2009 and re-approved by shareholders in May 2012 as amended and restated, we could grant stock options, SARs, RSUs, restricted stock, performance shares, leveraged restricted shares, and common shares to employees and directors. The maximum number of shares available for issuance is 3.35, which could be treasury shares or unissued shares. As of December 31, 2023, 0.03 stock options were outstanding under the 2009 Omnibus Equity Plan.

We recognized share-based compensation expense of \$12.6, \$10.6, and \$11.2 for the years ended December 31, 2023, 2022, and 2021, respectively. This expense is included in selling, general and administrative expenses in the consolidated statements of income. The tax benefit related to share-based compensation, which was recorded in net income in the consolidated statement of income during the years ended December 31, 2023, 2022, and 2021 was \$1.7, \$1.4 and \$2.2 respectively, which was recorded in net income in the consolidated statements of income. As of December 31, 2023, total share-based compensation expense of \$15.4 is expected to be recognized over the remaining weighted-average period of approximately 2.1 years.

Stock Options

We use a Black-Scholes option pricing model to estimate the fair value of stock options. The expected volatility is based on historical information. The risk-free rate is based on the U.S. Treasury yield in effect at the time of the grant. Weighted-average grant-date fair values of stock options and the assumptions used in estimating the fair values are as follows:

	Year Ended December 31,							
		2023		2022		2021		
Weighted-average grant-date fair value per share	\$	57.15	\$	67.58	\$	52.19		
Expected term (years)		4.7		4.7		4.7		
Risk-free interest rate		3.98 %		1.32 %		0.33 %		
Expected volatility		54.66 %		51.24 %		53.10 %		

Stock options generally have a four-year graded vesting period, an exercise price equal to the fair market value of a share of common stock on the date of grant, and a contractual term of 10 years. The following table summarizes our stock option activity from continuing operations:

	December 31, 2023								
	Number of Shares	Weighted-average Exercise Price			Exercise		Iı	Aggregate ntrinsic Value	Weighted- average Remaining Contractual Term
Outstanding at beginning of year	0.27	\$	79.91						
Granted	0.05		114.93						
Exercised	(0.02)		52.02						
Forfeited / Cancelled	(0.01)		109.23						
Outstanding at end of year	0.29	\$	87.09	\$	14.5	6.0 years			
Vested and expected to vest at end of year	0.28	\$	86.29	\$	12.1	5.9 years			
Exercisable at end of year	0.18	\$	70.22	\$	14.4	4.8 years			

As of December 31, 2023, total unrecognized compensation cost related to stock options expected to be recognized over the weighted-average period of approximately 2.3 years is \$2.3.

The total intrinsic value of options exercised during the years ended December 31, 2023, 2022, and 2021 was \$2.3, \$3.5, and \$10.3, respectively. The total fair value of stock options vested during the years ended December 31, 2023, 2022, and 2021 was \$2.1, \$2.3, and \$2.6, respectively.

Restricted Stock and RSUs

Restricted stock and RSUs generally vest ratably over a three-year period and are valued based on our market price on the date of grant. The following table summarizes our unvested restricted stock and RSUs activity from continuing operations:

	December 31, 2023				
	Number of Shares	Weighted-Average Grant-Date Fair Value			
Unvested at beginning of year	0.11	\$ 125.14			
Granted	0.07	132.28			
Forfeited	(0.01)	150.56			
Vested	(0.06)	106.20			
Unvested at end of year	0.11	\$ 137.70			

As of December 31, 2023, total unrecognized compensation cost related to unvested restricted stock and RSUs expected to be recognized over the weighted-average period of approximately 2.2 years is \$8.6.

The weighted-average grant-date fair value of restricted stock and RSUs granted during the years ended December 31, 2023, 2022, and 2021 was \$132.28, \$155.02, and \$124.32, respectively. The total fair value of restricted stock and RSUs that vested during the years ended December 31, 2023, 2022, and 2021 was \$7.7, \$10.0, and \$17.4, respectively.

Performance Units

Performance units are earned over a three-year period. Based on the attainment of pre-determined performance and market condition targets as determined by the Compensation Committee of the Board of Directors, performance units earned may be in the range of between 0% and 200%. The following table, which is stated at a 100% earned percentage, summarizes our performance units activity from continuing operations:

	Decembe	r 31, 2023
	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested at beginning of year	0.07	\$ 103.66
Granted	0.05	126.86
Vested	(0.03)	68.70
Forfeited	(0.02)	94.57
Unvested at end of year	0.07	\$ 134.41

As of December 31, 2023, total unrecognized compensation cost related to performance units expected to be recognized over a weighted-average period of approximately 1.8 years is \$4.5.

The weighted-average grant-date fair value of performance units granted during the years ended December 31 2023, 2022, and 2021 was \$126.86, \$153.81, and \$118.41, respectively. The total fair value of performance units that vested during the years ended December 31, 2023, 2022, and 2021 was \$3.4, \$2.6, and \$0.9, respectively.

Directors' Stock Grants

In 2023, 2022, and 2021, we granted the non-employee directors stock awards covering 0.01 shares of common stock for each of those years, which had fair values of \$1.1, \$0.7, and \$0.6, respectively. These stock awards were fully vested on the grant date. Likewise, the fair values were recognized immediately on the grant date.

NOTE 20 — Leases

Lessee Accounting

The Company leases certain office spaces, warehouses, facilities, vehicles and equipment. Our leases have maturity dates ranging from January 2024 to September 2036. Leases with an initial term of twelve months or less are not recorded on the balance sheet. Operating lease ROU assets are classified as property, plant and equipment, net in the consolidated balance sheets. Finance lease ROU assets are classified as other assets in the consolidated balance sheets. Operating lease liabilities are classified as other current liabilities and other long-term liabilities in the consolidated balance sheets.

We incurred \$21.1, \$16.9 and \$12.1 of rental expense under operating leases for the years ended December 31, 2023, 2022 and 2021, respectively. Certain operating 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. 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 provided by 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.

We incurred \$0.7, \$0.2 and \$0.2 of finance lease interest for the years ended December 31, 2023, 2022 and 2021, respectively.

The following table presents the lease balances within our consolidated balance sheets, weighted average remaining lease term and weighted average discount rates related to our leases:

Lease Assets and Liabilities	December 31, 2023		Γ	December 31, 2022
Assets				
Operating lease, net	\$	69.1	\$	21.1
Finance lease, net		16.1		3.0
Total lease assets	\$	85.2	\$	24.1
Liabilities				
Current:				
Operating lease liabilities	\$	18.5	\$	5.4
Finance lease liabilities		3.0		1.7
Non-current:				
Operating lease liabilities		50.7		15.6
Finance lease liabilities		14.2		1.5
Total lease liabilities	\$	86.4	\$	24.2
Weighted-average remaining lease terms				
Operating leases		5.1 years		4.4 years
Finance leases		5.9 years		2.1 years
Weighted-average discount rate				
Operating leases		6.6%		3.4%
Finance leases		6.7%		4.4%

Leased assets obtained in exchange for new finance and operating lease liabilities for the year ended December 31, 2023 were \$15.4 and \$62.3, respectively.

The following table summarizes future minimum lease payments for non-cancelable operating leases and for finance leases as of December 31, 2023:

	Finance	Operating
2024	\$ 4.5	\$ 22.6
2025	2.5	17.7
2026	2.2	12.3
2027	2.1	8.0
2028	1.8	6.8
Thereafter (1)	9.8	14.4
Total future minimum lease payments	\$ 22.9	\$ 81.8
Less: Present value discount	(5.7)	(12.6)
Lease Liability	\$ 17.2	\$ 69.2

⁽¹⁾ As of December 31, 2023, future minimum lease payments for non-cancelable operating leases for periods subsequent to 2028 relate to 20 leased facilities.

Lessor Accounting

We lease equipment manufactured by Chart primarily through our Cryo-Lease program as sales-type and operating leases. As of December 31, 2023 and 2022, our short-term net investment in sales-type leases was \$21.4 and \$14.5, respectively and is included in other current assets in our consolidated balance sheets. Our long-term net investment in sales-type leases was \$62.1 and \$44.3 as of December 31, 2023 and 2022, respectively, and is included in other assets in our consolidated balance sheets. For sales-type leases, interest income was \$3.3, \$2.4 and \$0.9 in the consolidated statements of income for the years ended December 31, 2023, 2022, and 2021, respectively.

Operating leases offered by Chart may include early termination options. At the end of a lease, a lessee generally has the option to either extend the lease, purchase the underlying equipment for a fixed price or return it to Chart. The lease agreements clearly define applicable return conditions and remedies for non-compliance to ensure that leased equipment will be in good operating condition upon return.

The following table represents sales from sales-type and operating leases:

	 December 31,						
	2023		2022		2021		
Sales-type leases	\$ 39.3	\$	28.1	\$	46.5		
Operating leases	 5.2		4.1		2.4		
Total sales from leases	\$ 44.5	\$	32.2	\$	48.9		

The following table represents scheduled payments for sales-type leases:

	Decer	nber 31, 2023
2024	\$	22.3
2025		22.2
2026		19.5
2027		13.5
2028		9.7
Thereafter		25.3
Total		112.5
Less: unearned income		29.0
Total	\$	83.5

The following table represents the cost of equipment leased to others:

	December 31,					
	2023		2022			
Equipment leased to others, cost	\$	20.6	\$	17.3		
Less: accumulated depreciation		4.4		3.1		
Equipment leased to others, net	\$	16.2	\$	14.2		

The following table represents payments due for operating leases:

	Dece	ember 31, 2023
2024	\$	0.4
2025		0.1
2026		_
2027		_
2028		_
Thereafter		_
Total	\$	0.5
		-

NOTE 21 — Commitments and Contingencies

Environmental

We are subject to federal, state, local, and foreign environmental laws and regulations concerning, among other matters, waste water effluents, air emissions, and handling and disposal of hazardous materials, such as cleaning fluids. We are involved with environmental compliance, investigation, monitoring, and remediation activities at certain of our owned and formerly owned manufacturing facilities and at one owned facility that is leased to a third party, and, except for these continuing remediation efforts, believe we are currently in substantial compliance with all known environmental regulations. Undiscounted accrued reserves at December 31, 2023 and 2022 were not material.

Legal Proceedings

In connection with our divestiture of our cryobiological products business on October 1, 2020, Chart retained certain potential liabilities, including claims in connection with lawsuits filed in the U.S. District Court for the Northern District of California and the San Francisco Superior Court during the second quarter of 2018 against Chart and other defendants with respect to the alleged failure of a stainless steel cryobiological storage tank at the Pacific Fertility Center in San Francisco, California.

As previously disclosed, the Company reached a settlement in late January 2023 to resolve these cases. In the fourth quarter of 2022, the Company recorded a loss contingency accrual of \$305.6 and a related loss receivable of \$231.9 from insurance proceeds from these combined cases, which were recognized in our consolidated balance sheet as of December 31, 2022. The net loss of approximately \$73.0 was recognized in discontinued operations and represented the expected out-of-pocket payments in connection with these settlements. The settlement was finalized and funded on March 20, 2023; therefore the previously disclosed loss contingency accrual and related loss receivable are no longer recorded as of December 31, 2023. This settlement and the net out-of-pocket payments do not reflect third-party recoveries which the Company is pursuing with respect to the underlying facts in these cases, and which the Company currently anticipates will result in recoveries approximating one-quarter or more of the Company's out-of-pocket, net payments.

We continue to evaluate the merits of the sole remaining lawsuit that was not included in the settlement in light of the information available. Based on the status of that lawsuit, a current estimate of reasonably possible losses in that case cannot be made; however, the Company does not anticipate the potential exposure to be material. The Company does not intend to report on this lawsuit quarterly, absent developments that would impact the materiality of the claim.

We are occasionally subject to various legal claims related to performance under contracts, product liability, taxes, employment matters, environmental matters, intellectual property, and other matters incidental to the normal course of our business. Based on our historical experience in litigating these claims, as well as our current assessment of the underlying merits of the claims and applicable insurance, if any, management believes that the final resolution of these matters, including the sole remaining Pacific Fertility Center case described above, will not have a material adverse effect on our financial position, liquidity, cash flows, or results of operations, except that our results of operations for any particular reporting period may be adversely affected by any potential or actual loss that is accrued in such period. Future developments may, however, result in resolution of these legal claims in a way that could have a material adverse effect.

NOTE 22 — Restructuring Activities

Restructuring costs of \$13.5 for the year ended December 31, 2023, were primarily related to cost reduction actions relative to Howden integration. Restructuring credits of \$1.0 for the year ended December 31, 2022, were primarily related to the reversal of prior restructuring accruals for employee retention at our Houston, Texas facility which was offset by moving and employee severance costs relative to restructuring at our Beasley, Texas, Houston, Texas, and Tulsa Oklahoma facilities. Restructuring costs of \$3.5 for the year ended December 31, 2021, were primarily related to moving and employee severance costs. During the third quarter of 2021, we announced our intention to transfer our Houston, Texas repair and service operations to our Beasley, Texas location.

We closely monitor our end markets and order rates and continue to take appropriate and timely actions as necessary.

The following table summarizes severance and other restructuring costs (credits), which includes employee-related costs, facility rent and exit costs, relocation, recruiting, travel and other:

	Year Ended December 31,					
	2023		2022			2021
Severance:						
Cost of sales	\$	0.3	\$		\$	0.4
Selling, general, and administrative expenses		11.8		_		0.8
Total severance costs		12.1				1.2
Other restructuring:						
Cost of sales		0.2		(1.0)		2.2
Selling, general, and administrative expenses		1.2		_		0.1
Total other restructuring costs (credits)		1.4		(1.0)		2.3
Total restructuring costs (credits)	\$	13.5	\$	(1.0)	\$	3.5

The following table summarizes restructuring costs (credits) by reportable segment:

	Year Ended December 31,						
		2023		2022		2021	
Cryo Tank Solutions	\$	1.6	\$	0.1	\$	0.3	
Heat Transfer Systems		0.9		0.3		1.7	
Specialty Products		1.8		_		_	
Repair, Service & Leasing		4.0		(1.4)		1.5	
Corporate		5.2		_		_	
Total restructuring costs (credits)	\$	13.5	\$	(1.0)	\$	3.5	

The following table summarizes our consolidated restructuring activities:

Balance as of December 31, 2020	\$ 0.8
Restructuring costs	3.5
Cash payments and other	(2.0)
Balance as of December 31, 2021	2.3
Restructuring credits	(1.0)
Cash payments and other	(1.1)
Balance as of December 31, 2022	0.2
Restructuring costs	13.5
Cash payments and other	(11.8)
Balance as of December 31, 2023	\$ 1.9

CHART INDUSTRIES, INC. AND SUBSIDIARIES SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS (Dollars in millions)

	Additions											
	beg	ance at jinning period	c	harged to osts and expenses	1	Charged to other accounts	De	ductions	Tra	anslations	at	lance end of eriod
Year Ended December 31, 2023												
Allowance for credit losses	\$	4.5	\$	2.2	\$	_	\$	(0.6) (1)	\$	(0.2)	\$	5.9
Deferred tax assets valuation allowance		5.4		_		86.9		$(2.0)^{(2)}$		_		90.3
Year Ended December 31, 2022												
Allowance for credit losses	\$	6.0	\$	0.5	\$	_	\$	(2.6) (1)	\$	0.6	\$	4.5
Deferred tax assets valuation allowance		21.6		0.4		_		(14.8)		(1.8)		5.4
Year Ended December 31, 2021												
Allowance for credit losses	\$	8.4	\$	1.2	\$		\$	(1.1) (1)	\$	(2.5)	\$	6.0
Deferred tax assets valuation allowance		33.9		0.3		_		(12.7)		0.1		21.6

⁽¹⁾ Reversal of amounts previously recorded as bad debt and uncollectible accounts written off.

Deductions to the deferred tax assets valuation allowance relate to decreased deferred tax assets and the release of the valuation allowance.

INDEX TO EXHIBITS

Exhibit No.	Description
2.1	Agreement and Plan of Merger, among Chart Industries, Inc., Chart Sully Corporation, RCHPH Holdings, Inc., and R/C Hudson Holdings, L.P., solely in its capacity as the Initial Holder Representative under the Merger Agreement, dated as of June 30, 2017 (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission ("SEC") on June 30, 2017 (File No. 001-11442)).**
2.1.1	Amendment No. 1, dated September 19, 2017, to Agreement and Plan of Merger, among Chart Industries, Inc., Chart Sully Corporation, RCHPH Holdings, Inc., and R/C Hudson Holdings, L.P., solely in its capacity as the Initial Holder Representative under the Merger Agreement, dated as of June 30, 2017 (incorporated by reference to Exhibit 2.2 to the Registrant's Current Report on Form 8-K filed with the SEC on September 21, 2017 (File No. 001-11442)).**
2.2	Share Purchase Agreement, by and among Chart Industries, Inc., Alessandro Spada, Elena Spada and Federico Spada, dated as of September 26, 2018 (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed with the SEC on September 27, 2018 (File No. 001-11442)).**
2.2.1	Amended and Restated Share Purchase Agreement, by and among Chart Industries, Inc., Alessandro Spada, Elena Spada, Federico Spada and VRV S.p.a., dated as of November 13, 2018 (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed with the SEC on November 15, 2018 (File No. 001-11442)).**
2.3	Stock Purchase Agreement, by and among Chart Inc., Chart Industries Luxembourg S.à r.l., Chart Asia Investment Company Limited and NGK Spark Plug Co., Ltd., dated as of September 28, 2018 (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed with the SEC on October 1, 2018 (File No. 001-11442)).**
2.4	Asset Purchase Agreement, dated as of May 8, 2019, by and among Chart Industries, Inc., E&C FinFan, Inc. and Harsco Corporation (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on May 9, 2019).
2.5	Purchase Agreement by and between Chart Industries, Inc. and Cryoport, Inc. dated as of August 24, 2020 (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on August 25, 2020 (File No. 001-11442)).
2.6	Equity Purchase Agreement, dated as of November 8, 2022, by and among Granite Holdings I B.V., Granite Holdings II B.V., Granite US Holdings LP, Granite Acquisition GmbH, Granite Canada Holdings Acquisition Corp., HowMex Holdings, S. de R.L. de C.V. and Chart Industries, Inc. (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on November 9, 2022 (File No. 001-11442)). **
2.7	Letter Agreement, dated December 7, 2022, by and among Granite Holdings I B.V., Granite Holdings II B.V., Granite US Holdings GP, LLC, Granite US Holdings LP, Granite Acquisition GmbH, Granite Canada Holdings Acquisition Corp., HowMex Holdings, S. de R.L. de C.V. and Chart Industries, Inc. (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 9, 2022 (File No. 001-11442)).
3.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to Amendment No. 5 to the Registrant's Registration Statement on Form S-1 (File No. 333-133254)).
3.2	Amended and Restated By-Laws, as amended (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 19, 2008 (File No. 001-11442)).
4.1	Form of Certificate (incorporated by reference to Exhibit 4.1 to Amendment No. 4 to the Registrant's Registration Statement on Form S-1 (File No. 333-133254)).
4.2	Indenture, dated as of November 6, 2017, by and between Chart Industries, Inc. and Wells Fargo Bank, National Association (including the form of the 1.00% Convertible Senior Subordinated Notes due 2024) (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed with the SEC on November 6, 2017 (File No. 001-11442)).
4.2.1	First Supplemental Indenture, dated as of December 31, 2020, to the Indenture, dated November 6, 2017 by and among Chart Industries, Inc. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on January 6, 2021 (File No. 001-11442)).
4.3	Description of Securities (x)

E-1

- 4.4 Certificate of Designations, filed with the Secretary of State of the State of Delaware and effective on December 13, 2022 (incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 13, 2022 (File No. 001-11442)).
- 4.5 Form of Certificate for the 6.75% Series B Mandatory Convertible Preferred Stock (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 13, 2022 (File No. 001-11442)).
- 4.6 Deposit Agreement, dated as of December 13, 2022, among Chart Industries, Inc., Computershare Inc. and Computershare Trust Company, N.A., acting jointly as Depositary, and the holders from time to time of the depositary receipts described therein (incorporated by reference to Exhibit 4.2 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 13, 2022 (File No. 001-11442)).
- 4.7 Form of Depositary Receipt for the Depositary Shares (incorporated by reference to Exhibit 4.3 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 13, 2022 (File No. 001-11442)).
- 4.8 Indenture, dated as of December 22, 2022, by and among Chart Industries, Inc., the subsidiary guarantors party thereto and U.S. Bank Trust Company, National Association, as trustee and as collateral agent (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 22, 2022 (File No. 001-11442)).
- 4.9 Indenture, dated as of December 22, 2022, by and among Chart Industries, Inc., the subsidiary guarantors party thereto and U.S. Bank Trust Company, National Association, as trustee (incorporated by reference to Exhibit 4.2 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 22, 2022 (File No. 001-11442)).
- 4.10 Form of 7.500% Senior Secured Notes due 2030 (incorporated by reference to Exhibit 4.3 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 22, 2022 (File No. 001-11442)).
- 4.11 Form of 9.500% Senior Notes due 2031 (incorporated by reference to Exhibit 4.4 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 22, 2022 (File No. 001-11442)).
- 10.1 Chart Industries, Inc. Amended and Restated 2009 Omnibus Equity Plan (incorporated by reference to Appendix A to the Registrant's definitive proxy statement filed with the SEC on April 10, 2012 (File No. 001-11442)).*
- 10.1.1 Amendment No. 1 to the Chart Industries, Inc. Amended and Restated 2009 Omnibus Equity Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2012 (File No. 001-11442)).*
- 10.1.2 Form of Nonqualified Stock Option Agreement (2014 grants) under the Chart Industries, Inc. Amended and Restated 2009 Omnibus Equity Plan (incorporated by reference to Exhibit 10.3.13 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2013 (File No. 001-11442)).*
- 10.1.3 Form of Nonqualified Stock Option Agreement (2015 grants) under the Chart Industries, Inc. Amended and Restated 2009 Omnibus Equity Plan (incorporated by reference to Exhibit 10.3.16 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2014 (File No. 001-11442)).*
- 10.1.4 Form of Nonqualified Stock Option Agreement (2016 grants) under the Chart Industries, Inc. Amended and Restated 2009 Omnibus Equity Plan (incorporated by reference to Exhibit 10.3.18 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2015 (File No. 001-11442)).*
- 10.1.5 Form of Nonqualified Stock Option Agreement (2017 grants) under the Chart Industries, Inc. Amended and Restated 2009 Omnibus Equity Plan (incorporated by reference to Exhibit 10.3.21 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2016 (File No. 001-11442)).*
- 10.2 Chart Industries, Inc. 2017 Omnibus Equity Plan (incorporated by reference to Appendix B to the Registrant's definitive proxy statement filed with the SEC on April 11, 2017 (File No. 001-11442)).*
- 10.2.1 Form of Nonqualified Stock Option Agreement (2018 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan (incorporated by reference to Exhibit 10.3.25 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 001-11442)).*
- Form of Performance Unit Agreement (2018 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan (incorporated by reference to Exhibit 10.3.26 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 001-11442)).*
- Form of Restricted Share Unit Agreement (2018 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan (incorporated by reference to Exhibit 10.3.27 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 001-11442)).*
- Form of Stock Award Agreement and Deferral Election Form (for eligible directors) under the Chart Industries, Inc. 2017 Omnibus Equity Plan. (incorporated by reference to Exhibit 10.3.4 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-11442).*

- 10.2.5 Form of Nonqualified Stock Option Agreement (2019 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan. (incorporated by reference to Exhibit 10.3.5 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-11442)).*
- Form of Performance Unit Agreement (2019 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan. (incorporated by reference to Exhibit 10.3.6 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-11442)).*
- 10.2.7 Form of Restricted Share Unit Agreement (2019 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan. (incorporated by reference to Exhibit 10.3.7 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-11442))*
- Form of Restricted Share Unit Agreement (2018 Evanko Grant) under the Chart Industries, Inc. 2017 Omnibus Equity Plan. (incorporated by reference to Exhibit 10.3.8 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-11442).*
- 10.2.9 Form of Nonqualified Stock Option Agreement (2020 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan. (incorporated by reference to Exhibit 10.2.9 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-11442)).*
- 10.2.10 Form of Performance Unit Agreement (2020 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan. (incorporated by reference to Exhibit 10.2.10 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-11442)).*
- 10.2.11 Form of Restricted Share Unit Agreement (2020 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan. (incorporated by reference to Exhibit 10.2.11 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-11442)).*
- 10.2.12 Form of Nonqualified Stock Option Agreement (2021 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan. (incorporated by reference to Exhibit 10.2.13 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2020 (File No. 001-11442)).*
- 10.2.13 Form of Performance Unit Agreement (2021 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan. (incorporated by reference to Exhibit 10.2.14 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2020 (File No. 001-11442))).*
- 10.2.14 Form of Restricted Share Unit Agreement (2021 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan. (incorporated by reference to Exhibit 10.2.15 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2020 (File No. 001-11442))).*
- 10.2.15 Form of Nonqualified Stock Option Agreement (2022 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan (incorporated by reference to Exhibit 10.2.15 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2021 (File No. 001-11442)).*
- 10.2.16 Form of Performance Unit Agreement (2022 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan (incorporated by reference to Exhibit 10.2.16 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2021 (File No. 001-11442)).*
- 10.2.17 Form of Restricted Share Unit Agreement (2022 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan (incorporated by reference to Exhibit 10.2.17 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2021 (File No. 001-11442)).*
- 10.2.18 Form of Nonqualified Stock Option Agreement (2023 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan (incorporated by reference to Exhibit 10.2.18 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2022 (File No. 001-11442)).*
- Form of Performance Unit Agreement (2023 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan (incorporated by reference to Exhibit 10.2.19 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2022 (File No. 001-11442)).*
- 10.2.20 Form of Restricted Share Unit Agreement (2023 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan (incorporated by reference to Exhibit 10.2.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2022 (File No. 001-11442)).*
- 10.2.21 Form of Nonqualified Stock Option Agreement (2024 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan.* (x)
- 10.2.22 Form of Performance Unit Agreement (2024 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan.* (x)

- 10.2.23 Form of Restricted Share Unit Agreement (2024 grants) under the Chart Industries, Inc. 2017 Omnibus Equity Plan.* (x)
- Amended and Restated Chart Industries, Inc. Voluntary Deferred Income Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on June 28, 2010 (File No. 001-11442)).*
- 10.3.1 Amendment No. 1 to the Amended and Restated Chart Industries, Inc. Voluntary Deferred Income Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (File No. 001-11442)).*
- 10.3.2 Amendment No. 2 to the Amended and Restated Chart Industries, Inc. Voluntary Deferred Income Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on July 14, 2016 (File No. 001-11442)).*
- 10.4 Chart Industries, Inc. Cash Incentive Plan (incorporated by reference to Appendix A to the Registrant's definitive proxy statement filed with the SEC on April 8, 2014 (File No. 001-11442)).*
- 10.5 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 SEC on March 29, 2019 (File No. 001-11442)).*
- Amended and Restated Employment Agreement, dated effective June 12, 2018, by and between Chart Industries, Inc. and Jillian C. Evanko (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K/A filed with the SEC on July 10, 2018 (File No. 001-11442)).*
- 10.7 Employment Agreement, dated October 26, 2017, by and between Chart Industries, Inc. and Gerald F. Vinci (incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 001-11442)).*
- 10.8 Amended and Restated Severance Agreement, dated effective October 1, 2021, by and between Chart Industries, Inc. and Joe Brinkman (incorporated by reference to Exhibit 10.8 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2021 (File No. 001-11442)).*
- Employment Agreement, dated March 26, 2019, by and between Chart Industries, Inc. and Herbert G. Hotchkiss (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019 (File No. 001-11442)).*
- 10.10 Retention Agreement, dated effective December 23, 2019, by and between Chart Energy & Chemicals, Inc. and Douglas Ducote, Jr. (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2022 (File No. 001-11442)).*
- 10.11 Form of Indemnification Agreement (incorporated by reference to Exhibit 10.20 to the Registrant's Registration Statement on Form S-1 (File No. 333-133254)).
- Base Call Option Transaction Confirmation, dated October 31, 2017, by and between Chart Industries, Inc. and Morgan Stanley & Co. International plc (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the SEC on November 6, 2017 (File No. 001-11442)).
- 10.13.1 Base Warrants Confirmation, dated October 31, 2017, by and between Chart Industries, Inc. and Morgan Stanley & Co. International plc (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed with the SEC on November 6, 2017 (File No. 001-11442)).
- 10.13.2 Base Call Option Transaction Confirmation, dated October 31, 2017, by and between Chart Industries, Inc. and JPMorgan Chase Bank, National Association, London Branch (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on November 6, 2017 (File No. 001-11442)).
- 10.13.3 Base Warrants Confirmation, dated October 31, 2017, by and between Chart Industries, Inc. and JPMorgan Chase Bank, National Association, London Branch (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed with the SEC on November 6, 2017 (File No. 001-11442)).
- 10.13.4 Base Call Option Transaction Confirmation, dated October 31, 2017, by and between Chart Industries, Inc. and Bank of America, N.A. (incorporated by reference to Exhibit 10.5 to the Registrant's Current Report on Form 8-K filed with the SEC on November 6, 2017 (File No. 001-11442)).
- 10.13.5 Base Warrants Confirmation, dated October 31, 2017, by and between Chart Industries, Inc. and Bank of America, N.A. (incorporated by reference to Exhibit 10.6 to the Registrant's Current Report on Form 8-K filed with the SEC on November 6, 2017 (File No. 001-11442)).
- 10.13.6 Additional Call Option Transaction Confirmation, dated November 1, 2017, by and between Chart Industries, Inc. and Morgan Stanley & Co. International plc (incorporated by reference to Exhibit 10.7 to the Registrant's Current Report on Form 8-K filed with the SEC on November 6, 2017 (File No. 001-11442)).

- 10.13.7 Additional Warrants Confirmation, dated November 1, 2017, by and between Chart Industries, Inc. and Morgan Stanley & Co. International plc (incorporated by reference to Exhibit 10.8 to the Registrant's Current Report on Form 8-K filed with the SEC on November 6, 2017 (File No. 001-11442)).
- 10.13.8 Additional Call Option Transaction Confirmation, dated November 1, 2017, by and between Chart Industries, Inc. and JPMorgan Chase Bank, National Association, London Branch (incorporated by reference to Exhibit 10.9 to the Registrant's Current Report on Form 8-K filed with the SEC on November 6, 2017 (File No. 001-11442)).
- 10.13.9 Additional Warrants Confirmation, dated November 1, 2017, by and between Chart Industries, Inc. and JPMorgan Chase Bank, National Association, London Branch (incorporated by reference to Exhibit 10.10 to the Registrant's Current Report on Form 8-K filed with the SEC on November 6, 2017 (File No. 001-11442)).
- 10.13.10 Additional Call Option Transaction Confirmation, dated November 1, 2017, by and between Chart Industries, Inc. and Bank of America, N.A. (incorporated by reference to Exhibit 10.11 to the Registrant's Current Report on Form 8-K filed with the SEC on November 6, 2017 (File No. 001-11442)).
- 10.13.11 Additional Warrants Confirmation, dated November 1, 2017, by and between Chart Industries, Inc. and Bank of America, N.A. (incorporated by reference to Exhibit 10.12 to the Registrant's Current Report on Form 8-K filed with the SEC on November 6, 2017 (File No. 001-11442)).
- Fifth Amended and Restated Credit Agreement, dated as of October 18, 2021, by and among Chart Industries, Inc., Chart Industries Luxembourg S.à r.l., Chart Asia Investment Company Limited, the other foreign borrowers from time to time party thereto, the lenders from time to time party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A., Fifth Third Bank, National Association, HSBC Bank USA, National Association, PNC Bank, National Association and Wells Fargo Bank, National Association, as Co-Syndication Agents, and BMO Harris Bank, N.A., Capital One, N.A., Citizens Bank, N.A., MUFG Union Bank, N.A. and Regions Bank, as Co-Documentation Agents (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on October 21, 2021 (File No. 001-11442)).
- 10.15 Amendment No. 1, dated as of November 21, 2022, to the Credit Agreement, dated as of October 18, 2021, by and among Chart Industries, Inc., the subsidiaries of Chart Industries, Inc. designated as borrowers from time to time thereunder, the lenders named therein, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A., Fifth Third Bank, National Association, HSBC Bank USA, National Association, PNC Bank, National Association and Wells Fargo Bank, National Association, as Co-Syndication Agents, and BMO Harris Bank, N.A., Capital One, N.A., Citizens Bank, N.A., MUFG Union Bank, N.A. and Regions Bank, as Co-Documentation Agents (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on November 22, 2022 (File No. 001-11442)).
- Amendment No. 2, dated as of March 16, 2023, to the Credit Agreement, dated as of October 18, 2021, by and among Chart Industries, Inc., the subsidiaries of Chart Industries, Inc. designated as borrowers from time to time thereunder, the lenders named therein, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A., Fifth Third Bank, National Association, HSBC Bank USA, National Association, PNC Bank, National Association and Wells Fargo Bank, National Association, as Co-Syndication Agents, and BMO Harris Bank, N.A., Capital One, N.A., Citizens Bank, N.A., MUFG Union Bank, N.A. and Regions Bank, as Co-Documentation Agents (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on March 17, 2023 (File No. 001-11442)).
- Amendment No. 3, dated as of March 17, 2023, to the Credit Agreement, dated as of October 18, 2021, by and among Chart Industries, Inc., the subsidiaries of Chart Industries, Inc. designated as borrowers from time to time thereunder, the lenders named therein, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A., Fifth Third Bank, National Association, HSBC Bank USA, National Association, PNC Bank, National Association and Wells Fargo Bank, National Association, as Co-Syndication Agents, and BMO Harris Bank, N.A., Capital One, N.A., Citizens Bank, N.A., MUFG Union Bank, N.A. and Regions Bank, as Co-Documentation Agents (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on March 17, 2023 (File No. 001-11442)).
- Amendment No. 4, dated as of June 30, 2023, which amends that certain Fifth Amended and Restated Credit Agreement, dated as of October 18, 2021 (as amended by Amendment No. 1, dated as of November 21, 2022, Amendment No. 2, dated as of March 16, 2023, Amendment No. 3, dated as of March 17, 2023, and as otherwise amended, restated, supplemented or otherwise modified prior to the date hereof), by and among Chart Industries, Inc., the direct or indirect subsidiaries of Chart Industries, Inc. designated as borrowers from time to time thereunder, the lenders named therein, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A., Fifth Third Bank, National Association, HSBC Bank USA, National Association, PNC Bank, National Association and Wells Fargo Bank, National Association, as Co-Syndication Agents, and BMO Harris Bank, N.A., Capital One, N.A., Citizens Bank, N.A., MUFG Union Bank, N.A. and Regions Bank, as Co-Documentation Agents (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on June 30, 2023 (File No. 001-11442)).

- Amendment No. 5, dated as of October 2, 2023, which amends that certain Fifth Amended and Restated Credit Agreement, dated as of October 18, 2021 (as amended by Amendment No. 1, dated as of November 21, 2022, Amendment No. 2, dated as of March 16, 2023, Amendment No. 3, dated as of March 17, 2023, Amendment No. 4, dated as of June 30, 2023, and as otherwise amended, restated, supplemented or otherwise modified prior to the date hereof), by and among Chart Industries, Inc., the direct or indirect subsidiaries of Chart Industries, Inc. designated as borrowers from time to time thereunder, the lenders named therein, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A., Fifth Third Bank, National Association, HSBC Bank USA, National Association, PNC Bank, National Association and Wells Fargo Bank, National Association, as Co-Syndication Agents, and BMO Harris Bank, N.A., Capital One, N.A., Citizens Bank, N.A., MUFG Union Bank, N.A. and Regions Bank, as Co-Documentation Agents (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on October 2, 2023 (File No. 001-11442)).
- 10.20 Letter Agreement dated May 30, 2003, by and between Chart Industries, Inc. and Mr. Joseph Belling (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on July 28, 2023 (File No. 001-11442)).
- 10.21 Co-Investment Agreement, dated as of September 7, 2021, by and among Chart Industries, Inc., ISQ HTEC HoldCo Limited and ISQ Blueprint Acquisitions Inc. (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on October 21, 2021 (File No. 001-11442)).
- 10.22 Collateral Agreement, dated as of December 22, 2022, by and among Chart Industries, Inc., the subsidiary guarantors party thereto and U.S. Bank Trust Company, National Association, as collateral agent (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 22, 2022 (File No. 001-11442)).
- Intercreditor Agreement, dated as of December 22, 2022, by and among Chart Industries, Inc., the subsidiary guarantors party thereto, U.S. Bank Trust Company, National Association, as collateral agent for the secured notes, and JPMorgan Chase Bank, N.A., as administrative agent and collateral agent under the credit agreement (incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 22, 2022 (File No. 001-11442)).
- 21.1 List of Subsidiaries. (x)
- 23.1 Consent of Independent Registered Public Accounting Firm Deloitte & Touche. (x)
- 31.1 Rule 13a-14(a) Certification of the Company's Chief Executive Officer and President. (x)
- 31.2 Rule 13a-14(a) Certification of the Company's Vice President and Chief Financial Officer. (x)
- 32.1 Section 1350 Certification of the Company's Chief Executive Officer and President. (xx)
- 32.2 Section 1350 Certification of the Company's Vice President and Chief Financial Officer. (xx)
- 97.1 Chart Industries, Inc. Incentive-Based Compensation Clawback Policy (x)
- 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.
- ** Certain exhibits and schedules have been omitted and Chart agrees to furnish supplementally to the Securities and Exchange Commission a copy of any omitted exhibits and schedules upon request.

