UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2023**

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM ________TO________ .**

Commission file number 1-13179

FLOWSERVE CORPORATION

(Exact name of registrant as specified in its charter)

New York	**31-0267900**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
5215 N. O'Connor Boulevard Suite 700, Irving, Texas	**75039**
(Address of principal executive offices)	(Zip Code)

(972) 443-6500

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, $1.25 Par Value	FLS	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

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

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

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

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

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes ☑ No ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

The aggregate market value of the common stock held by non-affiliates of the registrant, computed by reference to the closing price of the registrant's common stock as reported on June 30, 2023 (the last business day of the registrant's most recently completed second fiscal quarter), was approximately $2,637,862,572. For purposes of the foregoing calculation only, all directors, executive officers and known 5% beneficial owners have been deemed affiliates.

Number of the registrant's common shares outstanding as of February 14, 2024 was 131,226,906.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information contained in the definitive proxy statement for the registrant's 2024 Annual Meeting of Shareholders to be filed pursuant to Regulation 14A within 120 days after the end of the registrant's fiscal year covered by the report is incorporated by reference into Part III hereof.

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PART I

ITEM 1. *BUSINESS*

Unless the context otherwise indicates, references to "Flowserve," "the Company" and such words as "we," "our" and "us" include Flowserve Corporation and its subsidiaries.

OVERVIEW

Flowserve's purpose statement is to create extraordinary flow control solutions to make the world better for everyone. We are a world-leading manufacturer and aftermarket service provider of comprehensive flow control systems. We develop and manufacture precision-engineered flow control equipment integral to the movement, control and protection of the flow of materials in our customers' critical processes. Our product portfolio of pumps, valves, seals, automation and aftermarket services supports global infrastructure industries, including oil and gas, chemical, power generation (including nuclear, fossil and renewable) and water management, as well as certain general industrial markets where our products and services add value. Through our manufacturing platform and global network of Quick Response Centers ("QRCs"), we offer a broad array of aftermarket equipment services, such as installation, advanced diagnostics, repair and retrofitting for global infrastructure markets.

Strategies

Flowserve has a clear growth strategy as we transform our operations to better meet our customers' needs. Our overarching strategic objectives are to remain a global leader in the flow control industry and capitalize on growth through our traditional end markets as well as through energy transition opportunities. We seek to be recognized by our customers as the most trusted brand of flow control technology in terms of reliability and quality, which we believe will help maximize shareholder value.

In pursuit of these objectives, we maintain a strategic plan that takes a balanced approach to integrating both short-term and long-term initiatives and accelerates growth through three key areas: diversification, decarbonization, and digitization (the "3D Strategy"). With our 3D Strategy we hope to utilize our leadership in the flow control industry, and through our commitment to research and development, create innovative products and solutions which address the emerging climate and environmental issues that our customers face. We believe that our 3D strategy, improved execution through our new operating model and continued innovation efforts will drive long-term revenue growth and profit expansion. For further discussion of our new operating model, see the Executive Overview in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" included in this Annual Report.

Diversification

We are diversifying our traditional end markets to create a more balanced and less cyclical overall portfolio with a focus in the following end markets: water, specialty chemicals, and new vacuum and seal technologies. With a goal of supporting our customers today and through the energy transition, we focus on several elements to create a balanced and diverse portfolio based on cleaner sources of energy, including: (i) re-engaging our offerings with market participants in areas such as water, specialty chemicals, and other general industries where we maintain strong capabilities, (ii) increasing our exposure to end markets offering long-term outsized growth potential and (iii) maintaining and growing our vacuum technology that supports chemical processing and advanced industrial manufacturing.

Decarbonization

We are supporting our customers through their energy transitions. More than 90 countries have net-zero targets and corporations around the world are investing to help achieve their climate and emission reduction goals. Our decarbonization strategy focuses on several areas to address the effects of climate change through our innovative portfolio of flow control solutions, including: (i) continuing to develop our products and services that can be utilized in our customers' carbon reduction efforts, (ii) providing overall product and solution offerings to help customers' energy transition efforts in energy efficiency, carbon reduction, and operational cost mitigation and (iii) maintaining and improving our technologies already available in nuclear, liquefied natural gas ("LNG"), hydrogen, carbon capture, and renewables. The Flowserve Energy Advantage Program provides a holistic flow control approach aimed at helping operators reach their carbon reduction goals and lower total cost of ownership. It provides customers with Flowserve engineering expertise, a systematic data-driven evaluation process and a complete offering of products and services that can help increase energy efficiency through optimization of pump and valve power consumption, reduce carbon emissions, improve plant productivity and reliability, and provide operational cost savings.

Digitization

We are leveraging technology and data to improve our operations and those of our customers. With a goal of digitizing our existing installed base and new original equipment, we focus on several efforts to help our customers digitize their operations, including: (i) implementing RedRaven, our proprietary Industrial Internet of Things (“IIoT”) solution for equipment monitoring, to improve customers’ internal operations, (ii) supporting customer sites across a diverse set of industry applications and (iii) utilizing RedRaven to monitor existing assets, predict costly downtime in critical assets, and optimize flow loop operations.

History

Flowserve Corporation was created in 1997 through the merger of two leading fluid motion and control companies — BW/IP and Durco International. Under the name of a predecessor entity, we were incorporated in the State of New York on May 1, 1912, but some of our heritage product brand names date back to our founding in 1790. Over the years, we have evolved through organic growth and strategic acquisitions, and our over 230-year history of Flowserve heritage brands serves as the foundation for the breadth and depth of our products and services today.

BUSINESS SEGMENTS AND PRODUCTS

Our Primary Industries

We sell our products and services to approximately 10,000 companies, including some of the world’s leading engineering, procurement and construction firms ("EPC"), original equipment manufacturers, distributors and end users. Our products and services are used in several distinct industries having a broad geographic reach. Our total bookings in 2023, 2022 and 2021 were $4.3 billion, $4.4 billion and $3.8 billion, respectively. Our bookings mix by industry in 2023, 2022 and 2021 consisted of:

	2023	2022	2021
• oil and gas	38 %	40 %	35 %
• general industries(1)	26 %	22 %	26 %
• chemical(2)	21 %	22 %	24 %
• power generation	11 %	12 %	12 %
• water management	4 %	4 %	3 %

(1) General industries include mining and ore processing, pulp and paper, food and beverage and other smaller applications, as well as sales to distributors whose end customers typically operate in the other industries we primarily serve as identified above.

(2) Chemical industry is comprised of chemical-based and pharmaceutical products.

Demand

Demand for most of our products depends on the level of new capital investment as well as planned and unplanned maintenance expenditures by our customers. The level of new capital investment depends, in turn, on capital infrastructure projects driven by the need for products that rely on oil and gas, chemicals, power generation and water resource management, as well as general economic conditions. These drivers are generally related to the phase of the business cycle in their respective industries and the expectations of future market behavior, including changes in demand for certain products and processes as a result of evolving industry trends and needs. The levels of maintenance expenditures are additionally driven by the reliability of equipment, planned and unplanned downtime for maintenance and the required capacity utilization of the process. Energy transition has also resulted in increased demand for our products and services as customers and geographies look to secure more independent sources of energy.

Sales Channels

Sales to EPC firms and original equipment manufacturers are typically for large project orders and critical applications, as are certain sales to distributors. Project orders are typically procured for customers either directly from us or indirectly through contractors for new construction projects or facility enhancement projects that are longer-cycle projects and can take up to two years.

In contrast to large project orders, the quick turnaround business, which we also refer to as "short-cycle," is defined as orders that are received from the customer (booked) and shipped generally within six months of receipt. These orders are typically for more standardized, general purpose products, parts or services, and are less cyclical than larger capital expenditures driven by project orders. Each of our two business segments generates certain levels of this type of short-cycle business.

In the sale of aftermarket products and services (collectively referred to as "aftermarket"), we benefit from a large installed base of our original equipment, which requires periodic maintenance, repair and replacement parts. We use our manufacturing platform and global network of QRCs to offer a broad array of aftermarket equipment services, such as installation, advanced diagnostics, repair and retrofitting. In geographic regions where we are positioned to provide quick response, we believe customers have traditionally relied on us, rather than our competitors, for aftermarket products due to our highly engineered and customized products. However, the aftermarket for standard products is competitive, as the existence of common standards allows for easier replacement of the installed products. As proximity of service centers, timeliness of delivery and quality are important considerations for all aftermarket products and services, we continue to selectively expand our global QRC capabilities to improve our ability to capture an increasing portion of this important aftermarket business. Each of our two business segments generates certain levels of aftermarket products and services.

We have pursued a strategy of industry diversity and geographic breadth to mitigate the impact on our business of normal economic downturns in any one of the industries or in any particular part of the world we serve. In addition, to augment our focus on growth, we have initiated the 3D Strategy to create a more balanced portfolio, supporting customers through the energy transition and leveraging technology and data to improve customer operations and provide solutions.

For events that may occur and adversely impact our business, financial condition, results of operations and cash flows, refer to "Item 1A. Risk Factors" of this Annual Report on Form 10-K for the year ended December 31, 2023 ("Annual Report"). For information on our sales and long-lived assets by geographic areas, see Note 19 to our consolidated financial statements included in "Item 8. Financial Statements and Supplementary Data" ("Item 8") of this Annual Report.

Business Functions

Our segments share a focus on critical flow control technology and benefit from our global footprint and our economies of scale in reducing administrative and overhead costs to serve customers more cost effectively. All segments share certain resources and functions, including elements of research and development ("R&D"), supply chain, safety, quality assurance and administrative functions that provide efficiencies and an overall lower cost structure.

Our operations leadership reports to our Chief Executive Officer and the segments share leadership for operational support functions such as R&D, marketing and supply chain. We believe this leadership structure positions the Company to leverage operational excellence, cost reduction initiatives and internal synergies across our entire operating platform to drive further growth and increase in shareholder value.

BUSINESS SEGMENTS

We report a two operating segment structure, consisting of our Flowserve Pumps Division and our Flow Control Division. In addition to the business segment information presented below, Note 19 to our consolidated financial statements in Item 8 of this Annual Report contains additional financial information about our business segments and geographic areas in which we have conducted business in 2023, 2022 and 2021.

FLOWSERVE PUMPS DIVISION

Our largest business segment is the Flowserve Pumps Division ("FPD"), through which we design, manufacture, pretest, distribute and service specialty and highly-engineered custom and pre-configured pumps and pump systems, mechanical seals, auxiliary systems, replacement parts and upgrades and related aftermarket services. FPD products and services are primarily used by companies that operate in the oil and gas, chemical, power generation, water management and general industries. We market our pump and mechanical seal products through our global sales force and our regional QRCs and service and repair centers or through independent distributors and sales representatives. A portion of our mechanical seal products are sold directly to other original equipment manufacturers for incorporation into their rotating equipment requiring mechanical seals.

Our pump products are manufactured in a wide range of metal alloys and with a variety of configurations to reliably meet the operating requirements of our customers. Mechanical seals are critical to the reliable operation of rotating equipment in that they prevent leakage and emissions of hazardous substances from the rotating equipment and reduce shaft wear on the equipment caused by the use of non-mechanical seals. We also manufacture a gas-lubricated mechanical seal that is used in high-speed compressors for gas pipelines and in the oil and gas production and process markets. Our products are currently manufactured in 35 manufacturing facilities worldwide, 10 of which are located in Europe, 11 in North America, eight in Asia Pacific and six in Latin America, and we have 131 QRCs, including those co-located in manufacturing facilities and/or shared with our Flow Control Division ("FCD").

We also conduct business through strategic foreign joint ventures. We have five unconsolidated joint ventures that are located in Chile, India, Saudi Arabia, South Korea and the United Arab Emirates, where a portion of our products are manufactured, assembled or serviced in these territories. These relationships provide numerous strategic opportunities, including increased access to our current and new markets, access to additional manufacturing capacity and expansion of our operational platform to support best-cost sourcing initiatives and balance capacity demands for other markets.

FPD Products

We manufacture more than 227 different active types of pumps, including American Petroleum Institute ("API") process pumps used in many downstream refining and petrochemical processing systems, and single case multistage axially split heavy duty pumps often used for high pressure hydrocarbon pipeline transmission. In addition, we manufacture double case diffuser style barrel pumps for medium duty applications in refining and petrochemical applications and submersible pump for deep well pumping in irrigation and municipal water supply service. We also manufacture approximately 193 different models of mechanical seals and sealing systems. Our pump products are sold under globally recognized brands in some cases dating back as far as 230 years ago, including Worthington, SIHI, Durco and Innomag.

FPD Services

We also provide engineered aftermarket services through our global network of 131 QRCs, some of which are co-located in manufacturing facilities, in 45 countries. Our FPD service personnel provide a comprehensive set of equipment services for flow management control systems, including installation, commissioning services, seal systems spare parts, repairs, advanced diagnostics, re-rate and upgrade solutions and retrofit programs, machining and comprehensive asset management solutions. We provide asset management services and condition monitoring for rotating equipment through special contracts with many of our customers that reduce maintenance costs. A large portion of FPD’s service work is performed on a quick response basis and we offer 24-hour service in all of our major markets.

FPD New Product Development

Our investments in new product R&D continue to focus on increasing the capability of our products as customer applications become more advanced, demanding greater levels of production (i.e., flow and power) and under more extreme conditions (i.e., erosive, corrosive and temperature) beyond the level of traditional technology. We continue to invest in our product platform and develop innovations to improve our competitive position in our key markets, including the global chemical industry and in the engineered equipment industry, specifically upstream, offshore and downstream applications for the oil and gas market. Continued engagement with our end users is exemplified through the completion of advancements that significantly improve energy efficiency, reduce total cost-of-ownership and enhance safety.

As the world continues to undergo energy transition in the coming years, significant investment towards renewable sources of energy and energy efficiency solutions will become increasingly more important. We continue to develop new product designs to support our customers through energy transition in our key end markets, and those markets targeted through the diversification efforts of our 3D Strategy. We have launched and will continue to launch new initiatives to support renewable energy, energy efficiency, emissions reduction, decarbonization, and sustainability as the world continues to embrace energy transition into the future. Product development and continued improvements in these areas is a key aspect of our environmental, social and governance ("ESG") program.

In addition, we continue to advance our capabilities and technology position in our rapidly developing IIoT segment. Over the past several years we have continued to both invest and partner in this space to build remote monitoring solutions, as well as advanced equipment diagnostics in order to provide remote asset management and related services capabilities for our end-user customers. Our IIoT solution, RedRaven, includes delivering intelligent "edge" devices, advanced networking infrastructure and secure communication and security protocols, secure data management, and remote monitoring and reporting for our customers. In addition, we have moved beyond exploring new additive manufacturing capabilities, such as 3D printing and fast casting methods, and are exploring ways to economically scale these techniques as another means of manufacturing our products to both reduce lead time and lower our production costs.

None of these newly developed products or services required the investment of a material amount of our assets or was otherwise material to our business. Flowserve continues to develop cryogenic hydrogen pumping products and technology in connection with a third party technology partnership which began in 2022. Furthermore, Flowserve continues to develop and commercialize new products with greater efficiency and capacity in the pressure exchanger portfolio. We expect to increase our R&D focus in the above areas.

FPD Customers

Our customer mix is diversified and includes leading EPC firms, major national and international companies, equipment end users in our served markets, other original equipment manufacturers, distributors and end users. Our sales mix of original equipment products and aftermarket products and services diversifies our business and helps mitigate the impact of normal economic cycles on our business. Our sales are diversified among several industries, including oil and gas, chemical, power generation, water management and general industries.

FPD Competition

The pump and mechanical seal industry is highly fragmented, with thousands of competitors globally. We compete, however, primarily with a limited number of large companies operating on a global scale. There are also a number of smaller, newer entrants in some of our emerging markets. Competition among our closest competitors is generally driven by delivery times, application knowledge, experience, expertise, price, breadth of product offerings, contractual terms, previous installation history and reputation for quality. Some of our largest industry competitors include: Sulzer Pumps; Ebara Corp.; Eagle Burgmann, which is a joint venture of two traditional global seal manufacturers, John Crane Inc., a unit of Smiths Group Plc; Weir Group Plc.; ITT Industries; and KSB SE & Co. KGaA.

The pump and mechanical seal industry continues to undergo consolidation, which is primarily driven by (i) the need to lower costs through reduction of excess capacity and (ii) customers' preference to align with global full service suppliers to simplify their supplier base. Despite the consolidation activity, the market remains highly competitive.

We believe that our strongest sources of competitive advantage rest with our extensive range of pumps for the oil and gas, petrochemical, chemical and power generation industries, our large installed base of products, our strong customer relationships, our high quality technology, our more than 230 years of experience in manufacturing and servicing pumping equipment, our reputation for providing quality engineering solutions and our ability to deliver engineered new seal product orders within 72 hours from the customer's request.

FPD Backlog

FPD's backlog of orders as of December 31, 2023 was $1,891.7 million, compared with $2,008.9 million as of December 31, 2022. We expect to recognize revenue on approximately 86% of December 31, 2023 backlog during 2024.

FLOW CONTROL DIVISION

FCD designs, manufactures, distributes and services a broad portfolio of flow control solutions, including engineered and industrial valve and automation systems, isolation and control valves, actuation, controls and related equipment. FCD leverages its experience and application know-how by offering a complete menu of engineering and project management services to complement its expansive product portfolio. FCD products are used to control, direct and manage the flow of liquids, gases and multi-phase fluids, and are a critical part of any flow control system. Our valve and automation products are based on flexible architecture that can be customized or engineered to perform specific functions within each customer's unique flow control environment or objective.

Our flow control products are primarily used by companies operating in the chemical, power generation, oil and gas, water management and general industries. Our products are currently manufactured in 19 principal manufacturing facilities, five of which are located in the U.S., eight located in Europe, five located in Asia Pacific and one located in Latin America. We deliver our services through our global network of 25 QRCs worldwide, including five sites in Europe and Africa, nine in North America, three in the Middle East, six in Asia Pacific and two in Latin America, including those co-located in manufacturing facilities.

FCD Products

Our valve, automation and controls product and solutions portfolio represent one of the most comprehensive in the flow control industry. Our products are used in a wide variety of applications, from general service to the most severe and demanding services, including those involving high levels of corrosion, extreme temperatures and/or pressures, zero fugitive emissions and emergency shutdown.

Our "smart" valve and diagnostic technologies integrate sensors, microprocessor controls and software into high performance integrated control valves, digital positioners and switch boxes for automated on/off valve assemblies and electric actuators. These technologies permit real-time system analysis, system warnings and remote indication of asset health. These technologies have been developed in response to the growing demand for reduced maintenance, improved process control efficiency and digital communications at the plant level. We are committed to further enhancing the quality of our product portfolio by continuing to upgrade our existing offerings with cutting-edge technologies.

Our valve actuation products encompass a broad range of pneumatic, electric, hydraulic and stored energy actuation designs to take advantage of whatever power source the customer has available, including utilizing the process fluid flowing through the pipeline as a source of power to actuate the valve. Our actuation products also cover one of the widest ranges of output torques in the industry, providing the ability to automate anything from the smallest linear globe valve to the largest multi-turn gate valve. Most importantly, FCD combines best-in-class mechanical designs with the latest in controls and communication technologies in order to provide complete integrated automation solutions that optimize flow control performance and enhance digital end-user experience.

We manufacture approximately 30 different active types of products, including valves, actuators, positioners, and switches. Our products are sold under globally recognized brands in some cases dating back as far as 230 years, including Valtek, Argus, Worcester, Limitorque and Durco.

FCD Services

Our service personnel provide comprehensive equipment maintenance services for flow control systems, including advanced diagnostics, repair, installation, commissioning, retrofit programs and field machining capabilities. A large portion of our service work is performed on a quick response basis, which includes 24-hour service in all of our major markets. We also provide in-house repair and return manufacturing services worldwide through our manufacturing facilities. We believe our ability to offer comprehensive, quick turnaround services provides us with a unique competitive advantage and unparalleled access to our customers' installed base of flow control products.

During 2022, we added the service of condition monitoring for our control valves, which is enabled by RedRaven, our proprietary IIoT solution, and digital positioners. Within any control valve system, the RedRaven solution acts as a condition monitoring system and provides critical operating information to the end users and therefore helps to reduce downtime, improve productivity and increase visibility into their flow processes. Additionally, RedRaven is connected to our QRC network for fast and reliable repair or replacement of valves, actuators and other related valve equipment.

FCD New Product Development

Our R&D investment is focused on areas that will enhance the end-user experience and advance our technological leadership by creating compelling value propositions for our customers, and lasting competitive advantage of our products and services in the market. In that respect, our investments have been focusing in four critical areas:

(1) significantly enhancing the digital integration and interoperability of automation products (e.g., positioners, actuators, limit switches and associated accessories) with Distributed Control Systems ("DCS") and Asset Management Systems ("AMS");

(2) developing and deploying next-generation hardware and software solutions that leverage our in-depth domain knowledge, big data and artificial intelligence, to further flow control diagnostics and bring insights that increase performance and efficiency of end-user processes;

(3) advancing material science and processing technologies in order to further increase products' capabilities in severe and critical services – including but not limited to noise and cavitation reduction; and

(4) investing in our talents and processes that adopt modern R&D project management tools (such as lean startup, SCRUM, agile and hybrid portfolio management, etc.) that enable effective risk mitigation and shorter commercialization cycles.

In addition, like FPD, a number of FCD's product development efforts are tied to assisting our customers with energy transition. These efforts are geared toward (1) supporting our customers in their own decarbonization efforts with new valve offerings, including Flowtop and Mark linear control valves and Valbart ball valves, as well as (2) cost-effective deployment of alternative energy technologies, such as hydrogen and renewable power with innovations in our Valdisk rotary control valve, Edward gate and globe valves, and Valtek and Durco triple-offset butterfly valve product lines.

None of these newly developed valve products or services required the investment of a material amount of our assets or was otherwise material. We expect to increase our R&D focus in the above areas.

FCD Customers

Our customer mix spans several end markets, including the chemical, power generation, oil and gas, water management, pulp and paper, mining and other general industries. We are especially active in providing solutions for emerging applications that supports sustainability (such as concentrated solar power, hydrogen economy, carbon capture, desalination, etc.) or increases energy productivity (such as LNG), Ethylene cracking and Hydro cracking, etc.). Lastly, our expertise in flow control management makes us a reliable partner to assist our customers with energy transition – by either making their processes more efficient and sustainable, or by providing products and solutions for new technologies that enable energy transition.

Our product offerings include original equipment, aftermarket parts, and a portfolio of services and solutions. Contracts and transactions are conducted through a variety of channels depending on customer requirements, including direct end-users, EPC firms, distributors and other original equipment manufacturers.

FCD Competition

While in recent years the valve market has undergone a significant amount of consolidation, the market remains highly fragmented. Some of the largest valve industry competitors include Emerson Electric Co., Cameron International Corp. (a Schlumberger company), Baker Hughes, Rotork plc, Neles, IMI Plc and Crane Co.

Our market research and assessments indicate that the top 10 global valve manufacturers collectively comprise less than 15% of the total valve market. Based on independent industry sources, we believe that FCD is the second largest industrial valve supplier on a global basis. We believe that our strongest sources of competitive advantage rest with our comprehensive portfolio of valve and automation products and services, our ability to provide complementary pump and rotating equipment products and services, our focus on execution, our expertise in severe corrosion and erosion applications, and strategic partnerships purposely built to advance market adoption of new technologies and digital tools.

FCD Backlog

FCD's backlog of orders as of December 31, 2023 was $826.8 million, compared with $745.5 million as of December 31, 2022. We expect to recognize revenue on approximately 88% of December 31, 2023 backlog during 2024.

ADDITIONAL INFORMATION REGARDING BOTH REPORTING SEGMENTS

Seasonality

Our financial results are seasonal, as we typically experience lower earnings in the first quarter of the year, with lower sales, coupled with fixed operating expenses, impacting our earnings and cash flows. We typically have higher sales, earnings and cash flows in the second half of the year. Given that certain of our operating expenses are fixed, fluctuations in sales volumes from quarter to quarter may affect operating income for the respective quarters.

Selling and Distribution

We primarily distribute our products through direct sales by employees assigned to specific regions, industries or products. In addition, we use distributors and sales representatives to supplement our direct sales force where it is more economically efficient. We generate a majority of our sales leads through existing relationships with vendors, customers and prospects or through referrals.

Intellectual Property

We own a number of trademarks and patents relating to the names and designs of our products. We consider our trademarks and patents to be valuable assets of our business. In addition, our pool of proprietary information, consisting of know-how and trade secrets related to the design, manufacture and operation of our products, is considered particularly valuable. Accordingly, we take proactive measures to protect such proprietary information. We generally own the rights to the products that we manufacture and sell and are unencumbered by licensing or franchise agreements. In limited circumstances, we have entered into agreements to license intellectual property. The operational and financial terms of these agreements are not material. Our trademarks can typically be renewed indefinitely as long as they remain in use, whereas our existing patents generally expire 10 to 20 years from the dates they were filed, which has occurred at various times in the past. We do not believe that the expiration of any individual patent will have a material adverse impact on our business, financial condition or results of operations.

Raw Materials

The principal raw materials used in manufacturing our products include ferrous and non-ferrous metals in the form of bar stock, machined castings, fasteners, forgings and motors, as well as silicon, carbon faces, gaskets and fluoropolymer components. A substantial volume of our raw materials is purchased from outside sources, and we have been able to develop a robust supply chain. During the COVID-19 pandemic, many of our suppliers experienced varying lengths of production and shipping delays related to the pandemic, some of which continue to exist in highly affected countries.

These conditions had an adverse effect on the speed at which we could manufacture and ship our products to customers, requiring that we diversify our supply chain and, in some instances, source materials from new suppliers. We continually monitor the business conditions of our suppliers to manage competitive market conditions and to avoid potential supply disruptions wherever possible. We continue to expand global sourcing to capitalize on localization in emerging markets and low-cost sources of purchased goods balanced with efficient consolidated and compliant logistics.

During 2023, our operating costs were impacted by inflation, including with respect to the cost of certain raw materials as well as wage and benefit costs. We saw these impacts moderate during the second half of 2023 and do not currently expect significant additional impact from these issues in 2024. The combined effects of supply chain disruption, inflation and the strong U.S. dollar may adversely affect our ability to source raw materials from our suppliers.

Metal castings used in the manufacture of our pumps, valves, and mechanical seals are purchased from qualified and approved foundry sources. We remain vertically integrated with metal castings in certain strategic product families.

Concerning the products we supply to customers in the nuclear power generation industry, suppliers of raw materials for nuclear power generation markets must be qualified to meet the requirements of nuclear industry standards and governmental regulations. Supply channels for these materials are currently adequate, and we do not anticipate difficulty in obtaining such materials in the future.

Human Capital Management

Our associates worldwide are important to delivering on our purpose to create extraordinary flow control solutions. As a global manufacturer, our values start with our people - we strive to create a collaborative team environment that enables us to develop each other, embrace our differences and respect one another.

As of December 31, 2023, we had approximately 16,000 employees (“associates”) globally and a footprint of manufacturing facilities and QRCs in more than 50 countries. Of our global associates, there are approximately 9,100 in FPD and 4,000 in FCD. The remaining 2,900 associates support core business functions including legal, human resources, information technology, finance, global engineering operations and marketing and technology operations. During 2023, we redesigned the commercial operations and sales functions to align with our new operating model, and these functions now reside within the business segments. Regionally, approximately 4,900 of our associates are in North America, approximately 1,600 of our associates are in Latin America, approximately 6,000 of our associates are in Europe, the Middle East and Africa, and approximately 3,500 of our associates are in Asia Pacific.

We are committed to achieving business success with integrity at the forefront. All associates and our Board of Directors are governed by our Code of Conduct as we continuously work together to improve our operations by fostering a work environment that supports employee health, safety, training, development, diversity and inclusion. To create that environment, members of management work together to identify areas of opportunity and develop and implement various policies, procedures, and initiatives in these key areas. Members of management also provide regular updates to our Board of Directors, who provide additional input and guidance to management on these key areas.

Workplace Health and Safety: Safety is one of the corporate values at the Company and is embedded throughout our organization. We strive to create and maintain a safe working environment, empowering our employees to identify and report safety concerns and act to correct hazards. Our focus on safety and environmental protection has led to meaningful reductions in workplace safety incidents, emissions to the environment, and solid waste and hazardous waste generation at our facilities worldwide. In addition, the Company regularly monitors performance metrics, such as incident rates and lost time rates, and performance indicators, such as observations reported and training completions to ensure our safety program is having a positive impact on these key safety metrics.

Compensation and Benefits: We maintain a market-based compensation strategy that provides a competitive total target compensation opportunity for our associates. We also value the health and well-being of our associates and offer competitive overall benefits, health and wellness programs tailored to the specific localized needs of our employees. We offer a global employee wellness program at no cost to our employees that supports our employees through circumstances that may affect their health, job performance, or other mental and/or emotional well-being. We also aim to educate and engage our employees through wellness campaigns, educational content and partnerships with leading health and wellness partners across the globe to help foster healthy lives for our employees and their families.

Training, Development and Ethics: Developing our people is an essential aspect of Flowserve's strategy and we believe development is a continuous process. We offer developmental opportunities to help our associates build the skills needed to reach their short-term and long-term career goals, including but not limited to on-the-job training, online learning, rotational programs, professional memberships, language learning and leadership development. To help our associates see how their work contributes to overall Company objectives and successes, management uses a robust performance management system and provides regular feedback to develop talent and foster engagement.

Throughout 2022 and 2023 we engaged our more than 2,000 people leaders with Leadership in Motion ("LIM"), a development program focused on the foundational capabilities of leadership through the lens of Flowserve's values and behaviors. Together, these leaders advanced their skills in collaborating across the enterprise, developing their teams, and strengthening our culture of inclusion for all associates. We also introduced People Leader Expectations through the program to build on our Values and Behaviors with clearly defined attributes and actions for people leaders.

With respect to our Integrity and Compliance program, we provide our associates with training on the Flowserve Code of Conduct annually, through which they gain an understanding of the types of behaviors and decisions that represent our ethics and values. We also provide associates with compliance trainings on relevant topics such as trade, anti-corruption, anti-trust, investigations and data privacy.

Culture and Engagement: To further enhance our culture, we conduct regular employee engagement surveys to solicit feedback and input directly from our associates. In 2023, approximately 65% of our associates participated in our employee engagement survey. The Company put action to the survey results by empowering leaders with results summaries and personalized action planning support to further advance our culture and values at a local level.

Flowserve also seeks to build a diverse and inclusive culture through targeted training and development opportunities for our associates. Flowserve participates in regular national and global observances by sharing educational content with employees that raises awareness of cultural celebrations and experiences. Through these observances, we believe we can inspire mutual understanding and greater empathy across our global workforce. As a multi-national organization, recognition and education of cultural observances is an important part of creating a greater understanding and appreciation for our associates' experiences and for the experiences of our global customer base. With these programs and educational opportunities, we hope to foster an employee culture that drives inclusion, combats bias and positively impacts our communities in and outside of Flowserve.

Another avenue to foster our culture is through our employee recognition program, the Spirit of Flowserve. This program supports our business strategy, our values and our vision to drive an innovative culture, customer-centric mindset, employee engagement and talent retention. In 2023, over 22,000 awards were given through the Spirit of Flowserve program for exceptional achievement and positive impact to the Company.

Environmental, Social and Governance Activities

We structure our approach to sustainability around ESG principles that incorporate our values and business priorities so that all of our associates can contribute to our ESG priorities. One of the aims of our ESG program is to enable a clean energy future by advancing technologies that reduce climate impact, embedding sustainability within our core operations and strengthening our purpose-driven culture. Our ESG program is centered on three key pillars – climate, culture and core responsibility. Climate captures the environmental pillar of our ESG approach and outlines our commitment to enabling a clean energy future for our operations and our customers. Culture refers to the social pillar of our ESG strategy and is rooted in our belief that the collective energy of our people set us apart. It defines our commitment to strengthening our values-driven culture and investing in our communities through talent recruitment and engagement, diversity and inclusion, workplace health and safety, and employee well-being. Core responsibility represents governance and how we seek to conduct business ethically and in accordance with laws and regulations around the world.

We publish an annual ESG Report that discusses our ESG-related goals, activities and accomplishments, which can be accessed through the “Investor Relations” section of our Internet web site, and which is not incorporated by reference into this Annual Report on Form 10-K.

Environmental Regulations and Proceedings

We are subject to environmental laws and regulations in all jurisdictions in which we have operating facilities. These requirements primarily relate to the generation and disposal of waste, air emissions and wastewater discharges. We periodically make capital expenditures to enhance our compliance with environmental requirements, as well as to abate and control pollution. At present, we have no plans for any material capital expenditures for environmental control equipment at any of our facilities. However, we have incurred and continue to incur operating costs relating to ongoing environmental compliance matters, including with respect to proposed regulations on carbon emissions reporting. Based on existing and proposed environmental requirements and our anticipated production schedule, we believe that future environmental compliance expenditures will not have a material adverse effect on our financial condition, results of operations or cash flows.

We use hazardous substances and generate hazardous wastes in many of our manufacturing and foundry operations. Most of our current and former properties are or have been used for industrial purposes and some may require clean-up of historical contamination. During the due diligence phase of our acquisitions, we conduct environmental site assessments when warranted to identify potential environmental liabilities and required clean-up measures. We conduct follow-up investigation and/or remediation activities at locations where we have known environmental concerns and work with government authorities to comply with applicable laws and regulations.

Over the years, we have been involved as one of many potentially responsible parties ("PRP") at former public waste disposal sites that are or were subject to investigation and remediation. We are currently involved as a PRP at four Superfund sites. The sites are in various stages of evaluation by government authorities. Our total projected "fair share" cost allocation at these four sites is expected to be immaterial. See "Item 3. Legal Proceedings" included in this Annual Report for more information.

We have established reserves that we currently believe to be adequate to cover our currently identified on-site and off-site environmental liabilities.

Exports

Our export sales from the U.S. to foreign unaffiliated customers were $300.3 million in 2023, $246.6 million in 2022 and $263.1 million in 2021.

Licenses are required from U.S. and other government agencies to export certain products. In particular, products with nuclear power generation and/or military applications are restricted, as are certain other pump, valve and seal products.

AVAILABLE INFORMATION

We maintain an Internet web site at www.flowserve.com. Our Annual Reports 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) of the Securities Exchange Act of 1934 are made available free of charge through the “Investor Relations” section of our Internet web site as soon as reasonably practicable after we electronically file the reports with, or furnish the reports to, the U.S. Securities and Exchange Commission ("SEC"). Reports, proxy statements and other information filed or furnished with the SEC are also available at www.sec.gov.

Also available on our Internet web site are our Corporate Governance Guidelines for our Board of Directors and Code of Conduct, the charters of the Audit, Finance and Risk, Organization and Compensation and Corporate Governance and Nominating Committees of our Board of Directors, our annual ESG Report, and other important governance documents. All of the foregoing documents may be obtained through our Internet web site as noted above and are available in print without charge to shareholders who request them. Information contained on or available through our Internet web site is not incorporated into this Annual Report or any other document we file with, or furnish to, the SEC.

ITEM 1A. *RISK FACTORS*

Please carefully consider the following discussion of material factors, events, and uncertainties that make an investment in our securities risky. If any of the factors, events and contingencies discussed below or elsewhere in this Annual Report materialize, our business, financial condition, results of operations, cash flows, reputation or prospects could be materially adversely affected. While we believe all known material risks are disclosed, additional risks and uncertainties not presently known to us, or that we currently deem immaterial, may also materially adversely affect our business, financial condition, results of operations, cash flows, reputation, prospects or stock price. Because of the risk factors discussed below and elsewhere in this Annual Report and in other filings we make with the SEC, as well as other variables affecting our operating results, past financial performance may not be a reliable indicator of future performance, historical trends should not be used to anticipate results or trends in future periods and actual results could differ materially from those projected in the forward-looking statements contained in this Annual Report.

Business and Operating Risks

Our business depends on our customers’ levels of capital investment and maintenance expenditures, which in turn are affected by numerous factors, including changes in the state of domestic and global economies, global energy demand and the liquidity cyclicality and condition of global credit and capital markets, which have impacted and which could continue to impact the ability or willingness of our customers to invest in our products and services and adversely affect our financial condition, results of operations and cash flow.

Demand for most of our products and services depends on the level of new capital investment and planned maintenance expenditures by our customers. The level of capital expenditures by our customers depends, in turn, on general economic conditions, availability of credit, economic conditions within their respective industries and expectations of future market behavior. Additionally, volatility in commodity prices can negatively affect the level of these activities and can result in postponement of capital spending decisions or the delay or cancellation of existing orders. The ability of our customers to finance capital investment and maintenance is also affected by factors independent of the conditions in their industry, such as the condition of global credit and capital markets.

The businesses of many of our customers, particularly oil and gas companies, chemical companies and general industrial companies, are to varying degrees cyclical and have experienced periodic downturns. Our customers in these industries, particularly those whose demand for our products and services is primarily profit-driven, tend to delay large capital projects, including expensive maintenance and upgrades, during economic downturns. For example, our chemical customers generally tend to reduce their spending on capital investments and operate their facilities at lower levels in a soft economic environment, which reduces demand for our products and services. An economic slowdown or recession in the United States or in any other country that significantly affects the supply of or demand for oil or natural gas could negatively impact our operations and therefore adversely affect our results. Additionally, fluctuating energy demand forecasts and lingering uncertainty concerning commodity pricing, specifically the price of oil, have caused, and may in the future cause, our customers to be more conservative in their capital planning, reducing demand for our products and services. Reduced demand for our products and services from time to time results in the delay or cancellation of existing orders or leads to excess manufacturing capacity, which unfavorably impacts our absorption of fixed manufacturing costs. This reduced demand has in the past and may continue in the future to also erode average selling prices in our industry. Any of these results could continue to adversely affect our business, financial condition, results of operations and cash flows.

The COVID-19 pandemic, and the volatile regional and global economic conditions stemming from the pandemic, precipitated or aggravated many of the factors described above, and a resurgence or development of new strains or variants of COVID-19, or other public health emergencies, could cause these factors to continue to adversely impact our operations and financial performance as well as those of many of our customers and suppliers. For further discussion of the risks presented by the pandemic, see the discussion below under the heading "The COVID-19 pandemic adversely impacted our operations and financial performance, and a resurgence or development of new strains or variants of COVID-19, or other public health emergencies, could have a material adverse impact on our business, results of operation, financial condition and liquidity, the nature and extent of which is highly uncertain."

Additionally, our customers sometimes delay capital investment and maintenance even during favorable conditions in their industries or markets. Despite these favorable conditions, the general health of global credit and capital markets and our customers' ability to access such markets impacts investments in large capital projects, including necessary maintenance and upgrades. In addition, the liquidity and financial position of our customers impacts capital investment decisions and their ability to pay in full and/or on a timely basis. Any of these factors, whether individually or in the aggregate, could have a material adverse effect on our customers and, in turn, our business, financial condition, results of operations and cash flows.

Volatility in commodity prices, effects from credit and capital market conditions and global economic growth forecasts have in the past prompted and may in the future prompt customers to delay or cancel existing orders, which could adversely affect the viability of our backlog and could impede our ability to realize revenues on our backlog.

Our backlog represents the value of uncompleted customer orders. While we cannot be certain that reported backlog will be indicative of future results, our ability to accurately value our backlog can be adversely affected by numerous factors, including the health of our customers' businesses and their access to capital, volatility in commodity prices (e.g., copper, nickel, stainless steel) and economic uncertainty. While we attempt to mitigate the financial consequences of order delays and cancellations through contractual provisions and other means, if we were to experience a significant increase in order delays or cancellations that can result from the aforementioned economic conditions or other factors beyond our control, it could impede or delay our ability to realize anticipated revenues on our backlog. Such a loss of anticipated revenues could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our inability to deliver our backlog on time could affect our revenues, future sales and profitability and our relationships with customers.

At December 31, 2023, our backlog was $2.7 billion. In 2024, our ability to meet customer delivery schedules for backlog is dependent on a number of factors including, but not limited to, sufficient manufacturing plant capacity, adequate supply channel access to the raw materials and other inventory required for production, an adequately trained and capable workforce, project engineering expertise for certain large projects and appropriate planning and scheduling of manufacturing resources. Our manufacturing plant operations, capacity and supply chain are subject to disruption as a result of equipment failure, severe weather conditions and other natural or manmade disasters, including power outages, fires, explosions, terrorism, cyber-based attacks, conflicts or unrest, epidemics or pandemics, labor disputes, acts of God, or other reasons. We may also encounter capacity limitations due to changes in demand despite our forecasting efforts. Many of the contracts we enter into with our customers require long manufacturing lead times and contain penalty clauses related to late delivery. Failure to deliver in accordance with contract terms and customer expectations could subject us to financial penalties, damage existing customer relationships, increase our costs, reduce our sales and have a material adverse effect on our business, financial condition, results of operations and cash flows.

Failure to successfully execute and realize the expected financial benefits from any restructuring and strategic realignment and other cost-saving initiatives could adversely affect our business.

Adverse effects from our execution of any current or future restructuring and realignment activities could interfere with our realization of anticipated synergies, customer service improvements and cost savings from these strategic initiatives. Moreover, because such expenses are difficult to predict and are necessarily inexact, we may incur substantial expenses in connection with the execution of any current or future restructuring and realignment plans in excess of what is currently anticipated. Further, restructuring and realignment activities are a complex and time-consuming process that can place substantial demands on management, which could divert attention from other business priorities or disrupt our daily operations. Any of these failures could, in turn, materially adversely affect our business, financial condition, results of operations and cash flows, which could constrain our liquidity.

If these measures are not successful or sustainable, we may undertake additional realignment and cost reduction efforts, which could result in future charges. Moreover, our ability to achieve our other strategic goals and business plans may be adversely affected, and we could experience business disruptions with customers and elsewhere if any restructuring and realignment efforts prove ineffective.

We sell our products in highly competitive markets, which results in pressure on our profit margins and limits our ability to maintain or increase the market share of our products.

The markets for our products and services are geographically diverse and highly competitive. We compete against large and well-established national and global companies, as well as regional and local companies, low-cost replicators of spare parts and in-house maintenance departments of our end-user customers. We compete based on price, technical expertise, timeliness of delivery, contractual terms, project management, proximity to service centers, previous installation history and reputation for quality and reliability. Competitive environments in slow-growth industries and for original equipment orders have been inherently more influenced by pricing and domestic and global economic conditions and current economic forecasts suggest that the competitive influence of pricing has broadened. Additionally, some of our customers have been attempting to reduce the number of vendors from which they purchase in order to reduce the size and diversity of their supply chain. To remain competitive, we must invest in manufacturing, technology, marketing, customer service and support and our distribution networks. No assurances can be made that we will have sufficient resources to continue to make the investment required to maintain or increase our market share or that our investments will be successful. A relatively strong U.S. dollar has made and may continue to make our products more expensive overseas, which may make our ability to meet our international customers’ pricing expectations particularly challenging and may result in erosion of product margin and market share. In addition, negative publicity or other organized campaigns critical of us, through social media or otherwise, could negatively affect our reputation and competitive position. If we do not compete successfully, our business, financial condition, results of operations and cash flows could be materially adversely affected.

Failure to successfully develop and introduce new products could limit our ability to grow and maintain our competitive position and adversely affect our financial condition, results of operations and cash flow.

The success of new and improved products and services depends on their initial and continued acceptance by our customers. Our businesses are affected by varying degrees of technological change and corresponding shifts in customer demand, which result in unpredictable product transitions, shortened life cycles and increased importance of being first to market with new products and services. Difficulties or delays in the research, development, production and/or marketing of new products and services negatively impact our operating results and prevent us from recouping or realizing a return on the investments required to continue to bring these products and services to market.

Our inability to obtain raw materials at favorable prices may adversely affect our operating margins and results of operations.

We purchase substantially all electric power and other raw materials we use in the manufacturing of our products from outside sources. The costs of these raw materials have been volatile historically and are influenced by factors that are outside our control. In recent years, the prices for energy, metal alloys, nickel and certain other of our raw materials have been volatile. Our operating margins and results of operations and cash flows may be adversely affected if we are unable to pass increases in the costs of our raw materials on to our customers or if other methods to offset our increased costs through supply chain management, contractual provisions and gains in operational efficiencies are not achieved.

Inflation has the potential to adversely affect our business, financial condition and results of operations by increasing our overall cost structure, including with respect to purchased parts, commodity and raw material costs. Our operating costs are subject to fluctuations, particularly due to changes in prices for commodities, parts, raw materials, energy and related utilities, freight, and cost of labor which have been and may continue to be driven by inflation, tightening labor markets, prevailing price levels, exchange rates, and other economic factors. Throughout 2023, our operating costs were impacted by price inflation, including with respect to the cost of certain raw materials, commodities, freight and logistics, and we expect this to continue for the foreseeable future. In order to remain competitive, we may not be able to recover all or a portion of these higher costs from our customers through price increases, which would reduce our profit margins and cash flows. Actions we take to mitigate volatility in manufacturing and operating costs may not be successful and, as a result, our business, financial condition, cash flows and results of operations could be materially and adversely affected.

The COVID-19 pandemic adversely impacted our operations and financial performance, and a resurgence or development of new strains or variants of COVID-19, or other public health emergencies, could have a material adverse impact on our business, results of operation, financial condition and liquidity, the nature and extent of which is highly uncertain.

Our operations expose us to risks associated with public health emergencies, such as outbreaks of epidemics, pandemics, and contagious diseases, including COVID-19. The COVID-19 pandemic, including actions taken by governments in response, caused and could in the future cause, a substantial curtailment of business activities (including the decrease in demand for a broad variety of goods and services), weakened economic conditions, supply chain disruptions, significant economic uncertainty and volatility in the financial and commodity markets, including global volatility in supply and demand for oil and gas. These effects had an adverse impact on our operations and financial performance and the operations and financial performance of many of our customers and suppliers.

Our operations have generally stabilized since the peak of the COVID-19 pandemic. In May 2023, the World Health Organization declared an end to COVID-19 as a public health emergency. However, a resurgence or development of new strains of COVID-19 or other public health emergencies could result in unpredictable responses by authorities around the world which could negatively impact our global operations, customers and suppliers. Any future public health emergencies could result in disruptions to our manufacturing operations, including higher rates of employee absenteeism, and supply chain, which could negatively impact our ability to meet customer demand. The extent to which new strains or variants of COVID-19, or other public health emergencies, could impact our business, results of operations, financial condition or liquidity is highly uncertain and would depend on future developments, including the scope, spread and duration of any such virus and variants, potential responsive actions taken by governmental authorities, and how quickly economic conditions stabilize and recover.

Terrorist acts, conflicts, wars, natural or manmade disasters, epidemics or pandemics, acts of God and other such events around the world at times materially adversely affect our business, financial condition and results of operations and the market for our common stock.

As a global company with a large international footprint, we are subject to increased risk of damage or disruption to us, our employees, facilities, partners, suppliers, distributors, resellers or customers due to, among other things, terrorist acts, conflicts (including as a result of geopolitical uncertainty and/or conflicts in the countries and/or regions where we operate, including the United Kingdom, the European Union, Ukraine, the Middle East and the Trans-Pacific region), severe weather conditions, the potential physical effects of climate change, and other natural or manmade disasters, including power outages, fires, floods, earthquakes, hurricanes, storms, rising sea levels, explosions, cyber-based attacks, epidemics or pandemics, labor disputes, and acts of God wherever located around the world. The potential for future such events, the national and international responses to such events or perceived threats to national security, and other actual or potential conflicts or wars, such as the Russia-Ukraine conflict, the Israel-Hamas war and ongoing instability in Syria and Egypt, have created many economic and political uncertainties. In addition, as a global company with headquarters and significant operations located in the U.S., actions against or by the U.S. may impact our business or employees. Changes in general economic conditions or any of the foregoing events, or our inability to accurately forecast these changes or events or mitigate the impact of these conditions on our business, could materially adversely affect us. See also the discussion below under the heading "Economic, political and other risks associated with international operations could adversely affect our business."

Global climate change and our commitments to reduce our carbon emissions presents challenges to our business which could materially adversely affect us.

The effects of climate change create financial and operational risks to our business, both directly and indirectly. There is a general consensus that greenhouse gas (“GHG”) emissions are linked to global climate change, and that these emissions must be reduced dramatically to avert the worst effects of climate change. Increased public awareness and concern regarding global climate change will result in more regulations designed to reduce GHG emissions. As a result, and as discussed hereafter in our risk factor entitled "We are exposed to certain regulatory and financial risks related to climate change, which could adversely affect our financial condition, results of operations and cash flows," we may be required to make increased capital expenditures to adapt our business and operations to meet new regulations and standards.

Over the years, we have made several public commitments regarding our intended reduction of carbon emissions including other short- and mid-term environmental sustainability goals. We may be required to expend significant resources to meet these commitments, which could significantly increase our operational costs. Further, there can be no assurance of the extent to which any of our ambitions will be achieved, or that any future investments we make in furtherance of achieving our sustainability goals will meet customer expectations and needs, investor expectations or any binding or non-binding legal standards regarding sustainability performance. In particular, our ability to meet those commitments depends in part on innovations and significant technological advancements with respect to the development and availability of reliable, affordable and sustainable alternative solutions. Moreover, we may determine that it is in the best interest of our company and our shareholders to prioritize other business, social, governance or sustainable investments over the achievement of our current commitments based on economic, regulatory and social factors, business strategy or pressure from investors, activist groups or other stakeholders.

If we are unable to meet these commitments, then, in addition to regulatory and legal risks related to compliance, we could incur adverse publicity and reaction from investors, customers or other stakeholders, which could adversely impact our reputation, which could in turn adversely impact our results of operations. While we have been and remain committed to being responsive to climate change and to reducing our carbon footprint, there can be no assurance that our commitments and current and future strategic plans to achieve those commitments will be successful, that the costs related to the foregoing energy transition may not be higher than expected, that the technological advancements and innovations we are relying upon will come to fruition in the timeframe we expect, or at all, or that proposed regulation or deregulation related to climate change will not have a negative competitive impact, any one of which could have a material adverse effect on our capital expenditures, operating margins and results of operations.

Our business may be adversely impacted by work stoppages and other labor matters.

As of December 31, 2023, we had approximately 16,000 employees, of which approximately 4,600 were located in the U.S. Approximately 5% of our U.S. employees are represented by unions. We also have unionized employees or employee work councils in Argentina, Australia, Austria, Brazil, Finland, France, Germany, India, Italy, Japan, Mexico, The Netherlands, South Africa, Spain, and Sweden. Although we believe that our relations with our employees are generally satisfactory and we have not experienced any material strikes or work stoppages recently, no assurances can be made that we will not in the future experience these and other types of conflicts with labor unions, works councils, other groups representing employees or our employees generally, or that any future negotiations with our labor unions will not result in significant increases in our cost of labor. Our ability to successfully negotiate new and acceptable agreements when the existing agreements with employees covered by collective bargaining expire could result in business disruptions or increased costs.

Our ability to implement our business strategy and serve our customers is dependent upon the continuing ability to employ talented professionals and attract, train, develop and retain a skilled workforce. We are subject to the risk that we will not be able to effectively replace the knowledge and expertise of an aging workforce as workers retire. Without a properly skilled and experienced workforce, our costs, including productivity costs and costs to replace employees may increase, and this could negatively impact our earnings.

We may also encounter additional costs from claims made and/or legal proceedings brought against us with respect to alleged workplace harassment or discrimination, and we could suffer reputational harm.

Our growth strategy depends on our ability to continue to expand our market presence through acquisitions, and any future acquisitions may present unforeseen integration difficulties or costs which could materially affect our business.

Since 1997, we have expanded through a number of acquisitions, and we may pursue strategic acquisitions of businesses in the future. Our ability to implement this growth strategy may be limited by our ability to identify appropriate acquisition candidates, secure the requisite regulatory approvals, covenants in our credit agreement and other debt agreements and our financial resources, including available cash and borrowing capacity. Acquisitions may require additional debt financing, resulting in higher leverage and an increase in interest expense or may require equity financing, resulting in ownership dilution to existing shareholders. In addition, acquisitions sometimes require large one-time charges and can result in the incurrence of contingent liabilities, adverse tax consequences, substantial depreciation or deferred compensation charges, the amortization of identifiable purchased intangible assets or impairment of goodwill, any of which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

When we acquire another business, the process of integrating acquired operations into our existing operations creates operating challenges and requires significant financial and managerial resources that would otherwise be available for the ongoing development or expansion of existing operations. Some of the more common challenges associated with acquisitions that we may experience, and have experienced in the past, include:

- loss of key employees or customers of the acquired company;
- conforming the acquired company's standards, processes, procedures and controls, including accounting systems and controls, with our operations, which could cause deficiencies related to our internal control over financial reporting;
- coordinating operations that are increased in scope, geographic diversity and complexity;
- retooling and reprogramming of equipment;
- hiring additional management and other critical personnel; and
- the diversion of management's attention from our day-to-day operations.

Further, no guarantees can be made that we would realize the cost savings, synergies or revenue enhancements that we may anticipate from any acquisition, or that we will realize such benefits within the time frame that we expect. If we are not able to timely address the challenges associated with acquisitions and successfully integrate acquired businesses, or if our integrated product and service offerings fail to achieve market acceptance, our business could be adversely affected.

A significant data breach or disruption to our information technology infrastructure could materially adversely affect our business operations.

Our information technology networks and related systems and devices and those technology systems under control of third parties with whom we do business are critical to the operation of our business and essential to our ability to successfully perform day-to-day operations. These information technology networks and related systems and devices and those under control of third parties are susceptible to damage, disruptions or shutdowns due to programming errors, defects or other vulnerabilities, power outages, hardware failures, computer viruses, cyber-attacks, malware attacks, ransomware attacks, theft, misconduct by employees or other insiders, misuse, human errors or other cybersecurity incidents. If any of the aforementioned cybersecurity incidents or disruptions occur and our business continuity plans do not effectively resolve the issues in a timely manner, our business, financial condition, results of operations, and liquidity could be materially adversely affected.

In addition, any of the aforementioned cybersecurity incidents or disruptions could expose us to a risk of loss, disclosure, misuse, corruption, or interruption of sensitive and critical data, information and functions, including our proprietary and confidential information and information related to our customers, suppliers and employees. It is also possible a cybersecurity incident could result in theft of material trade secrets or other material intellectual property. While we devote substantial resources to maintaining adequate levels of cybersecurity, there can be no assurance that we will be able to prevent all of the rapidly evolving forms of increasingly sophisticated and frequent cyberattacks, or avoid or limit a material adverse impact on our systems after such incidents or attacks occur. The potential consequences of a material cybersecurity incident include reputational damage, loss of customers, litigation with third parties, regulatory actions and fines, theft of intellectual property, systems disruption, disruption of manufacturing plant operations and increased cybersecurity protection and remediation costs. Any of the foregoing can be exacerbated by a delay or failure to detect a cybersecurity incident or the full extent of such incident. In addition, our liability insurance, which includes cyber insurance, might not be sufficient in type or amount to cover us against claims related to cybersecurity incidents, attacks and other related incidents. If we are unable to prevent, anticipate, detect or adequately respond to cybersecurity incidents, our operations could be disrupted and our business could be materially and adversely affected.

Developments in the applicable legal standards for the handling of personal data from time to time require changes to our business practices, penalties, increased cost of operations, or otherwise harm our business. To conduct our operations, we regularly move data across national borders and must comply with increasingly complex and rigorous regulatory standards enacted to protect business and personal data in the U.S. and elsewhere. For example, the E.U. has adopted the General Data Protection Regulation (the “GDPR”). The GDPR imposes additional obligations on companies regarding the handling of personal data and provides certain individual privacy rights to persons whose data is stored. Compliance with existing, proposed and recently enacted laws and regulations can be costly; any failure to comply with these regulatory standards could subject us to legal and reputational risks, including proceedings against the Company by governmental entities or others, fines and penalties, damage to our reputation and credibility and could have a negative impact on our business and results of operations.

Risks Related to International Operations

Economic, political and other risks associated with our international operations could adversely affect our business.

A substantial portion of our operations is conducted and located outside the U.S. We have manufacturing, sales or service facilities in more than 50 countries and sell to customers in over 90 countries, in addition to the U.S. Moreover, we primarily source certain of our manufacturing and engineering functions, raw materials and components from China, Eastern Europe, India and Latin America. Accordingly, our business and results of operations are subject to risks associated with doing business internationally, including:

- instability in a specific country's or region's political or economic conditions, particularly economic conditions in Europe and Latin America, and political conditions in the Middle East, Asia, North Africa, Latin America, the Trans-Pacific region and other emerging markets;
- trade protection measures, such as tariff increases, and import and export licensing and control requirements;
- political, financial market or economic instability relating to epidemics or pandemics;
- uncertainties related to any geopolitical, economic and regulatory effects or changes due to recent or upcoming domestic and international elections;
- the imposition of governmental economic sanctions on countries in which we do business;
- potentially negative consequences from changes in tax laws or tax examinations;
- difficulty in staffing and managing widespread operations;
- increased aging and slower collection of receivables, particularly in Latin America and other emerging markets;
- difficulty of enforcing agreements and collecting receivables through some foreign legal systems;
- differing and, in some cases, more stringent labor regulations;
- potentially negative consequences from fluctuations in foreign currency exchange rates;
- partial or total expropriation;
- differing protection of intellectual property;
- inability to repatriate income or capital; and
- difficulty in administering and enforcing corporate policies, which may be different than the customary business practices of local cultures.

For example, political unrest or work stoppages negatively impact the demand for our products from customers in affected countries and other customers, such as U.S. oil refineries, that are affected by the resulting disruption in the supply of crude oil. Similarly, military conflicts in Russia/Ukraine, the Middle East, Asia and North Africa could soften the level of capital investment and demand for our products and services. We have experienced logistics disruptions as a result of the Israel-Hamas war that have increased expenses and delayed import of our products in the region. The conflict is ongoing and the length, impact, and outcome is highly unpredictable. If the conflict further intensifies or develops, it could have an adverse impact on our business operations in the Middle East or other affected areas. In response to the Russia-Ukraine conflict, several countries, including the United States, have imposed economic sanctions and export controls on certain industry sectors and parties in Russia. As a result of this conflict, including the aforementioned sanctions and overall instability in the region, in March 2022 we permanently ceased all Company operations in Russia and are currently taking the necessary steps to wind down in the country. See Note 1 to our consolidated financial statements included in Item 8 of this Annual Report for further discussion of the termination of our Russian operations.

In order to manage our day-to-day operations, we must overcome cultural and language barriers and assimilate different business practices. In addition, we are required to create compensation programs, employment policies and other administrative programs that comply with laws of multiple countries. We also must communicate and monitor standards and directives across our global network. In addition, emerging markets pose other uncertainties, including challenges to our ability to protect our intellectual property, pressure on the pricing of our products and increased risk of political instability, and may prefer local suppliers because of existing relationships, local restrictions or incentives. Our failure to successfully manage our geographically diverse operations could impair our ability to react quickly to changing business and market conditions and to enforce compliance with standards and procedures.

Additionally, increasing tensions between the U.S. and China may result in further restrictions or actions by the U.S. government with respect to doing business in China or by the Chinese government with respect to business conducted by foreign entities in China, which could impact certain of our manufacturing operations, as well as supply for our raw materials and components.

Our future success will depend, in large part, on our ability to anticipate and effectively manage these and other risks associated with our international operations. Any of these factors could, however, materially adversely affect our international operations and, consequently, our financial condition, results of operations and cash flows.

Implementation of new tariffs and changes to or uncertainties related to tariffs and trade agreements could adversely affect our business.

The U.S. has implemented certain tariffs on steel and aluminum imported into the country. In response, certain foreign governments have implemented or reportedly considered implementing additional tariffs on U.S. goods. In addition, there have been recent changes to trade agreements, like the U.S. withdrawal from the Trans-Pacific Partnership and the replacement of the North American Free Trade Agreement with the United States-Mexico-Canada Agreement. Uncertainties with respect to tariffs, trade agreements, or any potential trade wars negatively impact the global economic markets and could affect our customers’ ability to invest in capital expenditures, which may in turn result in reduced demand for our products and services, and could have a material adverse effect on our financial condition, results of operations and cash flows. Changes in tariffs could also result in changes in supply and demand of our raw material needs, affect our manufacturing capabilities and lead to increased prices that we may not be able to effectively pass on to customers, each of which could materially adversely affect our operating margins, results of operations and cash flows.

Our international operations expose us to fluctuations in foreign currency exchange rates which could adversely affect our business.

A significant portion of our revenue and certain of our costs, assets and liabilities, are denominated in currencies other than the U.S. dollar. The primary currencies to which we have exposure are the Euro, British pound, Mexican peso, Brazilian real, Indian rupee, Japanese yen, Singapore dollar, Argentine peso, Canadian dollar, Australian dollar, Chinese yuan, Colombian peso, Chilean peso and South African rand. Certain of the foreign currencies to which we have exposure, such as the Venezuelan bolivar and Argentine peso, have undergone significant devaluation in the past, which reduce the value of our local monetary assets, reduce the U.S. dollar value of our local cash flow, generate local currency losses that may impact our ability to pay future dividends from our subsidiary to the parent company and potentially reduce the U.S. dollar value of future local net income. Although we enter into forward exchange contracts to economically hedge some of our risks associated with transactions denominated in certain foreign currencies, no assurances can be made that exchange rate fluctuations will not adversely affect our financial condition, results of operations and cash flows.

We could be adversely affected by violations of the U.S. Foreign Corrupt Practices Act and similar worldwide anti-bribery laws and regulations.

The U.S. Foreign Corrupt Practices Act ("FCPA") and similar anti-bribery laws and regulations in other jurisdictions, such as the UK Bribery Act, generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business or securing an improper advantage. Because we operate in many parts of the world and sell to industries that have experienced corruption to some degree, our policies mandate compliance with applicable anti-bribery laws worldwide. Violation of the FCPA or other similar anti-bribery laws or regulations, whether due to our or others' actions or inadvertence, could subject us to civil and criminal penalties or other sanctions that could have a material adverse impact on our business, financial condition, results of operations and cash flows. In addition, actual or alleged violations could damage our reputation or ability to do business.

Regulatory and Legal Risks

Our operations are subject to a variety of complex and continually changing laws, regulations and policies, both internationally and domestically, which could adversely affect our business.

Due to the international scope of our operations, the system of laws, regulations and policies to which we are subject is complex and includes, without limitation, regulations issued by the U.S. Customs and Border Protection, the U.S. Department of Commerce's Bureau of Industry and Security, the U.S. Treasury Department's Office of Foreign Assets Control and various foreign governmental agencies, including applicable export controls, customs, currency exchange control and transfer pricing regulations, as applicable. No assurances can be made that we will continue to be found to be operating in compliance with, or be able to detect violations of, any such laws, regulations or policies. In addition, we cannot predict the nature, scope or effect of future regulatory requirements to which our international operations might be subject or the manner in which existing laws might be administered or interpreted. Compliance with laws and any new laws or regulations may increase our operations costs or require significant capital expenditures. Any failure to comply with applicable laws, regulations or policies in the U.S. or in any other country in which we operate could result in substantial fines and penalties, which could adversely affect our business.

In particular, there is uncertainty related to new or existing treaty and trade relationships with other countries which may affect restrictions or tariffs imposed on products we buy or sell. These factors, together with other key global events during 2023 (such as the ongoing conflicts and terrorist activity), may adversely impact the ability or willingness of non-U.S. companies to transact business in the U.S. This uncertainty may also affect regulations and trade agreements affecting U.S. companies, global stock markets (including the NYSE, on which our common shares are traded), currency exchange rates, and general global economic conditions. All of these factors are outside of our control, but may nonetheless cause us to adjust our strategy in order to compete effectively in global markets. For further discussion of the impact of tariffs and trade agreements on our business, please see the discussion above under the heading "Implementation of new tariffs and changes to or uncertainties related to tariffs and trade agreements could adversely affect our business."

Environmental compliance costs and liabilities could adversely affect our financial condition, results of operations and cash flows.

Our operations and properties are subject to regulation under environmental laws, which can impose substantial sanctions for violations. We must conform our operations to applicable regulatory requirements and adapt to changes in such requirements in all countries in which we operate.

We use hazardous substances and generate hazardous wastes in many of our manufacturing and foundry operations. Most of our current and former properties are or have been used for industrial purposes, and some may require clean-up of historical contamination. We are currently conducting investigation and/or remediation activities at a number of locations where we have known environmental concerns. In addition, we have been identified as one of many PRPs at four Superfund sites. The projected cost of remediation at these sites, as well as our alleged "fair share" allocation, while not anticipated to be material, has been reserved. However, until all studies have been completed and the parties have either negotiated an amicable resolution or the matter has been judicially resolved, some degree of uncertainty remains with respect to the anticipated impact.

We have incurred, and expect to continue to incur, operating and capital costs to comply with environmental requirements. In addition, new laws and regulations, stricter enforcement of existing requirements, the discovery of previously unknown contamination or the imposition of new clean-up requirements could require us to incur costs or become the basis for new or increased liabilities. Moreover, environmental and sustainability initiatives, practices, rules and regulations are under increasing scrutiny of both governmental and non-governmental bodies, which can cause rapid change in operational practices, standards and expectations and, in turn, increase our compliance costs. Any of these factors could have a material adverse effect on our financial condition, results of operations and cash flows.

We are exposed to certain regulatory and financial risks related to climate change, which could adversely affect our financial condition, results of operations and cash flows.

Emissions of carbon dioxide and other greenhouse gases and their role in climate change are receiving ever increasing attention worldwide, which has led to significant legislative and regulatory efforts to limit GHG emissions. Existing or future legislation and regulations related to GHG emissions and climate change by the U.S. Congress, state and foreign legislatures and federal, state, local and foreign governmental agencies could adversely affect our business. Additionally, it is uncertain whether, when and in what form mandatory carbon dioxide emissions reduction programs may be adopted. Similarly, certain countries, including the U.S., have adopted the Paris Climate Agreement and these and other existing international initiatives, such as the agreement resulting from the 2023 United Nations Climate Change Conference, or those under consideration may affect our operations.

When our customers, particularly those involved in the oil and gas, power generation, petrochemical processing or petroleum refining industries, are subject to any of these or other similar proposed or newly enacted laws and regulations, we are exposed to risks that the additional costs by customers to comply with such laws and regulations could impact their ability or desire to continue to operate at similar levels in certain jurisdictions as historically seen or as currently anticipated, which could negatively impact their demand for our products and services. In addition, new laws and regulations that might favor the increased use of non-fossil fuels, including nuclear, wind, solar and bio-fuels or that are designed to increase energy efficiency, could dampen demand for oil and gas production or power generation resulting in lower spending by customers for our products and services. These actions could also increase costs associated with our operations, including costs for raw materials and transportation. There is also increased focus, including by governmental and non-governmental organizations, environmental advocacy groups, investors and other stakeholders on these and other sustainability matters, and adverse publicity in the global marketplace about the levels of GHG emissions by companies in the manufacturing and energy industry could reduce customer demand for our products and services or harm our reputation. Because it is uncertain what laws will be enacted, we cannot predict the potential impact of such laws on our future financial condition, results of operations and cash flows, but such new or additional laws could adversely affect our business.

We are party to asbestos-containing product litigation that could adversely affect our financial condition, results of operations and cash flows.

We are a defendant in a substantial number of lawsuits that seek to recover damages for personal injury allegedly resulting from exposure to asbestos-containing products formerly manufactured and/or distributed by us. Such products were used as internal components of process equipment, and we do not believe that there was any significant emission of asbestos-containing fibers during the use of this equipment. Although we are defending these allegations vigorously and believe that a high percentage of these lawsuits are covered by insurance or indemnities from other companies, there can be no assurance that we will prevail or that coverage or payments made by insurance or such other companies would be adequate. Unfavorable rulings, judgments or settlement terms could have a material adverse impact on our business, financial condition, results of operations and cash flows.

Inability to protect our intellectual property could negatively affect our competitive position.

We cannot guarantee that the steps we have taken to protect our intellectual property will be adequate to prevent infringement of our rights or misappropriation of our technology. For example, effective patent, trademark, copyright and trade secret protection are unavailable or limited in some of the foreign countries in which we operate. In addition, confidentiality agreements which we enter into with employees and third parties could be breached or otherwise may not provide meaningful protection for our trade secrets and know-how related to the design, manufacture or operation of our products. Resorting to litigation to protect our intellectual property rights is burdensome and costly, and we may not always prevail. Further, adequate remedies are not always available in the event of an unauthorized use or disclosure of our trade secrets and manufacturing expertise. Failure to successfully enforce our intellectual property rights could harm our competitive position, business, financial condition, results of operations and cash flows.

Increased costs as a result of product liability and warranty claims could adversely affect our financial condition, results of operations and cash flows.

From time to time, we are exposed to product liability and warranty claims when the use of one of our products results in, or is alleged to result in, bodily injury and/or property damage or our products actually or allegedly fail to perform as expected. Some of our products are designed to support the most critical, severe service applications in the markets that we serve and any failure of such products could result in significant product liability and warranty claims, as well as damage to our reputation in the marketplace. While we maintain insurance coverage with respect to certain product liability claims, we may not be able to obtain such insurance on acceptable terms in the future, and any such insurance may not provide adequate coverage against product liability claims. In addition, product liability claims can be expensive to defend and can divert the attention of management and other personnel for significant periods of time, regardless of the ultimate outcome. An unsuccessful defense of a product liability claim could have an adverse effect on our business, financial condition, results of operations and cash flows. Even if we are successful in defending against a claim relating to our products, claims of this nature could cause our customers to lose confidence in our products and our company.

Warranty claims are not generally covered by insurance, and we may incur significant warranty costs that are not reimbursable, which could adversely affect our financial condition, results of operations and cash flows.

Financial and Accounting Risks

Significant changes in pension fund investment performance or assumptions changes may have a material effect on the valuation of our obligations under our defined benefit pension plans, the funded status of these plans and our pension expense.

We maintain funded defined benefit pension plans that are either currently funded in accordance with local requirements in the U.S., Belgium, Canada, The Netherlands, Switzerland and the U.K., or above funded requirements in India and Mexico, and defined benefit plans that are not required to be funded and are not funded in Austria, France, Germany, Italy, Japan and Sweden. Our pension liability is materially affected by the discount rate used to measure our pension obligations and, in the case of the plans that are required to be funded, the level of plan assets available to fund those obligations and the expected long-term rate of return on plan assets. A change in the discount rate can result in a significant increase or decrease in the valuation of pension obligations, affecting the reported status of our pension plans and our pension expense. Significant changes in investment performance or a change in the portfolio mix of invested assets can result in increases and decreases in the valuation of plan assets or in a change of the expected rate of return on plan assets. This impact may be particularly prevalent where we maintain significant concentrations of specified investments, such as the U.K. equity and fixed income securities in our non-U.S. defined benefit plans. Changes in the expected return on plan assets assumption can result in significant changes in our pension expense and future funding requirements.

We continually review our funding policy related to our U.S. pension plan in accordance with applicable laws and regulations. U.S. regulations have increased the minimum level of funding for U.S. pension plans in prior years, which has at times required significant contributions to our pension plans. Contributions to our pension plans reduce the availability of our cash flows to fund working capital, capital expenditures, R&D efforts and other general corporate purposes.

The recording of increased deferred tax asset valuation allowances in the future or the impact of tax law changes on such deferred tax assets could adversely affect our operating results.

We currently have significant net deferred tax assets resulting from tax credit carryforwards, net operating losses and other deductible temporary differences that are available to reduce taxable income in future periods. Based on our assessment of our deferred tax assets, we determined, based on projected future income and certain available tax planning strategies, that approximately $331 million of our deferred tax assets will more likely than not be realized in the future, and no valuation allowance is currently required for this portion of our deferred tax assets. Should we determine in the future that these assets will more likely than not be realized we will be required to record an additional valuation allowance in connection with these deferred tax assets and our operating results would be adversely affected in the period such determination is made. In addition, tax law changes could negatively impact our deferred tax assets.

Our outstanding indebtedness and the restrictive covenants in the agreements governing our indebtedness limit our operating and financial flexibility.

Under certain events of default, mandatory repayments on our outstanding indebtedness, which requires us to dedicate a substantial portion of our cash flows from operations to payments on our indebtedness, thereby reducing the availability of our cash flows to fund working capital, capital expenditures, R&D efforts and other general corporate purposes, such as dividend payments and share repurchases, and could generally limit our flexibility in planning for, or reacting to, changes in our business and industry. In addition, we may need new or additional financing in the future to expand our business or refinance our existing indebtedness. Our current senior credit facility matures on September 13, 2026 and our senior notes are due in 2030 and 2032. Additionally, we have drawn amounts under a term loan fund. For additional information regarding our current indebtedness refer to Note 12 to our consolidated financial statements included in Item 8 of this Annual Report. Our inability to timely access capital on satisfactory terms, including as a result of market disruptions, could limit our ability to expand our business as desired and refinance our indebtedness.

In addition, the agreements governing our indebtedness impose certain operating and financial restrictions on us and somewhat limit management's discretion in operating our businesses. These agreements limit or restrict our ability, among other things, to: incur additional debt; fully utilize the capacity under the senior credit facility; pay dividends and make other distributions; repurchase shares of our common stock in certain circumstances; prepay subordinated debt; make investments and other restricted payments; create liens; sell assets; and enter into transactions with affiliates.

We are also required to maintain debt ratings, comply with leverage and interest coverage financial covenants and deliver to our lenders audited annual and unaudited quarterly financial statements. Our ability to comply with these covenants may be affected by events beyond our control. Failure to comply with these covenants could result in an event of default which, if not cured or waived, may have a material adverse effect on our business, financial condition, results of operations and cash flows.

Goodwill impairment could negatively impact our net income and shareholders' equity.

Goodwill is not amortized, but is tested for impairment at the reporting unit level, which is an operating segment or one level below an operating segment. Goodwill is required to be tested for impairment annually and between annual tests if events or circumstances indicate that it is more likely than not that the fair value of a reporting unit is less than its carrying value. Reductions in or impairment of the value of our goodwill or other intangible assets will result in charges against our earnings, which could have a material adverse effect on our reported results of operations and financial position in future periods.

There are numerous risks that may cause the fair value of a reporting unit to fall below its carrying amount, which could lead to the measurement and recognition of goodwill impairment. These risks include, but are not limited to, lowered expectations of future financial results, adverse changes in the business climate, increase in the discount rate, an adverse action or assessment by a regulator, the loss of key personnel, a more-likely-than-not expectation that all or a significant portion of a reporting unit may be disposed of, failure to realize anticipated synergies from acquisitions, a sustained decline in the Company's market capitalization, and significant, prolonged negative variances between actual and expected financial results. In recent years, the estimated fair value of our pump reporting unit has fluctuated, partially due to broad-based capital spending declines and heightened pricing pressures experienced in the oil and gas markets. Although we have concluded that there is no impairment on the goodwill associated with our pump reporting unit as of December 31, 2023, we will continue to monitor its performance and related market conditions for future indicators of potential impairment. For additional information, see the discussion in Item 7 of this Annual Report and under Note 1 to our consolidated financial statements included in Item 8 of this Annual Report.

The failure to maintain effective Internal controls could impact the accuracy and timely reporting of our business and financial results.

Our internal control over financial reporting has not always prevented or detected misstatements because of its inherent limitations, including the possibility of human error, the circumvention or overriding of controls or fraud. We have in the past discovered, and may in the future discover, areas of our internal controls that need improvement, including material weaknesses in internal controls. We have devoted significant resources to remediate and improve our internal controls and to monitor the effectiveness of these remediated measures. There can be no assurance that these measures will ensure that we maintain at all times effective internal controls over our financial processes and reporting in the future. Even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. Any future failures to maintain the adequacy of our internal controls, including any failure to implement required new or improved controls, or difficulties in their implementation, could harm our business and financial results and we could fail to meet our financial reporting obligations.

General Risks

We depend on key personnel, the loss of whom would harm our business.

Our future success will depend in part on the continued service of key executive officers and personnel. The loss of the services of any key individual could harm our business. Our future success also depends on our ability to recruit, retain and engage our personnel sufficiently, both to maintain our current business and to execute our strategic initiatives. Competition for officers and employees in our industry is intense and we may not be successful in attracting and retaining such personnel.

Changes in accounting principles and guidance could result in unfavorable accounting charges or effects.

We prepare our consolidated financial statements in conformity with accounting principles generally accepted in the U.S. A change in these principles can have a significant effect on our reported financial position and financial results. The adoption of new or revised accounting principles may require us to make changes to our systems, processes and internal controls, which could have a significant effect on our reported financial results and internal controls, cause unexpected financial reporting fluctuations, retroactively affect previously reported results or require us to make costly changes to our operational processes and accounting systems upon our following the adoption of these standards.

Forward-Looking Information is Subject to Risk and Uncertainty

This Annual Report and other written reports and oral statements we make from time-to-time include "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, Section 21E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts included in this Annual Report regarding our financial position, business strategy and expectations, plans and objectives of management for future operations, industry conditions, market conditions and indebtedness covenant compliance are forward-looking statements. Forward-looking statements may include, among others, statements about our goals and strategies, new product introductions, plans to cultivate new businesses, future economic conditions, revenue, pricing, gross profit margin and costs, capital spending, expected cost savings from our realignment programs, depreciation and amortization, research and development expenses, potential impairment of assets, tax rate and pending tax and legal proceedings. In some cases forward-looking statements can be identified by terms such as "may," "should," "expects," "could," "intends," "projects," "predicts," "plans," "anticipates," "estimates," "believes," "forecasts," "seeks" or other comparable terminology. These statements are not historical facts or guarantees of future performance, but instead are based on current expectations and are subject to material risks, uncertainties and other factors, many of which are outside of our control.

We have identified factors that could cause actual plans or results to differ materially from those included in any forward-looking statements. These factors include those described above under this "Risk Factors" heading, or as may be identified in our other SEC filings from time to time. These uncertainties are beyond our ability to control, and in many cases, it is not possible to foresee or identify all the factors that may affect our future performance or any forward-looking information, and new risk factors can emerge from time to time. Given these risks and uncertainties, undue reliance should not be placed on forward-looking statements as a prediction of actual results.

All forward-looking statements included in this Annual Report are based on information available to us on the date of this Annual Report and the risk that actual results will differ materially from expectations expressed in this report will increase with the passage of time. We undertake no obligation, and disclaim any duty, to publicly update or revise any forward-looking statement or disclose any facts, events or circumstances that occur after the date hereof that may affect the accuracy of any forward-looking statement, whether as a result of new information, future events, changes in our expectations or otherwise. This discussion is provided as permitted by the Private Securities Litigation Reform Act of 1995 and all of our forward-looking statements are expressly qualified in their entirety by the cautionary statements contained or referenced in this section.

ITEM 1B. *UNRESOLVED STAFF COMMENTS*

None.

ITEM 1C. *CYBERSECURITY*

Governance

Our Board of Directors has delegated the primary responsibility to oversee cybersecurity matters to the Finance and Risk Committee of our Board of Directors. The Finance and Risk Committee receives regular reports from management, including our Chief Information Officer (CIO), and reports to the Board of Directors at least annually on data protection and cybersecurity matters and reviews the measures implemented by the Company to identify and mitigate data protection and cybersecurity risks. In addition to regularly scheduled Finance and Risk Committee reviews, we have in place processes and protocols by which certain cybersecurity incidents are reported immediately to the Company's executive leadership team, and subsequently thereafter, as appropriate to the Finance and Risk Committee.

Our CIO and our Director of Cybersecurity, who reports in to the CIO, have extensive cybersecurity knowledge and skills gained from over 30 years of work experience at the Company and elsewhere, respectively, and head the team responsible for implementing and maintaining cybersecurity and data protection practices across our business. Reporting to our Chief Information Officer and Director of Cybersecurity are a number of experienced information security specialists responsible for various parts of our business, each of whom is supported by a team of trained cybersecurity professionals. The CIO and Director of Cybersecurity are informed about and monitor the prevention, detection, mitigation, and remediation of cybersecurity incidents through reports from this team and regularly review risk management measures implemented by the Company to identify and mitigate cyber security risks. The CIO also attends regular meetings of the Finance and Risk Committee to report information on material risks from cybersecurity threats.

Risk Management and Strategy

We have documented processes in place for assessing, identifying, and managing material risks from potential unauthorized occurrences on or through our electronic information systems that may result in adverse effects on the confidentiality, integrity, and availability of our information systems and the information residing therein. These include a wide variety of mechanisms, controls, technologies, methods, systems, and other processes designed to prevent or mitigate data loss, theft, misuse, or other security incidents or vulnerabilities affecting the data we collect, process, store, and transmit as part of our business. We also employ systems and processes designed to oversee, identify, and reduce the potential impact of a security incident at a third-party vendor or customer.

As part of our risk management process and compliance with our ISO 27001 cybersecurity certification requirements, we conduct penetration testing, security audits, and ongoing risk assessments using a company-wide risk framework. We also require employees with access to information systems, to undertake data protection and cybersecurity training and compliance programs as part of the employee onboarding process, as well as annually thereafter.

In addition to our in-house cybersecurity capabilities, we engage consultants and other third parties as necessary to assist with assessing, identifying, and managing cybersecurity risks. With respect to incident response, we have adopted a Cybersecurity Incident Response Policy (the “CIRP”), which provides governance and guidance in responding to cybersecurity incidents. The CIRP sets out a coordinated approach to investigating, containing, documenting and mitigating incidents, including reporting findings and keeping senior management and other key stakeholders informed and involved as appropriate. In general, the CIRP aligns with the ISO 27001 standard. The CIRP applies to all Company personnel (including third-party contractors, vendors and partners) that perform functions or services that require access to secure Company information, and to all devices and network services that are owned or managed by the Company.

Cybersecurity risks and the adequacy of associated mitigations are analyzed by senior leadership as part of the enterprise risk assessments that are reported to and discussed by our Board of Directors. To date, risks from cybersecurity threats, including as a result of any previous cybersecurity incidents, have not materially affected us, including our business strategy, results of operations or financial condition, and we do not believe that such risks are reasonably likely to have such an effect over the long term. While we have not experienced any material cybersecurity incidents, there can be no guarantee that we will not be the subject of future successful incidents. For additional information on cybersecurity risks we face, see “Item 1A. Risk Factors”, of this Annual Report, which should be read in conjunction with the foregoing information.

ITEM 2. *PROPERTIES*

Our principal executive offices, including our global headquarters, are located at 5215 N. O'Connor Boulevard, Suite 700, Irving, Texas 75039. Our global headquarters is a leased facility, which we began to occupy on January 1, 2004. In December 2018, we extended our original lease term an additional 10 years to December 2030. We have the option to renew the current lease for two additional five-year periods. We currently occupy approximately 130,000 square feet at this facility.

Our major manufacturing facilities (those with 50,000 or more square feet of manufacturing capacity) operating at December 31, 2023 are presented in the table below. See "Item 1. Business" in this Annual Report for further information with respect to all of our manufacturing and operational facilities, including QRCs.

	Number of Facilities	Approximate Aggregate Square Footage
FPD		
U.S.	7	1,171,000
Non-U.S.	19	3,651,000
FCD		
U.S.	5	925,000
Non-U.S.	10	1,495,000

We own the majority of our manufacturing facilities, and those manufacturing facilities we do not own are leased. We also maintain a substantial network of U.S. and foreign service centers and sales offices, most of which are leased. The majority of our manufacturing leased facilities are covered by lease agreements with terms ranging from two to seven years, with individual lease terms generally varying based on the facilities' primary usage. We believe we will be able to extend leases on our various facilities as necessary, as they expire.

We believe that our current facilities are adequate to meet the requirements of our present and foreseeable future operations. We continue to review our capacity requirements as part of our strategy to optimize our global manufacturing efficiency. See Note 4 to our consolidated financial statements included in Item 8 of this Annual Report for additional information regarding our lease obligations.

ITEM 3. *LEGAL PROCEEDINGS*

We are party to the legal proceedings that are described in Note 15 to our consolidated financial statements included in Item 8 of this Annual Report, and such disclosure is incorporated by reference into this Item 3. In addition to the foregoing, we and our subsidiaries are named defendants in certain other ordinary routine lawsuits incidental to our business and are involved from time to time as parties to governmental proceedings, all arising in the ordinary course of business. Although the outcome of lawsuits or other proceedings involving us and our subsidiaries cannot be predicted with certainty, and the amount of any liability that could arise with respect to such lawsuits or other proceedings cannot be predicted accurately, management does not currently expect the amount of any liability that could arise with respect to these matters, either individually or in the aggregate, to have a material adverse effect on our financial position, results of operations or cash flows. We have established reserves covering exposures relating to contingencies to the extent believed to be reasonably estimable and probable based on past experience and available facts.

ITEM 4. *MINE SAFETY DISCLOSURES*

Not applicable.

PART II

ITEM 5. *MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES*

Market Information

Our common stock is traded on the New York Stock Exchange ("NYSE") under the symbol "FLS" and our CUSIP number is 34354P105. On February 14, 2024, our records showed 838 shareholders of record. We have historically paid quarterly dividends based on a dividend date-of-record in the last month of each quarter with the dividend paid the following month. Any subsequent dividends will be reviewed by our Board of Directors and declared in its discretion.

Issuer Purchases of Equity Securities

During the quarter ended December 31, 2023, we had no repurchases of our common stock shares as part of publicly announced plans. As of December 31, 2023, we had $96.1 million of remaining capacity under our current share repurchase program. Effective February 19, 2024, the Board of Directors authorized an increase in our total remaining capacity in the share repurchase program to $300.0 million. The following table sets forth the repurchase data for each of the three months during the quarter ended December 31, 2023:

Period	Total Number of Shares Purchased		Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plan (3)(4)	Approximate Dollar Value That May Yet Be Purchased Under the Plan
					(In millions)
October 1 - 31	192	(1)	$ 38.81	—	$ 96.1
November 1 - 30	1,705	(2)	37.10	—	96.1
December 1 - 31	2,328	(1)	40.56	—	96.1
Total	4,225		$ 39.09	—	

(1) Shares tendered by employees to satisfy minimum tax withholding amounts for Restricted Shares.

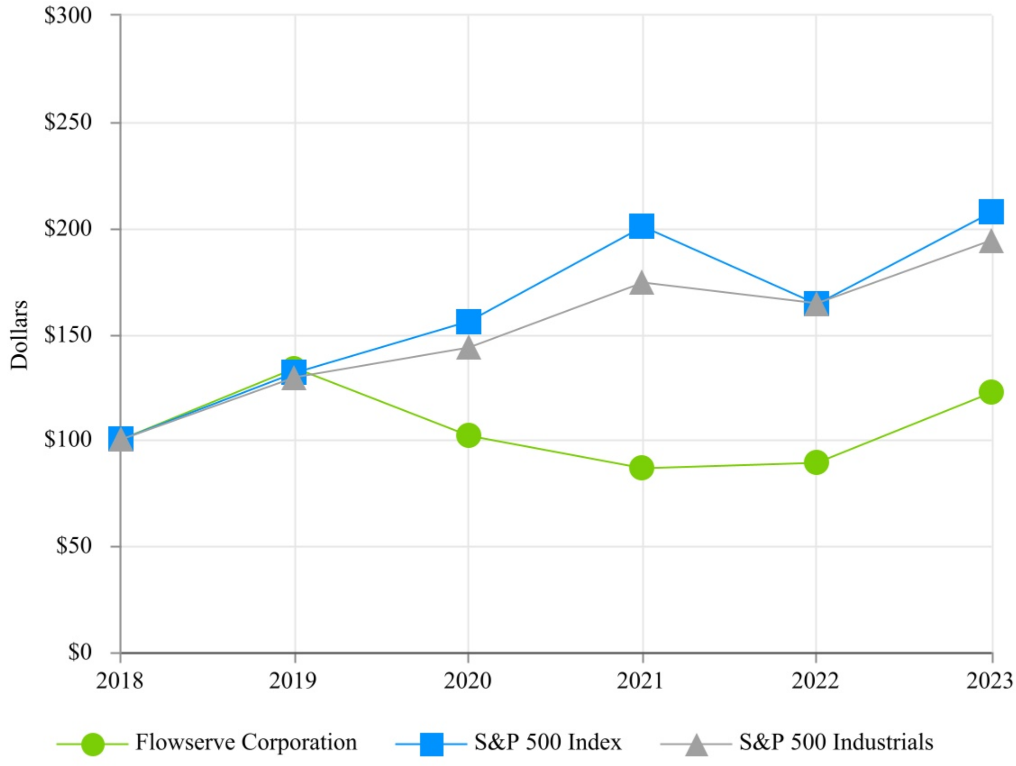
(2) Shares purchased at a price of $37.10 per share by a rabbi trust that we established in connection with our director deferral plans, pursuant to which non-employee directors may elect to defer directors' quarterly cash compensation to be paid at a later date in the form of common stock.

(3) On November 13, 2014, our Board of Directors approved a $500.0 million share repurchase authorization. Effective February 19, 2024, the Board of Directors authorized an increase in our total remaining capacity in the share repurchase program to $300.0 million. Our share repurchase program does not have an expiration date, and we reserve the right to limit or terminate the repurchase program at any time without notice.

(4) Note 17 to our consolidated financial statements included in Item 8 of this Annual Report provides additional information regarding our share repurchase activity.

Stock Performance Graph

The following graph depicts the most recent five-year performance of our common stock with the S&P 500 Index and S&P 500 Industrials. The graph assumes an investment of $100 on December 31, 2018, and assumes the reinvestment of any dividends over the following five years. The stock price performance shown in the graph is not necessarily indicative of future price performance.



	Base Period	December 31,				
Company/Index	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Flowserve Corporation	$100.00	$133.67	$101.76	$86.40	$89.05	$122.28
S&P 500 Index	100.00	131.49	155.66	200.31	164.00	207.06
S&P 500 Industrials	100.00	129.32	143.62	173.92	164.33	194.03

ITEM 6. [Reserved]

ITEM 7. *MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS*

The following discussion and analysis is provided to increase the understanding of, and should be read in conjunction with, the accompanying consolidated financial statements and notes. See “Item 1A. Risk Factors” and the section titled “Forward-Looking Information is Subject to Risk and Uncertainty” included in this Annual Report on Form 10-K for the year ended December 31, 2023 ("Annual Report") for a discussion of the risks, uncertainties and assumptions associated with these statements. Unless otherwise noted, all amounts discussed herein are consolidated.

EXECUTIVE OVERVIEW

Our Company

We are a world-leading manufacturer and aftermarket service provider of comprehensive flow control systems. We develop and manufacture precision-engineered flow control equipment integral to the movement, control and protection of the flow of materials in our customers’ critical processes. Our product portfolio of pumps, valves, seals, automation and aftermarket services supports global infrastructure industries, including oil and gas, chemical, power generation and water management, as well as general industrial markets where our products and services enable customers to achieve their goals. Through our manufacturing platform and global network of QRCs, we offer a broad array of aftermarket equipment services, such as installation, advanced diagnostics and turnkey maintenance programs. As of December 31, 2023, we have approximately 16,000 employees (“associates”) globally and a footprint of manufacturing facilities and QRCs in more than 50 countries.

Our business model is significantly influenced by the capital spending of global infrastructure industries for the placement of new products into service and maintenance spending for aftermarket services for existing operations. The worldwide installed base of our products is an important source of aftermarket revenue, where products are intended to maximize operating time of many key industrial processes. We continue to invest in our aftermarket strategy to provide local support to drive customer investments in our offerings and use of our services to replace or repair installed products. The aftermarket portion of our business also helps provide business stability during various economic periods. The aftermarket business, which is primarily served by our network of 156 QRCs located around the globe, some of which are shared by our two business segments, provides a variety of service offerings for our customers including spare parts, service solutions, product life cycle solutions and other value-added services. It is generally a higher margin business compared to our original equipment business and a key component of our profitable growth strategy.

Our operations are conducted through two business segments that are referenced throughout this Management’s Discussion and Analysis of Financial Condition and Results of Operations ("MD&A"):

- FPD designs and manufactures custom, highly-engineered pumps, pre-configured industrial pumps, pump systems, mechanical seals, auxiliary systems and replacement parts and related services; and
- FCD designs, manufactures and distributes a broad portfolio of engineered-to-order and configured-to-order isolation valves, control valves, valve automation products and related equipment.

Our business segments share a focus on industrial flow control technology and have a high number of common customers. These segments also have complementary product offerings and technologies that are often combined in applications that provide us a net competitive advantage. Our segments also benefit from our global footprint, our economies of scale in reducing administrative and overhead costs to serve customers more cost effectively and shared leadership for operational support functions, such as research and development, marketing and supply chain.

The reputation of our product portfolio is built on more than 50 well-respected brand names such as Worthington, IDP, Valtek, Limitorque, Durco, Argus, Edward, Valbart and Durametallic, which we believe to be one of the most comprehensive in the industry. Our products and services are sold either directly or through designated channels to more than 10,000 companies, including some of the world’s leading engineering, procurement and construction ("EPC") firms, original equipment manufacturers, distributors and end users.

We continue to leverage our QRC network to be positioned as near to customers as possible for service and support in order to capture valuable aftermarket business. Along with ensuring that we have the local capability to sell, install and service our equipment in remote regions, we continuously improve our global operations. We continue to enhance our global supply chain capability to increase our ability to meet global customer demands and improve the quality and timely delivery of our products over the long-term. Additionally, we continue to devote resources to improving the supply chain processes across our business segments to find areas of synergy and cost reduction and to improve our supply chain management capability to meet global customer demands. We also remain focused on improving on-time delivery and quality, while managing warranty costs as a percentage of sales across our global operations, through our operational excellence program. The goal of the program, which includes lean manufacturing, six sigma business management strategy and value engineering, is to maximize service fulfillment to customers through on-time delivery, reduced cycle time and quality at the highest internal productivity.

COVID-19 and Related Impacts

Throughout the pandemic, we experienced a number of supply chain and logistics constraints which impacted our ability to, and the speed at which we could manufacture and ship products to our customers. Most of these issues have stabilized as we enter 2024 and we do not expect they will have a material impact to our operations going forward.

Related to our supply chain challenges, the strong U.S. dollar has made and may continue to make our products more expensive overseas and has resulted in challenges to meet our international customers' pricing expectations. We will continue to be proactive in our efforts to stay competitive in our prices and market share.

Throughout the pandemic we engaged in a number of cost savings measures in order to help mitigate the adverse effects of the pandemic on our financial results, including certain realignment activities. In the first quarter of 2023, we identified and initiated certain realignment activities concurrent with the consolidation of our aftermarket and pump operations into a single operating model. This consolidated operating model was designed to better align our go-to-market strategy with our product offerings, enable end-to-end lifecycle responsibility and accountability, and to facilitate more efficient operations. Collectively, the above realignment activities are referred to as the "2023 Realignment Program." The 2023 Realignment Program activities were identified and implemented in phases throughout 2023 and expected to continue into 2024.

Our Markets

Our products and services are used in several distinct industries: oil and gas, chemical, power generation, water management, and several other industries, such as mining, food and beverage, steel, and pulp and paper, that are collectively referred to as "general industries."

Oil and Gas

The oil and gas industry represented approximately 38% and 40% of our bookings in 2023 and 2022, respectively. Customer repair and maintenance spending improved during 2023 supported by strong asset utilization, while larger project activity and short cycle investments continued in order to support global demand.

The outlook for the oil and gas industry is heavily dependent on the overall macroeconomic environment, including fuel demand, demand growth from both mature markets and developing geographies as well as changes in the regulatory environment. We currently expect continued growth in our business, including increased investment related to energy security and decarbonization efforts in 2024. We further believe stable oil prices provide support for increased demand for our aftermarket products and services. We believe the medium and long-term fundamentals for this industry remain attractive and see a stabilized environment with expected increased fuel demand on expected global economic growth. In addition, we believe projected depletion rates of existing fields and forecasted long-term demand growth will require additional investments. With our long-standing reputation in providing successful solutions for upstream, mid-stream and downstream applications, along with the advancements in our portfolio of offerings, we believe that we continue to be well-positioned to assist our customers in this improving environment.

General Industries

General industries represented, in the aggregate, approximately 26% and 22% of our bookings in 2023 and 2022, respectively. General industries comprise a variety of different businesses, including mining and ore processing, pulp and paper, food and beverage and other smaller applications, none of which individually represented more than 5% of total bookings in 2023 and 2022. General industries also include sales to distributors, whose end customers operate in the industries we primarily serve. General industry activity levels increased in 2023 for the second consecutive year, primarily due to customers' improved repair and maintenance budgets.

The outlook for this group of industries is heavily dependent upon the condition of global economies and consumer confidence levels. The long-term fundamentals of many of these industries remain sound, as many of the products produced by these industries are common staples of industrialized and urbanized economies. We believe that our specialty product offerings designed for these industries and our aftermarket service capabilities will provide continued business opportunities.

Chemical

The chemical industry represented approximately 21% and 22% of our bookings in 2023 and 2022, respectively. The chemical industry is comprised of petrochemical, specialty chemical and pharmaceutical products. Customer spending in 2023 remained resilient for the third consecutive year following the pandemic's negative impact on demand for chemical products in 2020. Customers' repair and maintenance budgets improved in 2023 and 2022 where bookings levels returned to roughly pre-pandemic levels.

The outlook for the chemical industry remains heavily dependent on global economic conditions. As global economies and unemployment conditions improve, a rise in consumer spending should follow. An increase in spending would drive greater demand for petrochemical, specialty chemical and pharmaceutical products supporting improved levels of capital investment. We believe the chemical industry will continue to invest in North America and Middle East capacity additions, maintenance and upgrades for optimization of existing assets and that developing regions will selectively invest in capital infrastructure to meet current and future indigenous demand. We believe our global presence and our localized aftermarket capabilities are well-positioned to serve the potential growth opportunities in this industry.

Power Generation

The power generation industry represented approximately 11% and 12% of our bookings in 2023 and 2022, respectively. In 2023, energy security concerns drove continued investment in the power generation industry, including nuclear new build and life extensions as well as traditional thermal power sources.

Natural gas-fired combined cycle (“NGCC”) plants have increased their share of the energy mix, driven by market prices for gas remaining low and stable (partially due to the increasing global availability of LNG), low capital expenditures, and the ability of NGCC to stabilize unpredictable renewable sources. With the potential of unconventional sources of gas, the global power generation industry is forecasting an increased use of this form of fuel for power generation plants.

As countries around the world look for opportunities to gain additional energy independence, nuclear power remains an important contributor to the global energy mix and is a key factor in our Diversification strategy. We continue to support our significant installed base in the global nuclear fleet by providing aftermarket and life extension products and services. Due to our extensive history, we believe we are well positioned to take advantage of this ongoing source of aftermarket and new project opportunities.

Global efforts to limit the emissions of carbon dioxide may have some adverse effect on thermal power investment plans depending on the potential requirements imposed and the timing of compliance by country. However, many proposed methods of capturing and limiting carbon dioxide emissions offer business opportunities for our products and services. At the same time, we continue to take advantage of new investments in concentrated solar power generating capacity, where our pumps, valves, and seals are uniquely positioned for both molten salt applications as well as the traditional steam cycle.

We believe the long-term fundamentals for the power generation industry remain solid based on projected increases in demand for electricity driven by global population growth, growth of urbanization in developing markets and the increased use of electricity driven transportation. We also believe that our long-standing reputation in the power generation industry, our portfolio of offerings for the various generating methods, our advancements in serving the renewable energy market and carbon capture methodologies, as well as our global service and support structure, position us well for the future opportunities in this important industry.

Water Management

The water management industry represented approximately 4% of our bookings in each of 2023 and 2022. Water management industry activity levels remained steady in 2023 following the decrease in 2020 primarily due to the pandemic's negative impact on government budgets across the globe. Worldwide demand for fresh water, water treatment and re-use, desalination and flood control are expected to create requirements for new facilities or for upgrades of existing systems, many of which require products that we offer, particularly pumps. We expect capital and aftermarket spending to rise in developed and emerging markets with governments and private industry providing funding for critical projects when their priorities shift away from pandemic-management.

The proportion of people living in regions that find it difficult to meet water requirements is expected to increase significantly in the coming years. We believe that the persistent demand for fresh water during all economic cycles supports continued investments, especially in North America and developing regions.

Impact of Russia-Ukraine Conflict on our Business

In response to the Russia-Ukraine conflict, several countries, including the United States, have imposed economic sanctions and export controls on certain industry sectors and parties in Russia. As a result of this conflict, including the aforementioned sanctions and overall instability in the region, in March 2022 we permanently ceased all Company operations in Russia and are currently taking the necessary steps to wind down in the country.

In the first quarter of 2022, we recorded a $20.2 million pre-tax charge ($21.0 million after-tax) to reserve the asset positions of our Russian subsidiary (excluding cash) as of March 31, 2022, to record contra-revenue for previously recognized revenue and estimated cancellation fees on open contracts that were previously accounted for under the percentage of completion ("POC") method and subsequently canceled, to establish a reserve for the estimated cost to exit the operations of our Russian subsidiary and to record a reserve for our estimated financial exposure on contracts that have been or are anticipated to be canceled.

In addition, we reevaluated our financial exposure as of December 31, 2022 and recorded an incremental $13.6 million pre-tax charge ($9.8 million after-tax) in the fourth quarter of 2022 for additional contract cancellation fees, to reserve our residual financial exposure due to increased Russia sanctions imposed during the latter part of 2022 and our decision to cancel backlog as a result of the additional sanctions.

We continue to monitor the situation involving Russia and Ukraine and its impact on the rest of our global business. This includes the macroeconomic impact, including with respect to global supply chain issues and inflationary pressures. We reevaluated our financial exposure as of December 31, 2023 and concluded that the reserve recorded as of December 31, 2022 is sufficient and no changes to material reserves were needed. To date, impacts have not been material to our business and we do not currently expect that any incremental impact in future quarters, including any financial impacts caused by our cancellation of customer contracts and ceasing of operations in Russia, will be material to the Company.

Outlook for 2024

As our operations have generally stabilized from the COVID-19 pandemic, we have seen growth from our supportive served end-markets and our focus on our 3D Strategy. Our sales volume is expected to deliver sustainable and healthy growth, while our 2023 Realignment Program and the new operating model have unlocked gains in organizational efficiency. With our strong backlog and improved market environment, we expect to continue growth in 2024.

Our bookings were $4.3 billion during 2023. Because a booking represents a contract that can be, in certain circumstances, modified or canceled, and can include varying lengths between the time of booking and the time of revenue recognition, there is no guarantee that bookings will result in comparable revenues or otherwise be indicative of future results. Assuming a positive general macroeconomic environment and continued supportive environments in our end markets, we expect full-year bookings in 2024 to be comparable to 2023 levels.

On December 31, 2023, we had $990.4 million of fixed-rate Senior Notes outstanding. We expect our interest expense in 2024 will be relatively consistent with amounts incurred in 2023. Our results of operations may also be impacted by unfavorable foreign currency exchange rate movements. See "Item 7A. Quantitative and Qualitative Disclosures about Market Risk" of this Annual Report.

We expect to generate sufficient cash from operations and have sufficient capacity under our Senior Credit Facility to fund any working capital, capital expenditures, dividend payments, share repurchases, debt payments and pension plan contributions in 2024. The amount of cash generated or consumed by working capital is dependent on our level of revenues, customer cash advances, backlog, customer-driven delays and other factors. We will seek to improve our working capital utilization, with a particular focus on improving the management of accounts receivable and inventory. In 2024, our cash flows for investing activities will be focused on strategic initiatives, information technology infrastructure, general upgrades and cost reduction opportunities and we currently estimate capital expenditures to be between $75 million and $85 million, before consideration of any acquisition activity. We currently anticipate that our contributions to our non-U.S. pension plans will be approximately $2 million in 2024, excluding direct benefits paid. We have no obligation to make contributions to our U.S. pension plans in 2024, but have authorization for contributions up to $20 million.

OUR RESULTS OF OPERATIONS

The following is the discussion and analysis of changes in the financial condition and results of operations for fiscal year December 31, 2023 compared to fiscal year 2022. The discussion and analysis of changes in the financial condition and results of operations for fiscal year 2022 compared to fiscal year 2021 that are not included in this Form 10-K may be found in Part II, Item 7 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on March 7, 2023.

Throughout this discussion of our results of operations, we discuss the impact of fluctuations in foreign currency exchange rates. We have calculated currency effects on operations by translating current year results on a monthly basis at prior year exchange rates for the same periods.

In the second quarter of 2020, we identified and initiated certain realignment activities to right-size our organizational operations based on the current business environment, with the overall objective to reduce our workforce costs, including manufacturing optimization through the consolidation of certain facilities ("2020 Realignment Program"). As of December 31, 2022, the 2020 Realignment Program was substantially complete.

In the first quarter of 2023, we identified and initiated certain realignment activities concurrent with the consolidation of our aftermarket and pump operations into a single operating model. This consolidated operating model is designed to better align our go to market strategy with our product offerings, enable end-to-end lifecycle responsibility and accountability, and to facilitate more efficient operations. Additionally, we committed to an estimated $50 million in cost reduction efforts to begin in 2023. Collectively, the above realignment activities are referred to as the "2023 Realignment Program." The 2023 Realignment Program activities were identified and implemented in phases throughout 2023. We currently anticipate a total investment in realignment activities that have been evaluated and initiated of approximately $87 million of which $17 million is estimated to be non-cash. Based on 2023 Realignment Program activities initiated to date, we estimate that we recognized cost savings of approximately $27 million during the year ended December 31, 2023. Upon completion of the 2023 Realignment Program activities that have been identified and initiated to date, we expect to exceed our established target of annualized cost savings of approximately $50 million. Actual savings could vary from expected savings, which represent management's best estimate to date. There are certain remaining realignment activities that are currently being evaluated, but have not yet been approved and therefore not included in the anticipated total investment or estimated savings.

Realignment Activity

The following tables present our realignment activity by segment related to our Realignment Programs. Realignment activity for the year ended December 31, 2022 is immaterial:

	December 31, 2023				
(Amounts in thousands)	FPD	FCD	Subtotal–Reportable Segments	All Other	Consolidated Total
Total Realignment Charges					
COS	$ 10,797	$ 10,576	$ 21,373	$ (361)	$ 21,012
SG&A	14,533	11,393	25,926	19,099	45,025
Total	$ 25,330	$ 21,969	$ 47,299	$ 18,738	$ 66,037

Restructuring charges are included within Total Realignment charges and include charges related to approved, but not yet announced, site closures.

Bookings and Backlog

	2023	2022	2021
		(Amounts in millions)	
Bookings	$ 4,271.8	$ 4,447.5	$ 3,774.4
Backlog (at period end)	2,695.1	2,735.3	2,003.6

We define a booking as the receipt of a customer order that contractually engages us to perform activities on behalf of our customer with regard to manufacturing, service or support. Bookings recorded and subsequently canceled within the year-to-date period are excluded from year-to-date bookings. Bookings cancelled from the prior fiscal periods are excluded from the reported bookings and represent less than 1% for all periods presented. Bookings of $4.3 billion in 2023 decreased by $175.8 million, or 4.0%, as compared with 2022. The decrease included currency benefits of approximately $9 million. The decrease was driven by decreased customer bookings in the oil and gas, power generation, chemical and water management industries. The decrease in customer bookings was driven substantially by original equipment bookings, including the impact of FPD original equipment orders booked in 2022 in excess of $230 million to supply pumps and related equipment to supply pumps and related equipment to support the development of an onshore unconventional gas project in the Middle East that did not recur.

Backlog represents the aggregate value of booked but uncompleted customer orders and is influenced primarily by bookings, sales, cancellations and currency effects. Backlog of $2.7 billion at December 31, 2023 decreased by $40.2 million, or 1.5%, as compared with December 31, 2022. Currency effects provided an increase of approximately $42 million (currency effects on backlog are calculated using the change in period end exchange rates). Approximately 37% of the backlog at December 31, 2023 and 34% of the backlog at December 31, 2022 was related to aftermarket orders. We expect to recognize revenue on approximately 87% of the December 31, 2023 backlog during 2024. Backlog includes our unsatisfied (or partially unsatisfied) performance obligations related to contracts having an original expected duration in excess of one year of approximately $772 million as discussed in Note 2 to our consolidated financial statements included in Item 8 of this Annual Report.

Sales

	2023	2022	2021
		(Amounts in millions)	
Sales	$ 4,320.6	$ 3,615.1	$ 3,541.1

Sales in 2023 increased by $705.5 million, or 19.5%, as compared with 2022. The increase included currency benefits of approximately $15 million. The increased sales were driven by both aftermarket and original equipment customer sales, with increased customer sales into North America, the Middle East, Asia Pacific, Europe and Latin America, partially offset by decreased customer sales into Africa. Aftermarket sales represented approximately 52% of total sales, as compared with approximately 53% of total sales for the same period in 2022.

Sales to international customers, including export sales from the U.S., were approximately 62% of total sales in both 2023 and 2022. Sales into Europe, the Middle East and Africa ("EMA") were approximately 34% of total sales in 2023 and 32% in 2022. Sales into Asia Pacific were approximately 17% of total sales in 2023 and 19% in 2022. Sales into Latin America were approximately 7% of total sales in both 2023 and 2022.

Gross Profit and Gross Profit Margin

	2023	2022	2021
	(Amounts in millions, except percentages)		
Gross profit	$ 1,276.8	$ 994.3	$ 1,049.7
Gross profit margin	29.6 %	27.5 %	29.6 %

Gross profit in 2023 increased by $282.5 million, or 28.4%, as compared with 2022. Gross profit margin in 2023 of 29.6% increased from 27.5% in 2022. The increase was primarily due to the favorable impact of previously implemented sales price increases, lower supply chain inflationary pressure and a $8.9 million charge taken in 2022 related to our financial exposure in Russia that did not recur, partially offset by higher broad-based annual incentive compensation and increased charges of $20.7 million related to our Realignment Programs as compared to the same period in 2022.

SG&A

	2023	2022	2021
	(Amounts in millions, except percentages)		
SG&A	$ 961.2	$ 815.5	$ 797.1
SG&A as a percentage of sales	22.2 %	22.6 %	22.5 %

SG&A in 2023 increased by $145.7 million, or 17.9%, as compared with 2022. Currency effects yielded an increase of approximately $3 million. In 2023, SG&A increased due to increased charges of $45.5 million related to our Realignment Programs, higher broad-based annual incentive compensation, $8.8 million increase in research and development costs, $7.3 million of expense related to the terminated Velan acquisition, higher asbestos-related costs of $7.4 million for IBNR asbestos liability accruals based on an annual actuarial study and related legal expense, and a $2.9 million impairment of a licensing intangible, partially offset by a $15.7 million charge taken in 2022 related to our financial exposure in Russia that did not recur as compared with the same period in 2022. SG&A as a percentage of sales decreased 40 basis points primarily due to increased sales leverage that outpaced cost increases.

Net Earnings from Affiliates

	2023	2022	2021
	(Amounts in millions)		
Net earnings from affiliates	$ 17.9	$ 18.5	$ 16.3

Net earnings from affiliates represents our net income from investments in five joint ventures (one located in each of Chile, India, Saudi Arabia, South Korea and the United Arab Emirates) that are accounted for using the equity method of accounting. Net earnings from affiliates in 2023 decreased by $0.6 million, or 3.2%, as compared to the prior year, primarily as a result of decreased earnings of our FPD joint venture in South Korea.

Operating Income

	2023	2022	2021
	(Amounts in millions, except percentages)		
Operating income	$ 333.6	$ 197.2	$ 270.8
Operating income as a percentage of sales	7.7 %	5.5 %	7.6 %

Operating income in 2023 increased by $136.4 million, or 69.2%, as compared with 2022. The increase included negative currency effects of approximately $4 million. The increase was primarily a result of the $282.5 million increase in gross profit, partially offset by the $145.7 million increase in SG&A.

Interest Expense and Interest Income

	2023	2022	2021
	(Amounts in millions)		
Interest expense	$ (66.9)	$ (46.2)	$ (57.6)
Interest income	7.0	4.0	2.8

Interest expense in 2023 increased by $20.7 million as compared with 2022. The increase was primarily attributable to a higher effective interest rate on our outstanding debt, resulting in part from the termination of cross-currency swap agreements in 2022, and an increase in borrowings under our Revolving Credit Facility during 2023. Interest income in 2023 increased by $3.0 million as compared to 2022. The increase in interest income was primarily attributed to higher interest rates on our average cash balances compared with same period in 2022.

Loss on Extinguishment of Debt

	2023	2022	2021
	(Amounts in millions)		
Loss on extinguishment of debt	$ —	$ —	$ (46.2)

Loss on extinguishment of debt in 2021 of $46.2 million resulted from the redemption of our 2023 Senior Notes, 2022 Senior Notes and 2022 Euro Senior Notes and the write-off of deferred financing fees due to the amendment and restatement of the previous Senior Credit facility.

Other Income (Expense), net

	2023	2022	2021
	(Amounts in millions)		
Other income (expense), net	$ (49.9)	$ (0.6)	$ (36.1)

Other expense, net increased $49.3 million as compared to 2022, due primarily to a $44.0 million increase in losses from transactions in currencies other than our sites' functional currencies, a $6.7 million increase in losses arising from transactions on foreign exchange forward contracts and a $2.0 million impairment of an equity investment. The net currency related change was primarily due to the foreign currency exchange rate movements in the Euro, Argentinian peso, Hungarian forint and Mexican peso in relation to the U.S. dollar during the year ended December 31, 2023, as compared with the same period in 2022.

Income Tax and Tax Rate

	2023	2022	2021
	(Amounts in millions, except percentages)		
Provision for (benefit from) income taxes	$ 18.6	$ (43.6)	$ (2.6)
Effective tax rate	8.3 %	(28.3)%	(1.9)%

In December 2022, the European Union (“EU”) member states reached an agreement to implement the minimum tax component (“Pillar Two”) of the Organization for Economic Co-operation and Development’s tax reform initiative. Many countries continue to consider changes in their tax laws and regulations based on the Pillar Two proposals. We are continuing to evaluate the impact of these proposed and enacted legislative changes as new guidance becomes available. Some of these legislative changes could result in double taxation of our non-U.S. earnings, a reduction in the tax benefit received from our tax incentives, or other impacts to our effective tax rate and tax liabilities.

Our effective tax rate of 8.3% for the year ended December 31, 2023 increased from (28.3)% in 2022 and differed from the federal statutory tax rate of 21% primarily due to the benefits of a tax planning strategy and the release of valuation allowances on the net deferred tax assets in Brazil and France, partially offset by the net impact of foreign operations.

The 2022 effective tax rate differed from the federal statutory rate of 21% primarily due to the release of the valuation allowance against our deferred tax assets in Germany and Mexico partially offset by a valuation allowance establishment in Argentina, and the release of the valuation allowance on our U.S. foreign tax credit carryforwards on general category income.

Our effective tax rate is based upon current earnings and estimates of future taxable earnings for each domestic and international location. The assumptions about future taxable income require the use of significant judgment and are consistent with the plans and estimates used in the underlying business. Changes in any of these and other factors, including our ability to utilize foreign tax credits and net operating losses or results from tax audits, could impact the tax rate in future periods. As of December 31, 2023, we had U.S. foreign tax credit carryforwards of $63.5 million, expiring in 2028-2033 tax years, against which we recorded a valuation allowance of $49.1 million related to the U.S. foreign tax credit carryforwards on foreign branch category income. Additionally, we have recorded other net deferred tax assets of $202.6 million, which relate to net operating losses, tax credits and other deductible temporary differences that are available to reduce taxable income in future periods, most of which do not have a definite expiration. Should we not be able to utilize all or a portion of these credits and losses, our effective tax rate would increase.

Net Earnings and Earnings Per Share

	2023	2022	2021
	(Amounts in millions, except per share amounts)		
Net earnings attributable to Flowserve Corporation	$ 186.7	$ 188.7	$ 125.9
Net earnings per share — diluted	$ 1.42	$ 1.44	$ 0.96
Average diluted shares	131.9	131.3	130.9

Net earnings in 2023 decreased by $2.0 million to $186.7 million, or to $1.42 per diluted share, as compared with 2022. The decrease was primarily attributable to a $62.2 million increase in tax expense, a $49.3 million increase in other expense, net, a $20.7 million increase in interest expense and a $9.2 million increase in net earnings attributable to noncontrolling interests, partially offset by an increase in operating income of $136.4 million.

Other Comprehensive Income (Loss)

	2023	2022	2021
	(Amounts in millions)		
Other comprehensive income (loss)	$ (4.6)	$ (82.9)	$ 44.7

Other comprehensive income (loss) in 2023 decreased by $78.3 million from a loss of $82.9 million in 2022. The net loss in 2023 was primarily due to foreign currency translation adjustments resulting primarily from exchange rate movements of the Euro, British pound, Colombian peso and Mexican peso versus the U.S. dollar at December 31, 2023 as compared with 2022, partially offset by pension and other postretirement activity.

Business Segments

We conduct our operations through two business segments based on type of product and how we manage the business. We evaluate segment performance and allocate resources based on each segment's operating income. See Note 19 to our consolidated financial statements included in Item 8 of this Annual Report for further discussion of our segments. The key operating results for our two business segments, FPD and FCD, are discussed below.

Flowserve Pumps Division Segment Results

Our largest business segment is FPD, through which we design, manufacture, distribute and service highly custom engineered pumps, pre-configured industrial pumps, pump systems, mechanical seals and auxiliary systems (collectively referred to as "original equipment") and related services. FPD includes longer lead time, highly-engineered pump products and mechanical seals that are generally manufactured within shorter lead times. FPD also manufactures replacement parts and related equipment and provides aftermarket services. FPD primarily operates in the oil and gas, chemical, power generation, water management and general industries. FPD operates in 49 countries with 35 manufacturing facilities worldwide, 10 of which are located in Europe, 11 in North America, eight in Asia Pacific and six in Latin America, and we have 131 QRCs, including those co-located in manufacturing facilities and/or shared with FCD.

	FPD		
	2023	**2022**	**2021**
	(Amounts in millions, except percentages)		
Bookings	$ 2,941.2	$ 3,214.7	$ 2,675.7
Sales	3,064.5	2,522.5	2,470.8
Gross profit	906.8	728.1	760.4
Gross profit margin	29.6 %	28.9 %	30.8 %
SG&A	575.8	538.5	535.6
Gain on sale of business	—	—	1.8
Segment operating income	348.9	208.0	243.2
Segment operating income as a percentage of sales	11.4 %	8.2 %	9.8 %
Backlog (at period end)	1,891.7	2,008.9	1,368.9

Bookings in 2023 decreased by $273.5 million, or 8.5%, as compared with 2022. The decrease included currency benefits of approximately $15 million. The decrease in customer bookings was driven by decreased orders in the oil and gas, power generation, chemical, general and water industries. Decreased customer orders of $250.3 million into the Middle East, $20.6 million into Europe, and $44.3 million into Asia Pacific, were partially offset by increased customer orders of $18.0 million into Africa, $25.3 million into Latin America and $1.3 million into North America. The decrease in customer bookings was substantially driven by original equipment bookings, including the impact of original equipment orders booked in 2022 in excess of $230 million to supply pumps and related equipment to support the development of an onshore unconventional gas project in the Middle East, that did not recur. Of the $2.9 billion of bookings in 2023, approximately 40% were from oil and gas, 27% from general industries, 18% from chemical, 10% from power generation and 5% from water management.

Sales in 2023 increased $542.0 million, or 21.5%, as compared with 2022. The increase included currency benefits of approximately $18 million. The increase was driven by both original equipment and aftermarket customer sales, resulting from increased customer sales of $204.8 million into North America, $193.4 million into the Middle East, $50.4 million into Latin America, $47.5 million into Asia Pacific and $75.3 million into Europe, partially offset by decreased customer sales of $27.0 million into Africa.

Gross profit in 2023 increased by $178.7 million, or 24.5%, as compared with 2022. Gross profit margin in 2023 of 29.6% increased from 28.9% in 2022. The increase in gross profit margin was primarily due to the favorable impact of previously implemented sales price increases, lower supply chain inflationary pressure, a $7.4 million charge taken in 2022 related to our financial exposure in Russia that did not recur and the under absorption of $5.1 million of fixed manufacturing costs primarily due to operational interruptions related to the implementation of a new enterprise resource planning system at certain of our North America quick response centers in 2022 that did not recur, partially offset by higher broad-based annual incentive compensation, increased charges of $10.6 million related to our Realignment Programs, a mix shift away from higher margin aftermarket sales and a $4.5 million reversal of previously reserved inventory due to settlement with a customer in 2022 that did not recur as compared to the same period in 2022.

SG&A in 2023 increased by $37.3 million, or 6.9%, as compared with 2022. Currency effects provided an increase of approximately $3 million. The increase in SG&A was primarily due to higher broad-based annual incentive compensation, increased charges of $14.4 million related to our Realignment Programs, a $2.9 million impairment of a licensing intangible, the reversal of $5.1 million of previously reserved accounts receivable due to collection from a customer in 2022 that did not recur and a $4.2 million gain resulting from the sale of a small QRC facility in 2022 that did not recur, partially offset by a $14 million charge taken in 2022 related to our financial exposure in Russia that did not recur and a $2.5 million decrease in research and development costs as compared to the same period in 2022.

Operating income in 2023 increased by $140.9 million, or 67.7%, as compared with 2022. The increase included negative currency effects of approximately $2 million. The increase was primarily due to the $178.7 million increase in gross profit partially offset by the $37.3 million increase in SG&A.

Backlog of $1.9 billion at December 31, 2023 decreased by $117.2 million, or 5.8%, as compared with December 31, 2022. Currency effects provided an increase of approximately $34 million.

Flow Control Division Segment Results

FCD designs, manufactures and distributes a broad portfolio of engineered-to-order and configured-to-order isolation valves, control valves, valve automation products and related equipment. FCD leverages its experience and application know-how by offering a complete menu of engineered services to complement its expansive product portfolio. FCD has a total of 44 manufacturing facilities and QRCs in 22 countries around the world, with five of its 19 manufacturing operations located in the U.S., eight located in Europe, five located in Asia Pacific and one located in Latin America. Based on independent industry sources, we believe that FCD is the second largest industrial valve supplier on a global basis.

	FCD		
	2023	**2022**	**2021**
	(Amounts in millions, except percentages)		
Bookings	$ 1,345.9	$ 1,247.2	$ 1,112.8
Sales	1,266.0	1,100.6	1,075.9
Gross profit	372.8	305.5	316.7
Gross profit margin	29.4 %	27.8 %	29.4 %
SG&A	224.8	192.1	197.4
Segment operating income	148.0	113.4	119.7
Segment operating income as a percentage of sales	11.7 %	10.3 %	11.1 %
Backlog (at period end)	826.8	745.5	639.8

Bookings in 2023 increased $98.7 million, or 7.9%, as compared with 2022. The increase included negative currency effects of approximately $5 million. The increase in customer bookings was driven by increased orders in the oil and gas, power generation, chemical, general and water management industries. There were increased customer orders of $0.6 million into North America, $35.0 million into Europe, $70.9 million into the Middle East and $1.0 million into Africa, partially offset by decreased bookings of $9.7 million into Asia Pacific and $0.1 million into Latin America. The increase in customer bookings was driven by both original equipment and aftermarket bookings. Of the $1.3 billion of bookings in 2023, approximately 30% were from chemical, 33% were from oil and gas, 23% from general, 13% from power generation and 1% from water management industries.

Sales in 2023 increased by $165.4 million, or 15.0%, as compared with 2022. The increase included negative currency effects of approximately $3 million. The increase was driven by both increased customer original equipment and aftermarket sales, resulting from increased customer sales of $82.7 million into North America, $6.6 million into Africa, $28.7 million into Europe, $38.7 million into the Middle East and $6.5 million into Latin America, partially offset by decreased customer sales of $3.2 million into Asia Pacific.

Gross profit in 2023 increased by $67.3 million, or 22.0%, as compared with 2022. Gross profit margin in 2023 of 29.4% increased from 27.8% in 2022. The increase in gross profit margin was primarily due to the favorable impact of previously implemented sales price increases, favorable original equipment mix, lower supply chain inflationary pressure and a $1.4 million charge taken in 2022 related to our financial exposure in Russia that did not recur, partially offset by higher broad-based annual incentive compensation and increased charges of $10.4 million related to our Realignment Programs as compared to the same period in 2022.

SG&A in 2023 increased by $32.7 million, or 17.0% as compared with 2022. Currency effects provided a decrease of less than a million. The increase in SG&A was primarily due to increased charges of $11.8 million related to our Realignment Programs, higher broad-based annual incentive compensation and $7.3 million of expense related to the terminated Velan acquisition, partially offset by a $1.7 million charge taken in 2022 related to our financial exposure in

Russia that did not recur and a discrete asset write-down of $3.0 million in 2022 that did not recur as compared to the same period in 2022.

Operating income in 2023 increased by $34.6 million, or 30.5%, as compared with 2022. The increase included negative currency effects of approximately $2 million. The increase was primarily due to the $67.3 million increase in gross profit partially offset by the increase in SG&A of $32.7 million.

Backlog of $826.8 million at December 31, 2023 increased by $81.3 million, or 10.9%, as compared with December 31, 2022. Currency effects provided an increase of approximately $8 million.

LIQUIDITY AND CAPITAL RESOURCES

Cash Flow Analysis

	2023	2022	2021
		(Amounts in millions)	
Net cash flows provided (used) by operating activities	$ 325.8	$ (40.0)	$ 250.1
Net cash flows provided (used) by investing activities	(68.6)	(6.1)	(59.5)
Net cash flows provided (used) by financing activities	(153.0)	(150.0)	(599.7)

The following is a discussion and analysis of the Company's liquidity and capital resources for the years ended December 31, 2023 and 2022. A discussion of changes in the Company's liquidity and capital resources for the year ended December 31, 2022 and 2021 can be found in Part II, "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources" of our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on March 7, 2023.

Existing cash, cash generated by operations and borrowings available under our senior credit facility are our primary sources of short-term liquidity. We monitor the depository institutions that hold our cash and cash equivalents on a regular basis, and we believe that we have placed our deposits with creditworthy financial institutions. Our sources of operating cash generally include the sale of our products and services and the conversion of our working capital, particularly accounts receivable and inventories. Our total cash balance at December 31, 2023 was $545.7 million, compared with $435.0 million at December 31, 2022.

At December 31, 2023 our cash provided by operating activities was $325.8 million, as compared to cash used of $40.0 million in 2022. Cash flow used by working capital decreased in 2023, due primarily to decreased cash flows used by or increased cash flows provided by accounts receivable, inventories, contract assets, accrued liabilities and income taxes payable and retirement obligations and other liabilities, partially offset by decreased cash flows provided by or increased cash flows used by contract liabilities, prepaid expenses and other and accounts payable as compared to the same period in 2022.

Increases in accounts receivable provided $4.7 million of cash flow in 2023, compared to cash used of $152.0 million in 2022. For the fourth quarter of 2023 our days' sales outstanding ("DSO") was 68 days as compared to 75 days in 2022. We have not experienced a significant increase in customer payment defaults in 2023.

Increases in inventory used $59.8 million of cash flow in 2023, compared with cash used of $147.5 million in 2022. Inventory turns were 3.6 times at both December 31, 2023 and 2022. Our calculation of inventory turns does not reflect the impact of advanced cash received from our customers.

Increases in contract assets used $41.1 million of cash flow and increases in contact liabilities provided $26.8 million of cash flow in 2023.

Increases in accounts payable provided $53.1 million of cash flow in 2023 compared with cash provided of $79.0 million in 2022. Increases in accrued liabilities and income taxes payable provided $59.2 million of cash flow in 2023 compared to cash used of $5.2 million in 2022.

Cash used by investing activities were $68.6 million in 2023, as compared to $6.1 million in 2022. The increase of cash used in 2023 was primarily due to the termination of cross-currency swaps resulting in cash proceeds received of $66.0 million in 2022 that did not recur, lower cash proceeds provided from the disposal of assets during the year of $2.4 million and higher net affiliate investment activity of $3.1 million. Capital expenditures were $67.4 million in 2023, as compared to $76.3 million in 2022. In 2024, we currently estimate capital expenditures to be between $75 million and $85 million, before consideration of any acquisition activity.

Cash used by financing activities were $153.0 million in 2023 compared to cash used of $150.0 million in 2022. Cash outflows during 2023 resulted primarily from the $40.0 million in payments on our Term Loan and $105.0 million of dividend payments.

In 2023 we repurchased no shares of our outstanding common stock during the year. As of December 31, 2023, we had $96.1 million of remaining capacity under our share repurchase plan previously approved by the Board of Directors. Effective February 19, 2024, the Board of Directors authorized an increase in our total remaining capacity in the share repurchase program to $300.0 million.

Our material cash requirements for the next 12 months, include our estimated 2024 capital expenditures described above and our contractual obligations summarized below under the subheading "--Contractual Obligations". In the aggregate, our cash needs in 2024 are expected to be lower than those of 2023 due to anticipated benefits from working capital reductions. We believe cash flows from operating activities, combined with availability under our senior credit facility and our existing cash balances, will be sufficient to enable us to meet our cash flow needs for the next 12 months. However, cash flows from operations could be adversely affected by a decrease in the rate of general global economic growth and an extended decrease in capital spending of our customers, as well as economic, political and other risks associated with sales of our products, operational factors, competition, regulatory actions, fluctuations in foreign currency exchange rates and fluctuations in interest rates, among other factors. We believe that cash flows from operating activities and our expectation of continuing availability to draw upon our credit agreements are also sufficient to meet our cash flow needs for periods beyond the next 12 months.

Financing

On September 13, 2021, we amended and restated our credit agreement (the "Amended and Restated Credit Agreement") under our Senior Credit Facility ("Credit Facility") with Bank of America, N.A. and the other lenders to provide greater flexibility in maintaining adequate liquidity and access to available borrowings. The Amended and Restated Credit Agreement, (i) retained, from the previous credit agreement, the $800.0 million unsecured Revolving Credit Facility (the "Revolving Credit Facility"), which includes a $750.0 million sublimit for the issuance of letters of credit and a $30.0 million sublimit for swing line loans ii) provides for an up to $300 million unsecured Term Loan Facility (the "Term Loan"), (iii) extends the maturity date of the agreement to September 13, 2026, (iv) reduces commitment fees, (v) extends net leverage ratio covenant definition through the maturity of the agreement, and (vi) provides the ability to make certain adjustments to the otherwise applicable commitment fee, interest rate and letter of credit fees based on the Company's performance against to-be-established key performance indicators with respect to certain of the Company's environmental, social and governance targets. Subsequently, on February 3, 2023, we entered into an amendment to the Credit Facility (the "Amendment") which (i) replaced LIBOR with Secured Overnight Financing Rate ("SOFR") as the benchmark reference rate, (ii) lowered the Material Acquisition (as defined in the Credit Facility) threshold from $250 million to $200 million and (iii) extended compliance dates for certain financial covenants. We believe this Amendment will provide greater flexibility and additional liquidity under our Credit Facility as we continue to pursue our business goals and strategy. Most other terms and conditions under the previous Credit Facility remained unchanged.

The interest rates per annum applicable to the Revolving Credit Facility, other than with respect to swing line loans, are adjusted Term Secured Overnight Financing Rate ("Adjusted Term SOFR") plus between 1.000% to 1.750%, depending on our debt rating by either Moody's Investors Service, Inc. ("Moody's") or Standard & Poor's Financial Services LLC ("S&P"), or, at our option, the Base Rate (as defined in the Senior Credit Agreement) plus between 0.000% to 0.750% depending on our debt rating by either Moody's or S&P. An additional credit spread adjustment of 0.100% is included within Adjusted Term SOFR to account for the transition from LIBOR to SOFR. At December 31, 2023, the interest rate on the Revolving Credit Facility was the Adjusted Term Secured Overnight Financing Rate ("SOFR") plus 1.375% in the case of Adjusted Term SOFR loans and the Base Rate plus 0.375% in the case of Base Rate loans. In addition, a commitment fee is payable quarterly in arrears on the daily unused portions of the Revolving Credit Facility. The commitment fee will be between 0.080% and 0.250% of unused amounts under the Revolving Credit Facility depending on our debt rating by either Moody's or S&P. The commitment fee was 0.175% (per annum) during the period ended December 31, 2023.

Under the terms and conditions of the Senior Credit Agreement, interest rates per annum applicable to the Term Loan Facility are stated as Adjusted Term SOFR plus between 0.875% to 1.625%, depending on the Company's debt rating by either Moody's or S&P, or, at the option of the Company, the Base Rate plus between 0.000% to 0.625% depending on the Company's debt rating by either Moody's or S&P. At December 31, 2023, the interest rate on the Term Loan Facility was Adjusted Term SOFR plus 1.250% in the case of Adjusted Term SOFR loans and the Base Rate plus 0.250% in the case of Base Rate loans.

A discussion of our debt and related covenants is included in Note 12 to our consolidated financial statements included in Item 8 of this Annual Report. We were in compliance with the covenants as of December 31, 2023.

Liquidity Analysis

Our cash balance increased by $110.7 million to $545.7 million as of December 31, 2023 as compared with December 31, 2022. The cash increase included $325.8 million in operating cash inflows, partially offset by $40.0 million in payments on long-term debt and $105.0 million in dividend payments.

During 2023, we made $2.0 million cash contributions to our U.S. pension plan, compared to no cash contributions in 2022. At December 31, 2023 and 2022, as a result of the values of the plan's assets and our contributions to the plan, our U.S. pension plan was fully-funded as defined by applicable law. As of December 31, 2023 direct benefits paid by the U.S. pension plan were $2.8 million. We continue to maintain an asset allocation consistent with our strategy to maximize total return, while reducing portfolio risks through asset class diversification.

As of December 31, 2023, we had approximately $1,219 million of liquidity, consisting of cash and cash equivalents of $546 million and $673 million of borrowings available under our Senior Credit Facility. In light of the liquidity currently available to us, and the costs savings measures planned and already in place, we expect to be able to maintain adequate liquidity over the next 12 months. We do not currently anticipate, nor are we aware of, any significant market conditions or commitments that would change any of our conclusions of the liquidity currently available to us. We will continue to actively monitor the credit markets in order to maintain sufficient liquidity and access to capital throughout 2024.

Contractual Obligations

The following table presents a summary of our contractual obligations at December 31, 2023:

	Payments Due By Period				
(Amounts in millions)	**Within 1 Year**	**1-3 Years**	**3-5 Years**	**Beyond 5 Years**	**Total**
Senior Notes and Term Loan Facility	$ 59.9	$ 159.9	$ —	$ 990.4	$ 1,210.2
Fixed interest payments(1)	31.5	63.0	63.0	73.3	230.8
Other debt	6.2	17.2	—	—	23.4
Leases:					
Operating	37.9	55.0	40.4	66.1	199.4
Finance	6.5	8.8	2.2	4.3	21.8
Purchase obligations:(2)					
Inventory	741.7	38.2	16.7	20.8	817.4
Non-inventory	59.8	2.3	0.1	0.1	62.3
Pension and postretirement benefits(3)	63.0	120.3	114.3	260.0	557.6
Total	$ 1,006.5	$ 464.7	$ 236.7	$ 1,415.0	$ 3,122.9

(1) Fixed interest payments represent interest payments on the Senior Notes as defined in Note 12 to our consolidated financial statements included in Item 8 of this Annual Report.
(2) Purchase obligations are presented at the face value of the purchase order, excluding the effects of early termination provisions. Actual payments could be less than amounts presented herein.
(3) Retirement and postretirement benefits represent estimated benefit payments for our U.S. and non-U.S. defined benefit plans and our postretirement medical plans, as more fully described below and in Note 13 to our consolidated financial statements included in Item 8 of this Annual Report.

The following table presents a summary of our commercial commitments at December 31, 2023:

	Commitment Expiration By Period				
	Within 1 Year	1-3 Years	3-5 Years	Beyond 5 Years	Total
	(Amounts in millions)				
Letters of credit	$ 487.8	$ 173.4	$ 15.0	$ 10.2	$ 686.4
Surety bonds	51.9	8.9	—	—	60.8
Total	$ 539.7	$ 182.3	$ 15.0	$ 10.2	$ 747.2

We expect to satisfy these commitments through performance under our contracts.

PENSION AND POSTRETIREMENT BENEFITS OBLIGATIONS

Plan Descriptions

We and certain of our subsidiaries have defined benefit pension plans and defined contribution plans for full-time and part-time employees. Approximately 67% of total defined benefit pension plan assets and approximately 58% of defined benefit pension obligations are related to the U.S. qualified plan as of December 31, 2023. Unless specified otherwise, the references in this section are to all of our U.S. and non-U.S. plans. None of our common stock is directly held by these plans.

In August 2023, we amended the U.S. qualified plan for non-union employees to discontinue future benefit accruals under the qualified plan and freeze existing accrued benefits effective January 1, 2025. Benefits earned by participants under the qualified plan prior to January 1, 2025 are not affected. We also amended the U.S. non-qualified defined benefit pension plan that provides enhanced retirement benefits to select members of management. The qualified plan and the non-qualified plan are closed to new entrants effective January 1, 2024, and September 1, 2023, respectively. The amendments resulted in a curtailment of both plans during the year ended December 31, 2023. The curtailment loss incurred and the change in projected benefit obligation is immaterial.

Our U.S. defined benefit plan assets consist of a balanced portfolio of equity and fixed income securities. Our non-U.S. defined benefit plan assets include a significant concentration of United Kingdom ("U.K.") fixed income securities, as discussed in Note 13 to our consolidated financial statements included in Item 8 of this Annual Report. We monitor investment allocations and manage plan assets to maintain an acceptable level of risk. At December 31, 2023, the estimated fair market value of U.S. and non-U.S. plan assets for our defined benefit pension plans increased to $540.6 million from $537.3 million at December 31, 2022. Assets were allocated as follows:

	U.S. Plan	
Asset category	2023	2022
Cash and Cash Equivalents	2 %	1 %
Global Equity	21 %	21 %
Global Real Assets	15 %	13 %
Equity securities	36 %	34 %
Diversified Credit	15 %	18 %
Liability-Driven Investment	47 %	47 %
Fixed income	62 %	65 %

Asset category	Non-U.S. Plans	
	2023	2022
Cash and Cash Equivalents	0 %	1 %
U.K. Government Gilt Index	39 %	38 %
Liability-Driven Investment	12 %	12 %
Fixed income	51 %	50 %
Multi-asset	19 %	20 %
Buy-in Contract	18 %	19 %
Other	12 %	10 %
Other types	49 %	49 %

The projected benefit obligation ("Benefit Obligation") for our defined benefit pension plans was $715.2 million and $651.3 million as of December 31, 2023 and 2022, respectively. Benefits under our defined benefit pension plans are based primarily on participants' compensation and years of credited service.

We sponsor defined benefit postretirement medical plans covering certain current retirees and a limited number of future retirees in the U.S. These plans provide for medical and dental benefits and are administered through insurance companies. We fund the plans as benefits are paid, such that the plans hold no assets in any period presented. Accordingly, we have no investment strategy or targeted allocations for plan assets. The benefits under the plans are not available to new employees or most existing employees.

The Benefit Obligation for our defined benefit postretirement medical plans was $12.4 million and $13.4 million as of December 31, 2023 and 2022, respectively.

Accrual Accounting and Significant Assumptions

We account for pension benefits using the accrual method, recognizing pension expense before the payment of benefits to retirees. The accrual method of accounting for pension benefits requires actuarial assumptions concerning future events that will determine the amount and timing of the benefit payments.

Our key assumptions used in calculating our cost of pension benefits are the discount rate, the rate of compensation increase and the expected long-term rate of return on plan assets. We, in consultation with our actuaries, evaluate the key actuarial assumptions and other assumptions used in calculating the cost of pension and postretirement benefits, such as discount rates, expected return on plan assets for funded plans, mortality rates, retirement rates and assumed rate of compensation increases, and determine such assumptions as of December 31 of each year to calculate liability information as of that date and pension and postretirement expense for the following year. See discussion of our accounting for and assumptions related to pension and postretirement benefits in the "Our Critical Accounting Estimates" section of this MD&A.

In 2023, the service cost component of the pension expense for our defined benefit pension plans included in operating income was $26.0 million compared to $30.7 million in 2022. The non-service cost portion of net pension expense (e.g., interest cost, actuarial gains and losses and expected return on plan assets) for our defined benefit pension plans included in other income (expense), net was $4.5 million in 2023, compared to $(4.2) million in 2022.

The following are assumptions related to our defined benefit pension plans as of December 31, 2023:

	U.S. Plan	Non-U.S. Plans
Weighted average assumptions used to determine Benefit Obligation:		
Discount rate	5.41 %	4.22 %
Rate of increase in compensation levels	4.00	3.24
Weighted average assumptions used to determine 2023 net pension expense:		
Long-term rate of return on assets	6.00 %	3.97 %
Discount rate	5.73	4.46
Rate of increase in compensation levels	3.50	3.62
Weighted-average interest crediting rates	4.00 %	2.29 %

The following provides a sensitivity analysis of alternative assumptions on the U.S. qualified, aggregate non-U.S. pension plans and U.S. postretirement plans.

Effect of Discount Rate Changes and Constancy of Other Assumptions:

	0.5% Increase	0.5% Decrease
	(Amounts in millions)	
U.S. defined benefit pension plan:		
Effect on net pension expense	$ 0.2	$ (0.2)
Effect on Benefit Obligation	(14.5)	15.6
Non-U.S. defined benefit pension plans:		
Effect on net pension expense	(0.4)	0.4
Effect on Benefit Obligation	(17.0)	18.6
U.S. Postretirement medical plans:		
Effect on Benefit Obligation	(0.3)	0.3

Effect of Changes in the Expected Return on Assets and Constancy of Other Assumptions:

	0.5% Increase	0.5% Decrease
	(Amounts in millions)	
U.S. defined benefit pension plan:		
Effect on net pension expense	$ (2.0)	$ 2.0
Non-U.S. defined benefit pension plans:		
Effect on net pension expense	(0.8)	0.8

As discussed below, accounting principles generally accepted in the U.S. ("U.S. GAAP") provide that differences between expected and actual returns are recognized over the average future service of employees or over the remaining expected lifetime for plans with only inactive participants.

At December 31, 2023, as compared with December 31, 2022, we decreased our discount rate for the U.S. plan from 5.73% to 5.41% based on an analysis of publicly-traded investment grade U.S. corporate bonds, which had lower yields due to current market conditions. The average discount rate for the non-U.S. plans decreased from 4.46% to 4.22% based on analysis of bonds and other publicly-traded instruments, by country, which had lower yields due to market conditions. The average assumed rate of compensation increased from 3.50% to 4.00% for the U.S. plan and decreased to 3.24% from 3.61% for our non-U.S. plans. To determine the 2023 pension expense, the expected rate of return on U.S. plan and non-US plan assets increased to 6.00% from 5.75% and increased to 3.97% from 2.43%, respectively, based on our target allocations and expected long-term asset returns. As the expected rate of return on plan assets is long-term in nature, short-term market fluctuations do not significantly impact the rate. For all U.S. plans, we adopted the Pri-2012 mortality tables and the MP-2021 improvement scale published in October 2021. We applied the Pri-2012 tables based on the constituency of our plan population for union and non-union participants. We adjusted the improvement scale to utilize the Proxy SSA Long Term Improvement Rates, consistent with assumptions adopted by the Social Security Administration trustees, based on long-term historical experience. Currently, we believe this approach provides the best estimate of our future obligation. Most plan participants elect to receive plan benefits as a lump sum at the end of service, rather than an annuity. As such, the updated mortality tables had an immaterial effect on our pension obligation.

We expect that the net pension expense for our defined benefit pension plans included in earnings before income taxes will be approximately $3.4 million higher in 2024 than the $30.4 million in 2023, primarily due to an increase in the service cost and amortization of the net loss. We have used discount rates of 5.41%, 4.22% and 5.57% at December 31, 2023, in calculating our estimated 2024 net pension expense for the U.S. pension plans, non-U.S. pension plans and postretirement medical plans, respectively.

The assumed ranges for the annual rates of increase in health care costs were 7.00% for 2023, 7.25% for 2022 and 7.50% for 2021, with a gradual decrease to 5.00% for 2032 and future years. If actual costs are higher than those assumed, this will likely put modest upward pressure on our expense for retiree health care.

Plan Funding

Our funding policy for defined benefit plans is to contribute at least the amounts required under applicable laws and local customs. In 2023, we contributed $15.0 million, to our defined benefit plans, compared to $18.7 million in 2022. We have no obligation to make contributions to our U.S. pension plans in 2024, but have authorization for contributions up to $20 million. We expect to contribute approximately $2 million to our non-U.S. pension plans in 2024, excluding direct benefits paid.

For further discussion of our pension and postretirement benefits, see Note 13 to our consolidated financial statements included in Item 8 of this Annual Report.

OUR CRITICAL ACCOUNTING ESTIMATES

The process of preparing financial statements in conformity with U.S. GAAP requires the use of estimates and assumptions to determine reported amounts of certain assets, liabilities, revenues and expenses and the disclosure of related contingent assets and liabilities. These estimates and assumptions are based upon information available at the time of the estimates or assumptions, including our historical experience, where relevant. The most significant estimates made by management include: timing and amount of revenue recognition; deferred taxes, tax valuation allowances and tax reserves; reserves for contingent loss; pension and postretirement benefits; and valuation of goodwill, indefinite-lived intangible assets and other long-lived assets. The significant estimates are reviewed at least annually if not quarterly by management. Because of the uncertainty of factors surrounding the estimates, assumptions and judgments used in the preparation of our financial statements, actual results may differ from the estimates, and the difference may be material.

Our critical accounting policies are those policies that are both most important to our financial condition and results of operations and require the most difficult, subjective or complex judgments on the part of management in their application, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. We believe that the following represent our critical accounting policies. For a summary of all of our significant accounting policies, see Note 1 to our consolidated financial statements included in Item 8 of this Annual Report. Management and our external auditors have discussed our critical accounting estimates and policies with the Audit Committee of our Board of Directors.

Revenue Recognition

We recognize revenue when (or as) we satisfy a performance obligation by transferring control to a customer. Transfer of control is evaluated based on the customer's ability to direct the use of and obtain substantially all of the benefits of a performance obligation. Revenue is recognized either over time or at a point in time, depending on the specific facts and circumstances for each contract, including the terms and conditions of the contract as agreed with the customer and the nature of the products or services to be provided. Service-related revenues do not typically represent a significant portion of the contracts with our customers and do not meet the thresholds requiring separate disclosure.

Our primary method for recognizing revenue over time is the POC method, whereby progress towards completion is measured by applying an input measure based on costs incurred to date relative to total estimated costs at completion. If control of the products and/or services does not transfer over time, then control transfers at a point in time. We determine the point in time that control transfers to a customer based on the evaluation of specific indicators, such as title transfer, risk of loss transfer, customer acceptance and physical possession. For a discussion related to revenue recognition refer to Note 2 included in Item 8 of this Annual Report.

Deferred Taxes, Tax Valuation Allowances and Tax Reserves

We recognize valuation allowances to reduce the carrying value of deferred tax assets to amounts that we expect are more likely than not to be realized. Our valuation allowances primarily relate to the deferred tax assets established for certain tax credit carryforwards, capital loss carryforwards, and net operating loss carryforwards for non-U.S. subsidiaries, and we evaluate the realizability of our deferred tax assets and adjust the amount of the valuation allowances, if necessary. We assess such factors as our forecast of future taxable income and available tax planning strategies that could be implemented to realize the net deferred tax assets in determining the sufficiency of our valuation allowances. Failure to achieve forecasted taxable income in the applicable tax jurisdictions could affect the ultimate realization of deferred tax assets and could result in an increase in our effective tax rate on future earnings. Implementation of different tax structures in certain jurisdictions could, if successful, result in future reductions of certain valuation allowances.

The amount of income taxes we pay is subject to ongoing audits by federal, state and foreign tax authorities, which often result in proposed assessments. Significant judgment is required in determining income tax provisions and evaluating tax positions. We establish reserves for open tax years for uncertain tax positions that may be subject to challenge by various tax authorities. The consolidated tax provision and related accruals include the impact of such reasonably estimable losses and related interest and penalties as deemed appropriate. Tax benefits recognized in the financial statements from uncertain tax positions are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement.

While we believe we have adequately provided for any reasonably foreseeable outcomes related to these matters, our future results may include favorable or unfavorable adjustments to our estimated tax liabilities. To the extent that the expected tax outcome of these matters changes, such changes in estimate will impact the income tax provision in the period in which such determination is made. For a discussion related to deferred taxes, tax valuation allowances and tax reserves refer to Note 18 included in Item 8 of this Annual Report.

Reserves for Contingent Loss

We are a defendant in a number of lawsuits that seek to recover damages for personal injury allegedly resulting from exposure to asbestos-containing products formerly manufactured and/or distributed by heritage companies of the Company. We have estimated that the liability for pending and future claims not yet asserted, and which are probable and estimable, could be experienced through 2053, which represents the expected end of our asbestos liability exposure with no further ongoing claims expected beyond that date. In light of the uncertainties and variables inherent in the long-term projection of the total asbestos liability, as part of our ongoing review of asbestos claims, each year we will reassess the projected liability of unasserted asbestos claims to be filed through 2053, and we will continually reassess the time horizon over which a reasonable estimate of unasserted claims can be projected.

In connection with our ongoing review of asbestos-related claims, we have also reviewed the amount of potential insurance coverage for such claims, taking into account the remaining limits of such coverage, the number and amount of claims on our insurance from co-insured parties, ongoing litigation against the Company's insurers, potential remaining recoveries from insolvent insurers, the impact of previous insurance settlements and coverage available from solvent insurers not party to the coverage litigation. Continuously, we review ongoing insurance coverage available for a significant amount of the potential future asbestos-related claims and in the future could secure additional insurance coverage as deemed necessary. For a discussion pertaining to asbestos claims refer to Note 15 included in Item 8 of this Annual Report.

Liabilities are recorded for various non-asbestos contingencies arising in the normal course of business when it is both probable that a loss has been incurred and such loss is reasonably estimable. Assessments of reserves are based on information obtained from our independent and in-house experts, including recent legal decisions and loss experience in similar situations. The recorded legal reserves are susceptible to changes due to new developments regarding the facts and circumstances of each matter, changes in political environments, legal venue and other factors. Recorded environmental reserves could change based on further analysis of our properties, technological innovation and regulatory environment changes.

Pension and Postretirement Benefits

We provide pension and postretirement benefits to certain of our employees, including former employees, and their beneficiaries. The assets, liabilities and expenses we recognize and disclosures we make about plan actuarial and financial information are dependent on the assumptions and estimates used in calculating such amounts. The assumptions include factors such as discount rates, health care cost trend rates, inflation, expected rates of return on plan assets, retirement rates, mortality rates, turnover, rates of compensation increases and other factors.

The assumptions utilized to compute expense and benefit obligations are shown in Note 13 to our consolidated financial statements included in Item 8 of this Annual Report. These assumptions are assessed annually in consultation with independent actuaries and investment advisors as of December 31 and adjustments are made as needed. We evaluate prevailing market conditions and local laws and requirements in countries where plans are maintained, including appropriate rates of return, interest rates and medical inflation (health care cost trend) rates. We ensure that our significant assumptions are within the reasonable range relative to market data. The methodology to set our significant assumptions includes:

- Discount rates are estimated using high quality debt securities based on corporate or government bond yields with a duration matching the expected benefit payments. For the U.S. the discount rate is obtained from an analysis of publicly-traded investment-grade corporate bonds to establish a weighted average discount rate. For plans in the U.K. and the Eurozone we use the discount rate obtained from an analysis of AA-graded corporate bonds used to generate a yield curve. For other countries or regions without a corporate AA bond market, government bond rates are used. Our discount rate assumptions are impacted by changes in general economic and market conditions that affect interest rates on long-term high-quality debt securities, as well as the duration of our plans' liabilities.

- The expected rates of return on plan assets are derived from reviews of asset allocation strategies, expected long-term performance of asset classes, risks and other factors adjusted for our specific investment strategy. These rates are impacted by changes in general market conditions, but because they are long-term in nature, short-term market changes do not significantly impact the rates. Changes to our target asset allocation also impact these rates.
- The expected rates of compensation increase reflect estimates of the change in future compensation levels due to general price levels, seniority, age and other factors.

Depending on the assumptions used, the pension and postretirement expense could vary within a range of outcomes and have a material effect on reported earnings. In addition, the assumptions can materially affect benefit obligations and future cash funding. Actual results in any given year may differ from those estimated because of economic and other factors.

We evaluate the funded status of each retirement plan using current assumptions and determine the appropriate funding level considering applicable regulatory requirements, tax deductibility, reporting considerations, cash flow requirements and other factors. We discuss our funding assumptions with the Finance and Risk Committee of our Board of Directors.

Valuation of Goodwill, Indefinite-Lived Intangible Assets and Other Long-Lived Assets

The initial recording of goodwill and intangible assets requires subjective judgments concerning estimates of the fair value of the acquired assets. We test the value of goodwill, indefinite-lived intangible assets and long-lived assets for impairment as of December 31 each year or whenever events or circumstances indicate such assets may be impaired. The test for goodwill impairment involves significant judgment in estimating projections of fair value generated through future performance of each of the reporting units. We did not record a material impairment for goodwill, indefinite-lived intangible assets or long-lived assets in 2023, 2022 or 2021.

Due to uncertain market conditions and potential changes in strategy and product portfolio, it is possible that forecasts used to support asset carrying values may change in the future, which could result in non-cash charges that would adversely affect our financial condition and results of operations. For a discussion pertaining to goodwill, indefinite-lived intangible assets and long-lived assets refer to Note 1 included in Item 8 of this Annual Report.

ACCOUNTING DEVELOPMENTS

We have presented the information about accounting pronouncements not yet implemented in Note 1 to our consolidated financial statements included in Item 8 of this Annual Report.

ITEM 7A. *QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK*

We have market risk exposure arising from changes in foreign currency exchange rate movements. We are exposed to credit-related losses in the event of non-performance by counterparties to financial instruments, but we currently expect the counterparties will continue to meet their obligations given their current creditworthiness.

Foreign Currency Exchange Rate Risk

A substantial portion of our operations are conducted by our subsidiaries outside of the U.S. in currencies other than the U.S. dollar. The primary currencies in which we operate, in addition to the U.S. dollar, are the Argentine peso, Australian dollar, Brazilian real, British pound, Canadian dollar, Chinese yuan, Colombian peso, Euro, Hungarian forint, Indian rupee, Japanese yen, Mexican peso, Singapore dollar, Swedish krona, Russian ruble, Malaysian ringgit and Venezuelan bolivar. Almost all of our non-U.S. subsidiaries conduct their business primarily in their local currencies, which are also their functional currencies. Foreign currency exposures arise from translation of foreign-denominated assets and liabilities into U.S. dollars and from transactions, including firm commitments and anticipated transactions, denominated in a currency other than a non-U.S. subsidiary's functional currency. As a means of managing the volatility of foreign currency exposure with the Euro/U.S. dollar exchange rate, we entered into swaps associated with our Euro investment in certain of our international subsidiaries and were designated as net investment hedges. On December 22, 2022 all outstanding cross-currency swaps were terminated resulting in cash proceeds received of $66.0 million. Routinely, we review our investments in foreign subsidiaries from a long-term perspective and use capital structuring techniques to manage our investment in foreign subsidiaries as deemed necessary. We realized net gains (losses) associated with foreign currency translation of $30.8 million, $(98.7) million and $0.5 million for the years ended December 31, 2023, 2022 and 2021, respectively, which are included in other comprehensive income (loss). The net loss in 2023 was primarily due to foreign currency translation adjustments resulting primarily from exchange rate movements of the Euro, British pound, Colombian peso and Mexican peso versus the U.S. dollar at December 31, 2023 as compared with 2022.

We employ a foreign currency risk management strategy to minimize potential changes in cash flows from unfavorable foreign currency exchange rate movements. Where available, the use of forward exchange contracts allows us to mitigate transactional exposure to exchange rate fluctuations as the gains or losses incurred on the forward exchange contracts will offset, in whole or in part, losses or gains on the underlying foreign currency exposure. Our policy allows foreign currency coverage only for identifiable foreign currency exposures. As of December 31, 2023, we had a U.S. dollar equivalent of $656.6 million in aggregate notional amount outstanding in foreign exchange contracts with third parties, compared with $459.2 million at December 31, 2022. Transactional currency gains and losses arising from transactions outside of our sites' functional currencies and changes in fair value of foreign exchange contracts are included in our consolidated results of operations. We recognized foreign currency net gains (losses) of $(41.1) million, $9.7 million and $(27.4) million for the years ended December 31, 2023, 2022 and 2021, respectively, which are included in other income (expense), net in the accompanying consolidated statements of income.

Based on a sensitivity analysis at December 31, 2023, a 10% change in the foreign currency exchange rates for the year ended December 31, 2023 would have impacted our net earnings by approximately $1 million. At December 31, 2022, a 10% change in the foreign currency exchange rates for the year ended December 31, 2022 would have impacted our net earnings by approximately $7 million. This calculation assumes that all currencies change in the same direction and proportion relative to the U.S. dollar and that there are no indirect effects, such as changes in non-U.S. dollar sales volumes or prices. This calculation does not take into account the impact of the foreign currency forward exchange contracts discussed above.

LIBOR/SOFR

On March 5, 2021, the UK Financial Conduct Authority ("FCA"), which regulates LIBOR issued an announcement on the future cessation or loss of representativeness of LIBOR benchmark settings currently published by ICE Benchmark Administration. That announcement confirmed that LIBOR will either cease to be provided by any administrator or will no longer be representative after December 31, 2021 for all non-USD LIBOR reference rates, and for 1-Week and 2-Month USD LIBOR and after June 30, 2023 for other USD LIBOR reference rates. The U.S. Federal Reserve, in conjunction with the Alternative Reference Rate Committee, has proposed the replacement of U.S. dollar LIBOR rates with a new index calculated by short-term repurchase agreements backed by U.S. Treasury securities called SOFR. As a result of the expected LIBOR cessation, the Company amended its Credit Agreement on February 3, 2023 whereby it has replaced LIBOR references with SOFR as the benchmark reference rate.

ITEM 8. *FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA*

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Flowserve Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Flowserve Corporation and its subsidiaries (the “Company”) as of December 31, 2023 and 2022, and the related consolidated statements of income, of comprehensive income, of shareholders' equity and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited 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 (COSO).

In our opinion, the consolidated financial statements referred to above 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. Also 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 the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill Impairment Test FPD Reporting Unit

As described in Note 1 and 5 to the consolidated financial statements, the Company's consolidated goodwill balance was $1,182.2 million as of December 31, 2023, and the goodwill associated with the FPD reporting unit was approximately $780.0 million. The value of goodwill is tested for impairment as of December 31 each year or whenever events or circumstances indicate goodwill may be impaired. If the carrying value of a reporting unit exceeds its fair value, the goodwill of that reporting unit is impaired and an impairment loss is recorded equal to the excess of the carrying value over its fair value. Fair value is estimated using a discounted cash flow analysis, which requires management to make various judgmental assumptions about future sales, operating margins, growth rates and discount rates.

The principal considerations for our determination that performing procedures relating to the goodwill impairment test of the FPD reporting unit is a critical audit matter are (i) the significant judgment by management when estimating the fair value of the reporting unit; (ii) a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating management's significant assumption related to the discount rate; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment test, including controls over the valuation of the FPD reporting unit. These procedures also included, among others (i) testing management's process for estimating the fair value of the FPD reporting unit, (ii) evaluating the appropriateness of the discounted cash flow analysis, (iii) testing the completeness and accuracy of underlying data used in the analysis, and (iv) evaluating the significant assumption used by management related to the discount rate. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's discounted cash flow analysis and assumption related to the discount rate.

/s/ PricewaterhouseCoopers LLP

Dallas, Texas
February 20, 2024

We have served as the Company's auditor since 2000.

FLOWSERVE CORPORATION

CONSOLIDATED BALANCE SHEETS

	December 31, 2023	December 31, 2022
	(Amounts in thousands, except per share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 545,678	$ 434,971
Accounts receivable, net	881,869	868,632
Contract assets, net	280,228	233,457
Inventories, net	879,937	803,198
Prepaid expenses and other	116,065	110,714
Total current assets	2,703,777	2,450,972
Property, plant and equipment, net	506,158	500,945
Operating lease right-of-use assets, net	156,430	174,980
Goodwill	1,182,225	1,168,124
Deferred taxes	218,358	149,290
Other intangible assets, net	122,248	134,503
Other assets, net	219,523	211,820
Total assets	$ 5,108,719	$ 4,790,634
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$ 547,824	$ 476,747
Accrued liabilities	504,430	427,578
Contract liabilities	287,697	256,963
Debt due within one year	66,243	49,335
Operating lease liabilities	32,382	32,528
Total current liabilities	1,438,576	1,243,151
Long-term debt due after one year	1,167,307	1,224,151
Operating lease liabilities	138,665	155,196
Retirement obligations and other liabilities	389,120	309,529
Commitments and contingencies (See Note 15)		
Shareholders’ equity:		
Common shares, $1.25 par value	220,991	220,991
Shares authorized — 305,000		
Shares issued — 176,793 and 176,793, respectively		
Capital in excess of par value	506,525	507,484
Retained earnings	3,854,717	3,774,209
Treasury shares, at cost — 45,885 and 46,359 shares, respectively	(2,014,474)	(2,036,882)
Deferred compensation obligation	7,942	6,979
Accumulated other comprehensive loss	(639,601)	(647,788)
Total Flowserve Corporation shareholders’ equity	1,936,100	1,824,993
Noncontrolling interests	38,951	33,614
Total equity	1,975,051	1,858,607
Total liabilities and equity	$ 5,108,719	$ 4,790,634

See accompanying notes to consolidated financial statements.

FLOWSERVE CORPORATION

CONSOLIDATED STATEMENTS OF INCOME

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in thousands, except per share data)		
Sales	$ 4,320,577	$ 3,615,120	$ 3,541,060
Cost of sales	(3,043,749)	(2,620,825)	(2,491,335)
Gross profit	1,276,828	994,295	1,049,725
Selling, general and administrative expense	(961,169)	(815,545)	(797,076)
Gain on sale of business	—	—	1,806
Net earnings from affiliates	17,894	18,469	16,304
Operating income	333,553	197,219	270,759
Interest expense	(66,924)	(46,247)	(57,617)
Loss on extinguishment of debt	—	—	(46,176)
Interest income	6,991	3,963	2,764
Other income (expense), net	(49,870)	(559)	(36,142)
Earnings before income taxes	223,750	154,376	133,588
(Provision for) benefit from income taxes	(18,562)	43,639	2,594
Net earnings, including noncontrolling interests	205,188	198,015	136,182
Less: Net earnings attributable to noncontrolling interests	(18,445)	(9,326)	(10,233)
Net earnings attributable to Flowserve Corporation	$ 186,743	$ 188,689	$ 125,949
Net earnings per share attributable to Flowserve Corporation common shareholders:			
Basic	$ 1.42	$ 1.44	$ 0.97
Diluted	1.42	1.44	0.96
Weighted average shares – basic	131,117	130,630	130,305
Weighted average shares – diluted	131,931	131,315	130,857

See accompanying notes to consolidated financial statements.

FLOWSERVE CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in thousands)		
Net earnings, including noncontrolling interests	$ 205,188	$ 198,015	$ 136,182
Other comprehensive income (loss):			
Foreign currency translation adjustments, net of deferred taxes of $3,735, $(20,526) and $(875) in 2023, 2022 and 2021, respectively	30,810	(98,658)	524
Pension and other postretirement effects, net of deferred taxes of $8,700, $(8,423) and $(7,474) in 2023, 2022 and 2021, respectively	(35,526)	15,309	45,058
Cash flow hedging activity, net of deferred taxes of $0, $286 and $0 in 2023, 2022 and 2021, respectively	120	403	(848)
Other comprehensive income (loss)	(4,596)	(82,946)	44,734
Comprehensive income, including noncontrolling interests	200,592	115,069	180,916
Comprehensive (income) attributable to noncontrolling interests	(5,661)	(10,579)	(8,930)
Comprehensive income attributable to Flowserve Corporation	$ 194,931	$ 104,490	$ 171,986

See accompanying notes to consolidated financial statements.

FLOWSERVE CORPORATION

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

	Total Flowserve Corporation Shareholders' Equity									
	Common Stock		Capital in Excess of Par Value	Retained Earnings	Treasury Stock		Deferred Compensation Obligation	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interests	Total Equity
	Shares	Amount			Shares	Amount				
	(Amounts in thousands)									
Balance — January 1, 2021	176,793	$ 220,991	$ 502,227	$ 3,670,543	(46,768)	$ (2,059,309)	$ 6,164	$ (609,625)	$ 30,330	$ 1,761,321
Stock activity under stock plans	—	—	(25,320)	—	414	19,134	1,050	—	—	(5,136)
Stock-based compensation	—	—	29,479	—	—	—	—	—	—	29,479
Net earnings	—	—	—	125,949	—	—	—	—	10,233	136,182
Cash dividends declared ($0.80 per share)	—	—	—	(105,469)	—	—	—	—	—	(105,469)
Repurchases of common shares	—	—	—	—	(440)	(17,531)	—	—	—	(17,531)
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	—	46,036	(1,302)	44,734
Other, net	—	—	—	—	—	—	—	—	(6,235)	(6,235)
Balance — December 31, 2021	176,793	$ 220,991	$ 506,386	$ 3,691,023	(46,794)	$ (2,057,706)	$ 7,214	$ (563,589)	$ 33,026	$ 1,837,345
Stock activity under stock plans	—	—	(24,432)	—	435	20,824	(235)	—	—	(3,843)
Stock-based compensation	—	—	25,530	—	—	—	—	—	—	25,530
Net earnings	—	—	—	188,689	—	—	—	—	9,326	198,015
Cash dividends declared ($0.80 per share)	—	—	—	(105,503)	—	—	—	—	—	(105,503)
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	—	(84,199)	1,253	(82,946)
Other, net	—	—	—	—	—	—	—	—	(9,991)	(9,991)
Balance — December 31, 2022	176,793	$ 220,991	$ 507,484	$ 3,774,209	(46,359)	$ (2,036,882)	$ 6,979	$ (647,788)	$ 33,614	$ 1,858,607
Stock activity under stock plans	—	—	(28,767)	—	474	22,408	963	—	—	(5,396)
Stock-based compensation	—	—	27,808	—	—	—	—	—	—	27,808
Net earnings	—	—	—	186,743	—	—	—	—	18,445	205,188
Cash dividends declared ($0.80 per share)	—	—		(106,235)	—	—	—	—	—	(106,235)
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	—	8,187	(12,783)	(4,596)
Other, net	—	—	—	—	—	—	—	—	(325)	(325)
Balance — December 31, 2023	176,793	$ 220,991	$ 506,525	$ 3,854,717	(45,885)	$ (2,014,474)	$ 7,942	$ (639,601)	$ 38,951	$ 1,975,051

See accompanying notes to consolidated financial statements.

FLOWSERVE CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in thousands)		
Cash flows — Operating activities:			
Net earnings, including noncontrolling interests	$ 205,188	$ 198,015	$ 136,182
Adjustments to reconcile net earnings to net cash provided (used) by operating activities:			
Depreciation	73,464	77,636	85,175
Amortization of intangible and other assets	10,283	13,317	14,647
Loss on extinguishment of debt	—	—	46,176
Stock-based compensation	27,808	25,530	29,478
Foreign currency, asset write downs and other non-cash adjustments	(17,331)	(27,758)	29,772
Change in assets and liabilities:			
Accounts receivable, net	4,744	(152,011)	(8,675)
Inventories, net	(59,831)	(147,492)	(32,124)
Contract assets, net	(41,149)	(41,768)	74,333
Prepaid expenses and other assets, net	7,825	17,461	1,302
Accounts payable	53,065	78,968	(19,505)
Contract liabilities	26,837	61,684	14,196
Accrued liabilities and income taxes payable	59,213	(5,226)	(13,948)
Retirement obligations and other	38,497	(1,430)	(15,690)
Net deferred taxes	(62,841)	(136,936)	(91,200)
Net cash flows provided (used) by operating activities	325,772	(40,010)	250,119
Cash flows — Investing activities:			
Capital expenditures	(67,359)	(76,287)	(54,936)
Proceeds from disposal of assets	2,057	4,422	2,663
Proceeds from termination of cross-currency swap	—	66,004	—
Affiliate investment activity	(3,278)	(225)	(7,204)
Net cash flows provided (used) by investing activities	(68,580)	(6,086)	(59,477)
Cash flows — Financing activities:			
Payments on senior notes	—	—	(1,243,548)
Proceeds from issuance of senior notes	—	—	498,280
Payments on long-term debt	(40,000)	(32,500)	(7,500)
Proceeds from issuance of long-term debt	—	—	300,000
Payments of deferred loan costs	—	—	(6,739)
Proceeds from short-term financing	280,000	45,000	—
Payments on short-term financing	(280,000)	(45,000)	—
Proceeds under other financing arrangements	1,114	1,733	1,408
Payments under other financing arrangements	(2,604)	(1,790)	(2,086)
Payments related to tax withholding for stock-based compensation	(6,245)	(4,683)	(5,984)
Repurchases of common shares	—	—	(17,531)
Payments of dividends	(104,955)	(104,549)	(104,604)
Other	(324)	(8,223)	(11,403)
Net cash flows provided (used) by financing activities	(153,014)	(150,012)	(599,707)
Effect of exchange rate changes on cash	6,529	(27,373)	(27,757)
Net change in cash and cash equivalents	110,707	(223,481)	(436,822)
Cash and cash equivalents at beginning of year	434,971	658,452	1,095,274
Cash and cash equivalents at end of year	$ 545,678	$ 434,971	$ 658,452
Income taxes paid (net of refunds)	$ 119,275	$ 60,085	$ 65,621
Interest paid	64,865	41,629	72,247

See accompanying notes to consolidated financial statements.

FLOWSERVE CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF DECEMBER 31, 2023 AND 2022 AND FOR THE
THREE YEARS ENDED DECEMBER 31, 2023

1. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING DEVELOPMENTS

We are principally engaged in the worldwide design, manufacture, distribution and service of industrial flow management equipment. We provide long lead time, custom and other highly-engineered pumps; standardized, general-purpose pumps; mechanical seals; engineered and industrial valves; related automation products; and services and solutions primarily for oil and gas, chemical, power generation, water management and other general industries requiring flow management products and services. Equipment manufactured and serviced by us is predominantly used in industries that deal with difficult-to-handle and corrosive fluids, as well as environments with extreme temperatures, pressure, horsepower and speed. Our business is affected by economic conditions in the United States ("U.S.") and other countries where our products are sold and serviced, by the cyclical nature and competitive environment of our industries served, by the relationship of the U.S. dollar to other currencies and by the demand for and pricing of our customers' end products.

Coronavirus Pandemic ("COVID-19") — We continue to assess any remaining impacts of COVID-19 on all aspects of our business and geographies, including with respect to our associates, customers and communities, supply chain impacts and labor availability issues. Over the past year, COVID-related supply chain, logistics and labor availability impacts decreased when compared to 2022 and have generally stabilized. The Company's consolidated financial statements presented reflect management's estimates and assumptions regarding the effects of COVID-19 as of the date of the consolidated financial statements.

Russia and Ukraine Conflict - In response to the Russia-Ukraine conflict, several countries, including the United States, have imposed economic sanctions and export controls on certain industry sectors and parties in Russia. As a result of this conflict, including the aforementioned sanctions and overall instability in the region, in March 2022 we permanently ceased all Company operations in Russia and are currently taking the necessary steps to wind down in the country.

In the first quarter of 2022, we recorded a $20.2 million pre-tax charge ($21.0 million after-tax) to reserve the asset positions of our Russian subsidiary (excluding cash) as of March 31, 2022, to record contra-revenue for previously recognized revenue and estimated cancellation fees on open contracts that were previously accounted for under the percentage of completion ("POC") method and subsequently canceled, to establish a reserve for the estimated cost to exit the operations of our Russian subsidiary and to record a reserve for our estimated financial exposure on contracts that have been or are anticipated to be canceled.

In addition, we reevaluated our financial exposure as of December 31, 2022 and recorded an incremental $13.6 million pre-tax charge ($9.8 million after-tax) in the fourth quarter of 2022 for additional contract cancellation fees, to reserve our residual financial exposure due to increased Russia sanctions imposed during the latter part of 2022 and our decision to cancel backlog as a result of the additional sanctions.

We continue to monitor the situation involving Russia and Ukraine and its impact on the rest of our global business. This includes the macroeconomic impact, including with respect to global supply chain issues and inflationary pressures. We reevaluated our financial exposure as of December 31, 2023 and concluded that the reserve recorded as of December 31, 2022 is sufficient and no changes to material reserves were needed. To date, impacts have not been material to our business and we do not currently expect that any incremental impact in future quarters, including any financial impacts caused by our cancellation of customer contracts and ceasing of operations in Russia, will be material to the Company.

The following table presents the above impacts of the Russia pre-tax charge for the year ended December 31, 2022:

	Year Ended December 31, 2022		
(Amounts in thousands)	Flowserve Pumps Division	Flow Control Division	Consolidated Total
Sales	$ (9,330)	$ —	$ (9,330)
Cost of sales ("COS")	7,442	1,418	8,860
Gross loss	(16,772)	(1,418)	(18,190)
Selling, general and administrative expense ("SG&A")	13,977	1,720	15,697
Operating loss	$ (30,749)	$ (3,138)	$ (33,887)

Terminated Acquisition — On February 9, 2023 the Company entered into a definitive agreement under which it would acquire all of the outstanding equity of Velan Inc., a manufacturer of highly engineered industrial valves, in an all cash transaction valued at approximately $245 million. In October 2023, the Company received notice that the required French foreign investment screening approval would not be obtained. As a result, the agreement and transaction were terminated. According to the terms of the agreement, no termination fee was paid by either party. Cumulative acquisition related expenses in 2023 associated with the transaction were $7.3 million.

Principles of Consolidation — The consolidated financial statements include the accounts of our company and our wholly and majority-owned subsidiaries. In addition, we consolidate any variable interest entities for which we are deemed to be the primary beneficiary. Noncontrolling interests of non-affiliated parties have been recognized for all majority-owned consolidated subsidiaries. Intercompany profits/losses, transactions and balances among consolidated entities have been eliminated from our consolidated financial statements.

In the ordinary course of our operations worldwide, we have entered into joint ventures and interests (collectively referred to as “affiliates”) to provide greater flexibility in delivering our products and services, gain access to markets and geographical locations and reduce exposure and diversify risk. Investments in affiliate companies with a noncontrolling ownership interests between 20% and 50%, are unconsolidated and are accounted for using the equity method, which approximates our equity interest in their underlying equivalent net book value under accounting principles generally accepted in the U.S. ("U.S. GAAP"). All equity method investments are reviewed for impairment whenever events and conditions indicate that a decrease in the value of an investment has occurred that is other than temporary. If impaired, an impairment loss representing the difference between our carrying value and fair value is recorded and the investment is written down to a new carrying value. Investment in affiliate companies where we own less than 20% are accounted for by the cost method, whereby income is only recognized in the event of dividend receipt. Investments accounted for by the cost method are tested for impairment if an impairment indicator is present.

Use of Estimates — The process of preparing financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect reported amounts of certain assets, liabilities, revenues and expenses. We believe our estimates and assumptions are reasonable; however, actual results may differ materially from such estimates. The most significant estimates and assumptions are used in determining:

- Timing and amount of revenue recognition;
- Deferred taxes, tax valuation allowances and tax reserves;
- Reserves for contingent loss;
- Pension and postretirement benefits; and
- Valuation of goodwill, indefinite-lived intangible assets and other long-lived assets.

Revenue Recognition — The majority of our revenues relate to customer orders that typically contain a single commitment of goods or services which have lead times under a year. Longer lead time, more complex contracts with our customers typically have multiple commitments of goods and services, including any combination of designing, developing, manufacturing, modifying, installing and commissioning of flow management equipment and providing services and parts related to the performance of such products. We recognize revenue when (or as) we satisfy a performance obligation by transferring control to a customer. Transfer of control is evaluated based on the customer’s ability to direct the use of and obtain substantially all of the benefits of a performance obligation. Revenue is recognized either over time or at a point in time, depending on the specific facts and circumstances for each contract, including the terms and conditions of the contract as agreed with the customer and the nature of the products or services to be provided. Service-related revenues do not typically represent a significant portion of the contracts with our customers and do not meet the thresholds requiring separate disclosure.

Our primary method for recognizing revenue over time is the POC method, whereby progress towards completion is measured by applying an input measure based on costs incurred to date relative to total estimated costs at completion. If control of the products and/or services does not transfer over time, then control transfers at a point in time. We determine the point in time that control transfers to a customer based on the evaluation of specific indicators, such as title transfer, risk of loss transfer, customer acceptance and physical possession. For a detailed discussion related to revenue recognition refer to Note 2.

Cash and Cash Equivalents — We place temporary cash investments with financial institutions and, by policy, invest in those institutions and instruments that have minimal credit risk and market risk. These investments, with an original maturity of three months or less when purchased, are classified as cash equivalents. They are highly liquid and principal values are not subject to significant risk of change due to interest rate fluctuations.

Accounts Receivable, Allowance for Expected Credit Losses and Credit Risk — Trade accounts receivables are recorded at the invoiced amount and do not bear interest. We establish an allowance for expected credit losses on an aging schedule and according to historical losses as determined from our billings and collections history. Additionally, we consider factors that are specific to our customers' credit risk such as financial difficulties, liquidity issues, insolvency, and country and political risk. We also consider both the current and forecasted direction of macroeconomic conditions at the reporting date in estimating expected credit losses. Receivables are written off against the allowance in the period when the receivable is deemed to be uncollectible and further collection efforts have ceased. Subsequent recoveries of amounts previously written off are reflected as a reduction to credit impairment losses in the income statement.

Credit risks are mitigated by the diversity of our customer base across many different geographic regions and industries and by performing creditworthiness analyses on our customers. Additionally, we mitigate credit risk through letters of credit and advance payments received from our customers. We do not believe that we have any other significant concentrations of credit risk.

Inventories and Related Reserves — Inventories are stated at the lower of cost and net realizable value. Cost is determined by the first-in, first-out method. Reserves for excess and obsolete inventories are based upon our assessment of market conditions for our products determined by historical usage and estimated future demand. Due to the long life cycles of our products, we carry spare parts inventories that have historically low usage rates and provide reserves for such inventory based on demonstrated usage and aging criteria.

Income Taxes, Deferred Taxes, Tax Valuation Allowances and Tax Reserves — We account for income taxes under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are calculated using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the period that includes the enactment date. We record valuation allowances to reduce the carrying value of deferred tax assets to amounts that we expect are more likely than not to be realized. We assess existing deferred tax assets, net operating losses and tax credits by jurisdiction and expectations of our ability to utilize these tax attributes through a review of past, current and estimated future taxable income and establishment of tax planning strategies.

We provide deferred taxes for the temporary differences associated with our investment in foreign subsidiaries that have a financial reporting basis that exceeds tax basis, unless we can assert permanent reinvestment in foreign jurisdictions. Financial reporting basis and tax basis differences in investments in foreign subsidiaries consist of both unremitted earnings and losses, as well as foreign currency translation adjustments.

The amount of income taxes we pay is subject to ongoing audits by federal, state, and foreign tax authorities, which often result in proposed assessments. We establish reserves for open tax years for uncertain tax positions that may be subject to challenge by various tax authorities. The consolidated tax provision and related accruals include the impact of such reasonably estimable losses and related interest and penalties as deemed appropriate.

We recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities. The determination is based on the technical merits of the position and presumes that each uncertain tax position will be examined by the relevant taxing authority that has full knowledge of all relevant information. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement.

Legal and Environmental Contingencies — Legal and environmental reserves are recorded based upon a case-by-case analysis of the relevant facts and circumstances and an assessment of potential legal obligations and costs. Amounts relating to legal and environmental liabilities are recorded when it is probable that a loss has been incurred and such loss is reasonably estimable. Assessments of legal and environmental costs are based on information obtained from our independent and in-house experts and our loss experience in similar situations. Estimates are updated as applicable when new information regarding the facts and circumstances of each matter becomes available. Legal fees associated with legal and environmental liabilities are expensed as incurred.

We are a defendant in a number of lawsuits that seek to recover damages for personal injury allegedly resulting from exposure to asbestos-containing products formerly manufactured and/or distributed by heritage companies of the Company. We have estimated that the liability for pending and future claims not yet asserted, and which are probable and estimable, could be experienced through 2053, which represents the expected end of our asbestos liability exposure with no further ongoing claims expected beyond that date. This estimate is based on the Company's historical claim experience and estimates of the number and resolution cost of potential future claims that may be filed based on anticipated levels of unique plaintiff asbestos-related claims in the U.S. tort system against all defendants, the diminished volatility and consistency of observable claims data, the period of time that has elapsed since we stopped manufacturing products that contained encapsulated asbestos and an expected downward trend in claims due to the average age of our claimants. This estimate is not discounted to present value. In light of the uncertainties and variables inherent in the long-term projection of the total asbestos liability, as part of our ongoing review of asbestos claims, each year we will reassess the projected liability of unasserted asbestos claims to be filed through 2053, and we will continually reassess the time horizon over which a reasonable estimate of unasserted claims can be projected.

We assess the sufficiency of the estimated liability for pending and future claims on an ongoing basis by evaluating actual experience regarding claims filed, settled and dismissed, and amounts paid in settlements. In addition to claims and settlement experience, we consider additional quantitative and qualitative factors such as changes in legislation, the legal environment and the Company's defense strategy. In connection with our ongoing review of asbestos-related claims, we have also reviewed the amount of potential insurance coverage for such claims, taking into account the remaining limits of such coverage, the number and amount of claims on our insurance from co-insured parties, ongoing litigation against the Company’s insurers, potential remaining recoveries from insolvent insurers, the impact of previous insurance settlements and coverage available from solvent insurers not party to the coverage litigation. Continuously, we review ongoing insurance coverage available for a significant amount of the potential future asbestos-related claims and in the future could secure additional insurance coverage as deemed necessary.

The study from the Company's actuary, based on data as of August 31, 2023, provided for a range of possible future liability from approximately $83.0 million to $132.6 million. The Company does not believe any amount within the range of potential outcomes represents a better estimate than another given the many factors and assumptions inherent in the projections and therefore the Company has recorded the liability at the actuarial central estimate of approximately $102.9 million as of December 31, 2023. In addition, the Company has recorded estimated insurance receivables of approximately $42.9 million as of December 31, 2023. The amounts recorded for the asbestos-related liability and the related insurance receivables are based on facts known at the time and a number of assumptions. However, projecting future events, such as the number of new claims to be filed each year, the length of time it takes to defend, resolve, or otherwise dispose of such claims, coverage issues among insurers and the continuing solvency of various insurance companies, as well as the numerous uncertainties surrounding asbestos litigation in the United States, could cause the actual liability and insurance recoveries for us to be higher or lower than those projected or recorded. Additionally, we have claims pending against certain insurers that, if resolved more favorably than reflected in the recorded receivables, would result in discrete gains in the applicable year. Changes recorded in the estimated liability and estimated insurance recovery based on projections of asbestos litigation and corresponding insurance coverage, result in the recognition of additional expense or income. For a discussion pertaining to the activity related to asbestos claims refer to Note 15.

Warranty Accruals — Warranty obligations are based upon product failure rates, materials usage, service delivery costs, an analysis of all identified or expected claims and an estimate of the cost to resolve such claims. The estimates of expected claims are generally a factor of historical claims and known product issues. Warranty obligations based on these factors are adjusted based on historical sales trends for the preceding 24 months.

Insurance Accruals — Insurance accruals are recorded for wholly or partially self-insured risks such as medical benefits and workers' compensation and are based upon an analysis of our claim loss history, insurance deductibles, policy limits and other relevant factors that are updated annually and are included in accrued liabilities in our consolidated balance sheets. The estimates are based upon information received from actuaries, insurance company adjusters, independent claims administrators or other independent sources. Receivables from insurance carriers are estimated using our historical experience with insurance recovery rates and estimates of future recoveries, which include estimates of coverage and financial viability of our insurance carriers. Estimated receivables are included in accounts receivable, net and other assets, net, as applicable, in our consolidated balance sheets.

Pension and Postretirement Obligations — Determination of pension and postretirement benefits obligations is based on estimates made by management in consultation with independent actuaries and investment advisors. Inherent in these valuations are assumptions including discount rates, expected rates of return on plan assets, retirement rates, mortality rates and rates of compensation increase and other factors all of which are reviewed annually and updated if necessary. Current market conditions, including changes in rates of return, interest rates and medical inflation rates, are considered in selecting these assumptions.

Actuarial gains and losses and prior service costs are recognized in accumulated other comprehensive loss as they arise and we amortize these costs into net pension expense over the remaining expected service period.

Property, Plant and Equipment and Depreciation — Property, plant and equipment are stated at historical cost, less accumulated depreciation. If asset retirement obligations exist, they are capitalized as part of the carrying amount of the asset and depreciated over the remaining useful life of the asset. The useful lives of leasehold improvements are the lesser of the remaining lease term or the useful life of the improvement. When assets are retired or otherwise disposed of, their costs and related accumulated depreciation are removed from the accounts and any resulting gains or losses are included in income from operations for the period. Depreciation is computed by the straight-line method based on the estimated useful lives of the depreciable assets, or in the case of assets under finance leases, over the related lease term. Generally, the estimated useful lives of the assets are:

Buildings and improvements	10 to 40 years
Machinery, equipment and tooling	3 to 14 years
Software, furniture and fixtures and other	3 to 7 years

Costs related to routine repairs and maintenance are expensed as incurred.

Leases — We have operating and finance leases for certain manufacturing facilities, offices, service and quick response centers, machinery, equipment and automobiles. Our leases have remaining lease terms of up to 29 years. The terms and conditions of our leases may include options to extend or terminate the lease which are considered and included in the lease term when these options are reasonably certain of exercise.

We determine if a contract is (or contains) a lease at inception by evaluating whether the contract conveys the right to control the use of an identified asset. For all classes of leased assets, we account for any non-lease components in the contract together with the related lease component in the same unit of account. For lease contracts containing more than one lease component, we allocate the contract consideration to each of the lease components on the basis of relative standalone prices in order to identify the lease payments for each lease component.

Right-of-use ("ROU") assets and lease liabilities are recognized in our consolidated balance sheets at the commencement date based on the present value of remaining lease payments over the lease term. Additionally, ROU assets include any lease payments made at or before the commencement date, as well as any initial direct costs incurred, and are reduced by any lease incentives received. In determining the discount rate used to measure the right-of-use asset and lease liability, we utilize the Company's incremental borrowing rate and consider the term of the lease, as well as the geographic location of the leased asset. Our incremental borrowing country-specific rate is determined based on information available at the commencement date of the lease.

Operating leases are included in operating lease right-of-use assets, net and operating lease liabilities in our consolidated balance sheets. Finance leases are included in property, plant and equipment, debt due within one year and long-term debt due after one year in our consolidated balance sheets.

For all classes of leased assets, we have applied an accounting policy election to exclude short-term leases from recognition in our consolidated balance sheets. A short-term lease has a lease term of 12 months or less at the commencement date and does not include a purchase option that is reasonably certain of exercise. We recognize short-term lease expense in our consolidated income statements on a straight-line basis over the lease term. Our short-term lease expense and short-term lease commitments as of December 31, 2023 are immaterial.

We have certain lease contracts with terms and conditions that provide for variability in the payment amount based on changes in facts or circumstances occurring after the commencement date. These variable lease payments are recognized in our consolidated income statements as the obligation is incurred.

We have certain lease contracts where we provide a guarantee to the lessor that the value of an underlying asset will be at least a specified amount at the end of the lease. Estimated amounts expected to be paid for residual value guarantees are included in lease liabilities and ROU assets.

Internally Developed Software — We capitalize certain costs associated with the development of internal-use software. Generally, these costs are related to significant software development projects and are amortized over their estimated useful life, typically three to seven years, upon implementation of the software. We also capitalize certain costs incurred during the application development stage of implementation of cloud computing arrangements. Amounts capitalized for cloud arrangements are amortized on a straight-line basis over a period of three to seven years and are reported as a component of other long-term assets.

Intangible Assets — Intangible assets, excluding trademarks (which are considered to have an indefinite life), consist primarily of engineering drawings, patents, existing customer relationships, software, distribution networks and other items that are being amortized over their estimated useful lives generally ranging from four to 40 years. These assets are reviewed for impairment whenever events and circumstances indicate impairment may have occurred.

Valuation of Goodwill, Indefinite-Lived Intangible Assets and Other Long-Lived Assets — The value of goodwill and indefinite-lived intangible assets is tested for impairment as of December 31 each year or whenever events or circumstances indicate such assets may be impaired. The identification of our goodwill reporting units begins at the operating segment level and considered whether components one level below the operating segment levels should be identified as reporting units for the purpose of testing goodwill for impairment based on certain conditions. These conditions included, among other factors, (i) the extent to which a component represents a business and (ii) the aggregation of economically similar components within the operating segments based on the similarity of the nature of the products and services, the nature of the production processes, the methods of distribution and the types of industries served. This resulted in two reporting units that are consistent with our operating and reportable segments, FPD and FCD, as no components exist one level below the operating segment levels for which discrete financial information is available for review by segment management.

Accounting Standards Codification ("ASC") 350 allows an optional qualitative assessment, prior to a quantitative assessment test, to determine whether it is more likely than not that the fair value of a reporting unit exceeds its carrying amount. For goodwill, we generally do not attempt a qualitative assessment and proceed directly to the quantitative test. If the carrying value of a reporting unit exceeds its fair value, the goodwill of that reporting unit is impaired and an impairment loss is recorded equal to the excess of the carrying value over its fair value. We estimate the fair value of our reporting units based on an income approach, whereby we calculate the fair value of a reporting unit based on the present value of estimated future cash flows. A discounted cash flow analysis requires us to make various judgmental assumptions about future sales, operating margins, growth rates and discount rate, which are based on our budgets, business plans, economic projections, anticipated future cash flows and market participants.

We did not record an impairment of goodwill in 2023, 2022 or 2021. The FPD reporting unit is primarily focused on custom, highly-engineered pumps, pre-configured industrial pumps, pump systems, mechanical seals, auxiliary systems and replacement parts and related services. As of December 31, 2023 our FPD reporting unit had approximately $780 million of goodwill and an estimated fair value that exceeded its carrying value. The FCD reporting unit is primarily focused on a broad portfolio of engineered-to-order and configured-to-order isolation valves, control valves, valve automation products and related equipment. As of December 31, 2023 our FCD reporting unit had approximately

$402 million of goodwill and an estimated fair value that exceeded its carrying value. The key factors considered in determining the estimated fair value of our reporting units included the annual operating plan and forecasted operating results, successful execution of our current continuous improvement and identified strategic initiatives, a constant cost of capital, continued stabilization and mid to long-term improvement of the macro-economic conditions of the industries we serve, and a relatively stable global gross domestic product. Although we have concluded that there is no impairment on the goodwill associated with our reporting units as of December 31, 2023, we will continue to closely monitor their performance and related market conditions for future indicators of potential impairment and reassess accordingly.

We also considered our market capitalization in our evaluation of the fair value of our goodwill. Our market capitalization as of December 31, 2023 was favorable compared with 2022 and did not indicate a potential impairment of our goodwill as of December 31, 2023.

Impairment losses for indefinite-lived intangible assets are recognized whenever the estimated fair value is less than the carrying value. Fair values are calculated for trademarks using a "relief from royalty" method, which estimates the fair value of a trademark by determining the present value of estimated royalty payments that are avoided as a result of owning the trademark. This method includes judgmental assumptions about sales growth and discount rates that have a significant impact on the fair value and are substantially consistent with the assumptions used to determine the fair value of our reporting unit discussed above. We did not record a material impairment of our trademarks in 2023, 2022 or 2021.

The recoverable value of other long-lived assets, including property, plant and equipment and finite-lived intangible assets, is reviewed when indicators of potential impairments are present. The recoverable value is based upon an assessment of the estimated future cash flows related to those assets, utilizing assumptions similar to those for goodwill. Additional considerations related to our long-lived assets include expected maintenance and improvements, changes in expected uses and ongoing operating performance and utilization.

Deferred Loan Costs — Deferred loan costs, consisting of fees and other expenses associated with debt financing, are amortized over the term of the associated debt using the effective interest method. Additional amortization is recorded in periods where optional prepayments on debt are made.

Fair Values of Financial Instruments — Our financial instruments are presented at fair value in our consolidated balance sheets, with the exception of our long-term debt. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Where available, fair value is based on observable market prices or parameters or derived from such prices or parameters. Where observable prices or inputs are not available, valuation models may be applied.

Assets and liabilities recorded at fair value in our consolidated balance sheets are categorized based upon the level of judgment associated with the inputs used to measure their fair values. Hierarchical levels, as defined by ASC 820, "Fair Value Measurements and Disclosures," are directly related to the amount of subjectivity associated with the inputs to fair valuation of these assets and liabilities. An asset or a liability's categorization within the fair value hierarchy is based on the lowest level of significant input to its valuation. Hierarchical levels are as follows:

Level I — Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

Level II — Inputs (other than quoted prices included in Level I) are either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument's anticipated life.

Level III — Inputs reflect management's best estimate of what market participants would use in pricing the asset or liability at the measurement date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

Recurring fair value measurements are limited to investments in derivative instruments. The fair value measurements of our derivative instruments are determined using models that maximize the use of the observable market inputs including interest rate curves and both forward and spot prices for currencies, and are classified as Level II under the fair value hierarchy. The fair values of our derivative instruments are included in Note 8.

Derivatives and Hedging Activities — We have a foreign currency derivatives and hedging policy outlining the conditions under which we can enter into financial derivative transactions. We do not use derivative instruments for trading or speculative purposes. All derivative instruments are recognized on the balance sheet at their fair values.

We employ a foreign currency economic hedging strategy to mitigate certain financial risks resulting from foreign currency exchange rate movements that impact foreign currency denominated receivables and payables, firm committed transactions and forecasted sales and purchases. The changes in the fair values are recognized immediately in other income (expense), net in the consolidated statements of income. See Note 8 for further discussion of forward exchange contracts.

We are exposed to risk from credit-related losses resulting from nonperformance by counterparties to our financial instruments. We perform credit evaluations of our counterparties under forward exchange contracts and expect all counterparties to meet their obligations. If necessary, we would adjust the values of our derivative contracts for our or our counterparties' credit risks.

Foreign Currency Translation — Assets and liabilities of our foreign subsidiaries are translated to U.S. dollars at exchange rates prevailing at the balance sheet date, while income and expenses are translated at average rates for each month. Translation gains and losses are reported as a component of accumulated other comprehensive loss. Transactional currency gains and losses arising from transactions in currencies other than our sites' functional currencies are included in our consolidated results of operations.

Transaction and translation gains and losses arising from intercompany balances are reported as a component of accumulated other comprehensive loss when the underlying transaction stems from a long-term equity investment or from debt designated as not due in the foreseeable future. Otherwise, we recognize transaction gains and losses arising from intercompany transactions as a component of income. Where intercompany balances are not long-term investment related or not designated as due beyond the foreseeable future, we may mitigate risk associated with foreign currency fluctuations by entering into forward exchange contracts.

Stock-Based Compensation — Stock-based compensation is measured at the grant-date fair value. The exercise price of stock option awards and the value of restricted shares, restricted share units and performance-based unit awards (collectively referred to as "Restricted Shares") are set at the closing price of our common stock on the New York Stock Exchange on the date of grant, which is the date such grants are authorized by our Board of Directors. Restricted share units and performance-based units refer to restricted awards that do not have voting rights and accrue dividends, and are forfeited if vesting does not occur.

The intrinsic value of Restricted Shares, which is typically the product of share price at the date of grant and the number of Restricted Shares granted, is amortized on a straight-line basis to compensation expense over the periods in which the restrictions lapse based on the expected number of shares that will vest. We account for forfeitures as they occur resulting in the reversal of cumulative expense previously recognized.

Earnings Per Share — We use the two-class method of calculating Earnings Per Share ("EPS"), which determines earnings per share for each class of common stock and participating security as if all earnings for the period had been distributed. Unvested restricted share awards that earn non-forfeitable dividend rights qualify as participating securities and, accordingly, are included in the basic computation as such. Our unvested Restricted Shares participate on an equal basis with common shares; therefore, there is no difference in undistributed earnings allocated to each participating security.

Research and Development Expense — Research and development costs are charged to expense when incurred. Aggregate research and development costs included in SG&A were $48.7 million, $39.9 million and $34.2 million in 2023, 2022 and 2021, respectively. Costs incurred for research and development primarily include salaries and benefits and consumable supplies, as well as rent, professional fees, utilities and the depreciation of property and equipment used in research and development activities.

Shipping and Handling Costs — Amounts billed to customers for reimbursement of shipping and handling costs are recorded as revenue when the related revenue is recognized and shipping and handling costs are recognized in Cost of sales. All other shipping and handling costs are recognized in Cost of sales in the period in which they are incurred.

Accounting Developments

Pronouncements Implemented

In October 2021, the FASB issued ASU No. 2021-08, "Accounting for Contract Assets and Contract Liabilities from Contracts with Customers." The amendments in this ASU improve comparability for both the recognition and measurement of acquired revenue contracts with customers at the date of and after a business combination. The amendments are effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years and should be applied prospectively to business combinations occurring on or after the effective date of the amendments. The adoption of this ASU did not have a material impact on our condensed consolidated balance sheets, condensed consolidated statements of income or condensed consolidated statements of cash flows.

In September 2022, the FASB issued ASU No. 2022-04, "Liabilities—Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations." The amendments require a buyer that uses supplier finance programs to make annual disclosures about the program's key terms, the balance sheet presentation of related amounts, the confirmed amount outstanding at the end of the period and associated roll-forward information. Only the amount outstanding at the end of the period must be disclosed in interim periods following the year of adoption. The amendments are effective for all entities for fiscal years beginning after December 15, 2022 on a retrospective basis, including interim periods within those fiscal years, except for the requirement to disclose roll-forward information, which is effective prospectively for fiscal years beginning after December 15, 2023.

We adopted ASU No. 2022-04 effective January 1, 2023. We partner with two banks to offer our suppliers the option of participating in a supplier financing program and receive payment early. Under the program agreement, we must reimburse each bank for approved and valid invoices in accordance with the originally agreed upon terms with the supplier. We have no obligation for fees; subscription, service, commissions or otherwise with either bank. We also have no obligation for pledged assets or other forms of guarantee and may terminate either program agreement with appropriate notice. As of December 31, 2023, $13.5 million remained outstanding with the supply chain financing partner banks and recorded within accounts payable on our consolidated balance sheet.

Pronouncements Not Yet Implemented

In March 2023, the FASB issued ASU No. 2023-01, "Leases (Topic 842): Common Control Arrangements." The amendments permits leasehold improvements to be amortized over the useful life of the asset when the lessee controls the use of the underlying asset and the lease is between common control entities. The amendments further allow entities to account for leasehold improvements as a transfer of assets between entities under common control through an equity adjustment when the lessee is no longer in control of the underlying asset. The amendments are effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. We do not expect the impact of this ASU to be material.

In March 2023, the FASB issued ASU No. 2023-02, "Equity Method and Joint Ventures (Topic 323): Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method." The amendments allow companies to account for all of their tax equity investments using the proportional amortization method if certain conditions are met. Companies can elect to apply the proportional amortization method on a tax-credit-program-by-tax-credit-program rather than unilaterally or on an individual investment basis. The amendments are effective on either a modified retrospective or retrospective basis for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years, depending on whether the company elects to evaluate its investments for which it still expects to receive income tax credits or other income tax benefits as of the beginning of the period of adoption or at the beginning of the earliest period presented. We do not expect the impact of this ASU to be material.

In August 2023, the FASB issued ASU No. 2023-05, "Business Combinations - Joint Venture Formations (Subtopic 805-60): Recognition and Initial Measurement." The amendments requires that newly formed joint ventures measure the net assets and liabilities contributed at fair value. Subsequent measurement is in accordance with the requirements for acquirers of a business in Sections 805-10-35, 805-20-35, and 805-30-35, and other generally accepted accounting principles. The amendments are effective prospectively for all joint venture formations with a formation date on or after January 1, 2025, but companies may elect to apply the amendments retrospectively to joint ventures formed prior to January 1, 2025, if it has sufficient information. Early adoption is permitted in any interim or annual period in which financial statements have not yet been issued (or made available for issuance), either prospectively or retrospectively. We do not expect the impact of this ASU to be material.

In November 2023, the FASB issued ASU No. 2023-07, "Segment Reporting (Topic 280) - Improvements to Reportable Segment Disclosures." The amendments enhance the disclosure requirements of significant segment expenses and other segment items. The amendments are effective for annual periods beginning after December 15, 2023 and interim periods within fiscal years beginning after December 15, 2024. The amendments are to be applied retrospectively to all prior periods presented in the financial statements. Upon transition, the segment expense categories and amounts disclosed in the prior periods should be based on the significant segment expense categories identified and disclosed in the period of adoption. Early adoption is permitted. We are evaluating the impact of this ASU on our disclosures.

In December 2023, the FASB issued ASU No. 2023-08, "Intangibles - Goodwill and Other - Crypto Assets (Subtopic 350-60)." The amendments require that assets that qualify as a crypto asset, in accordance with the new guidance, must be recorded and subsequently valued at fair value at each reporting period, recognizing changes within net income of the same period. The amendments also require that companies present crypto assets measured at fair value separately from other intangible assets on the balance sheet with changes related to the remeasurement of crypto assets reported separately from changes in carrying amounts of other intangible assets in the income statement. Specific disclosure is required around the activity of crypto assets during the reporting period. The amendments are effective for all entities for fiscal years beginning after December 15, 2024, including interim periods within those fiscal years. Early adoption is permitted. We do not expect the impact of this ASU to be material.

In December 2023, the FASB issued ASU No. 2023-09, "Income Taxes (Topic 740)." The amendments require that entities on an annual basis disclose specific categories in the rate reconciliation, provide additional information for reconciling items that meet a quantitative threshold, and disclose specific information about income taxes paid. The amendments eliminate previously required disclosures around changes in unrecognized tax benefits and cumulative amounts of certain temporary difference. The amendments are effective prospectively for annual periods beginning after December 15, 2024. Early adoption is permitted. We are evaluating the impact of this ASU on our disclosures.

2. REVENUE RECOGNITION

The majority of our revenues relate to customer orders that typically contain a single commitment of goods or services which have lead times under a year. Longer lead time and more complex contracts with our customers typically have multiple commitments of goods and services, including any combination of designing, developing, manufacturing, modifying, installing and commissioning of flow management equipment and providing services and parts related to the performance of such products. Control transfers over time when the customer is able to direct the use of and obtain substantially all of the benefits of our work as we perform. Service-related revenues do not typically represent a significant portion contracts with our customers and do not meet the thresholds requiring separate disclosure.

Revenue from products and services transferred to customers over time accounted for approximately 16%, 13% and 15% of total revenue for the years ended December 31, 2023, 2022 and 2021, respectively. Our primary method for recognizing revenue over time is the POC method. If control does not transfer over time, then control transfers at a point in time. We recognize revenue at a point in time at the level of each performance obligation based on the evaluation of certain indicators of control transfer, such as title transfer, risk of loss transfer, customer acceptance and physical possession. Revenue from products and services transferred to customers at a point in time accounted for approximately 84%, 87% and 85% of total revenue for the years ended December 31, 2023, 2022 and 2021, respectively.

Disaggregated Revenue

We conduct our operations through two business segments based on the type of product and how we manage the business:

- FPD designs and manufactures custom, highly-engineered pumps, pre-configured industrial pumps, pump systems, mechanical seals, auxiliary systems and replacement parts and related services; and
- FCD designs, manufactures and distributes a broad portfolio of engineered-to-order and configured-to-order isolation valves, control valves, valve automation products and related equipment.

Our revenue sources are derived from our original equipment manufacturing and our aftermarket sales and services. Our original equipment revenues are generally related to originally designed, manufactured, distributed and installed equipment that can range from pre-configured, short-cycle products to more customized, highly-engineered equipment ("Original Equipment"). Our aftermarket sales and services are derived from sales of replacement equipment, as well as maintenance, advanced diagnostic, repair and retrofitting services ("Aftermarket"). Each of our two business segments generates Original Equipment and Aftermarket revenues.

The following table presents our customer revenues disaggregated by revenue source:

	December 31, 2023		
(Amounts in thousands)	FPD	FCD	Total
Original Equipment	$ 1,147,906	$ 938,790	$ 2,086,696
Aftermarket	1,913,087	320,794	2,233,881
	$ 3,060,993	$ 1,259,584	$ 4,320,577

	December 31, 2022		
(Amounts in thousands)	FPD	FCD	Total
Original Equipment	$ 881,061	$ 825,508	$ 1,706,569
Aftermarket	1,636,939	271,612	1,908,551
	$ 2,518,000	$ 1,097,120	$ 3,615,120

	December 31, 2021		
(Amounts in thousands)	FPD	FCD	Total
Original Equipment	$ 899,519	$ 804,744	$ 1,704,263
Aftermarket	1,568,579	268,218	1,836,797
	$ 2,468,098	$ 1,072,962	$ 3,541,060

Our customer sales are diversified geographically. The following table presents our revenues disaggregated by geography, based on the shipping addresses of our customers:

	December 31, 2023		
(Amounts in thousands)	FPD	FCD	Total
North America(1)	$ 1,264,673	$ 556,208	$ 1,820,881
Latin America(1)	273,126	30,126	303,252
Middle East and Africa	538,037	146,552	684,589
Asia Pacific	436,813	302,700	739,513
Europe	548,344	223,998	772,342
	$ 3,060,993	$ 1,259,584	$ 4,320,577

	December 31, 2022		
(Amounts in thousands)	FPD	FCD	Total
North America(1)	$ 1,060,393	$ 472,467	$ 1,532,860
Latin America(1)	222,878	23,575	246,453
Middle East and Africa	372,148	101,017	473,165
Asia Pacific	389,366	305,193	694,559
Europe	473,215	194,868	668,083
	$ 2,518,000	$ 1,097,120	$ 3,615,120

	December 31, 2021		
(Amounts in thousands)	FPD	FCD	Total
North America(1)	$ 955,283	$ 389,766	$ 1,345,049
Latin America(1)	211,150	30,554	241,704
Middle East and Africa	311,161	107,533	418,694
Asia Pacific	482,596	333,513	816,109
Europe	507,908	211,596	719,504
	$ 2,468,098	$ 1,072,962	$ 3,541,060

(1) North America represents United States and Canada; Latin America includes Mexico.

On December 31, 2023, the aggregate transaction price allocated to unsatisfied (or partially unsatisfied) performance obligations related to contracts having an original expected duration in excess of one year was approximately $772 million. We estimate recognition of approximately $583 million of this amount as revenue in 2024 and an additional $189 million in 2025 and thereafter.

Contract Balances

We receive payment from customers based on a contractual billing schedule and specific performance requirements as established in our contracts. We record billings as accounts receivable when an unconditional right to consideration exists. A contract asset represents revenue recognized in advance of our right to bill the customer under the terms of a contract. A contract liability represents our contractual billings in advance of revenue recognized for a contract.

The following table presents opening and closing balances of contract assets and contract liabilities, current and long-term, for the years ended December 31, 2023 and 2022:

(Amounts in thousands)	Contract Assets, net (Current)	Long-term Contract Assets, net(1)	Contract Liabilities (Current)	Long-term Contract Liabilities(2)
Balance — January 1, 2022	$ 195,598	$ 426	$ 202,965	$ 464
Revenue recognized that was included in contract liabilities at the beginning of the period	—	—	(143,736)	—
Increase due to revenue recognized in the period in excess of billings	660,039	—	—	—
Increase due to billings arising during the period in excess of revenue recognized	—	—	203,711	—
Amounts transferred from contract assets to receivables	(603,422)	(1,338)	—	—
Currency effects and other, net	(18,758)	1,209	(5,977)	595
Balance — December 31, 2022	$ 233,457	$ 297	$ 256,963	$ 1,059
Revenue recognized that was included in contract liabilities at the beginning of the period	—	—	(209,560)	—
Increase due to revenue recognized in the period in excess of billings	890,150	932	—	—
Increase due to billings arising during the period in excess of revenue recognized	—	—	238,683	1,043
Amounts transferred from contract assets to receivables	(842,780)	(435)	—	—
Currency effects and other, net	(599)	240	1,611	(559)
Balance — December 31, 2023	$ 280,228	$ 1,034	$ 287,697	$ 1,543

(1) Included in other assets, net.
(2) Included in retirement obligations and other liabilities.

3. ALLOWANCE FOR EXPECTED CREDIT LOSSES

The allowance for credit losses is an estimate of the credit losses expected over the life of our financial assets and instruments. We assess and measure expected credit losses on a collective basis when similar risk characteristics exist, including market, geography, credit risk and remaining duration. Financial assets and instruments that do not share risk characteristics are evaluated on an individual basis. Our estimate of the allowance balance is assessed and quantified using internal and external valuation information relating to past events, current conditions and reasonable and supportable forecasts over the contractual terms of an asset.

Our primary exposure to expected credit losses is through our accounts receivable and contract assets. For these financial assets, we record an allowance for expected credit losses that, when deducted from the gross asset balance, presents the net amount expected to be collected. Primarily, our experience of historical credit losses provides the basis for our estimation of the allowance. We estimate the allowance based on an aging schedule and according to historical losses as determined from our history of billings and collections. Additionally, we adjust the allowance for factors that are specific to our customers' credit risk such as financial difficulties, liquidity issues, insolvency, and country and geopolitical risks. We also consider both the current and forecasted macroeconomic conditions as of the reporting date. As identified and needed, we adjust the allowance and recognize adjustments in the income statement each period. Accounts receivable are written off against the allowance in the period when the receivable is deemed to be uncollectible and further collection efforts have ceased. Subsequent recoveries of previously written off amounts are reflected as a reduction to credit impairment losses in the consolidated statements of income.

Contract assets represent a conditional right to consideration for satisfied performance obligations that become a receivable when the conditions are satisfied. Generally, contract assets are recorded when contractual billing schedules differ from revenue recognition based on timing and are managed through the revenue recognition process. Based on our historical credit loss experience, the current expected credit loss for contract assets is estimated to be approximately 1% of the asset balance.

The following table presents the changes in the allowance for expected credit losses for our accounts receivable and short-term contract assets as of December 31, 2023, 2022 and 2021:

(Amounts in thousands)	Accounts receivable	Short-term contract assets
Beginning balance, January 1, 2023	$ 83,062	$ 5,819
Charges to cost and expenses, net of recoveries	5,597	—
Write-offs	(10,947)	(1,450)
Currency effects and other, net	2,301	624
Ending balance, December 31 , 2023	$ 80,013	$ 4,993
Beginning balance, January 1, 2022	$ 74,336	$ 2,393
Charges to cost and expenses, net of recoveries	12,530	2,785
Write-offs	(3,188)	—
Currency effects and other, net	(616)	641
Ending balance, December 31 , 2022	$ 83,062	$ 5,819
Beginning balance, January 1, 2021	$ 75,176	$ 3,205
Charges to cost and expenses, net of recoveries	3,934	—
Write-offs	(2,015)	—
Currency effects and other, net	(2,759)	(812)
Ending balance, December 31 , 2021	$ 74,336	$ 2,393

Our allowance on long-term receivables, included in other assets, net, represent receivables with collection periods longer than 12 months and the balance primarily consists of reserved receivables associated with the national oil company in Venezuela. The following table presents the changes in the allowance for long-term receivables as of December 31, 2023, 2022 and 2021:

(Amounts in thousands)	2023	2022	2021
Beginning balance, January 1,	$ 66,377	$ 67,696	$ 67,842
Currency effects and other, net	487	(1,319)	(146)
Ending balance, December 31,	$ 66,864	$ 66,377	$ 67,696

We also have exposure to credit losses from off-balance sheet exposures, such as financial guarantees and standby letters of credit, where we believe the risk of loss is immaterial to our financial statements as of December 31, 2023.

4. LEASES

We had $4.0 million and $2.0 million of legally binding minimum lease payments for operating leases signed but not yet commenced as of December 31, 2023 and 2022. We did not have material subleases, leases that imposed significant restrictions or covenants, material related party leases or sale-leaseback arrangements.

In conjunction with our close process for the third quarter of 2022, the Company identified an accounting error related to certain operating real estate leases that have escalating rent payments which were not correctly recorded on a straight-line basis in the amount of $6.4 million. Approximately $5.8 million of the error impacted the Company's consolidated statements of income prior to adoption of ASU No. 2016-02, Leases (Topic 842) in 2019 and the remaining immaterial amount impacted each period subsequent to adoption. To correct the cumulative impact of the error the Company recorded an adjustment of $6.4 million of incremental operating lease expense in the third quarter of 2022 ($5.5 million classified as SG&A and $0.9 million classified as COS), with the offsetting adjustment to reduce operating lease right-of-use assets, net on our condensed consolidated balance sheet for the period ended September 30, 2022. There was no impact to our statements of cash flows as a result of the correction of the error.

Other information related to our leases is as follows:

	December 31, 2023	December 31, 2022
	(Amounts in thousands)	
Finance Leases:		
ROU assets recorded under finance leases	$ 35,523	$ 33,427
Accumulated depreciation associated with finance leases	(16,828)	(15,851)
Total finance leases ROU assets, net(1)	$ 18,695	$ 17,576
Total finance leases liabilities(2)	$ 19,374	$ 17,939

The costs components of operating and finance leases are as follows:

	December 31, 2023	December 31, 2022	December 31, 2021
	(Amounts in thousands)		
Operating Lease Costs:			
Fixed lease expense(3)	$ 55,588	$ 59,782	$ 57,482
Variable lease expense(3)	8,131	7,412	9,331
Total operating lease expense	$ 63,719	$ 67,194	$ 66,813
Finance Lease Costs:			
Depreciation of finance lease ROU assets(3)	$ 6,655	$ 5,984	$ 5,374
Interest on lease liabilities(4)	885	604	617
Total finance lease expense	$ 7,540	$ 6,588	$ 5,991

(1) Included in property, plant and equipment, net

(2) Included in debt due within one year and long-term debt due after one year, accordingly

(3) Included in cost of sales and selling, general and administrative expense, accordingly

(4) Included in interest expense

Supplemental cash flows information related to our leases is as follows:

(Amounts in thousands, except lease term and discount rate)	December 31, 2023	2022	2021
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases(1)	$ 62,303	$ 57,712	$ 61,240
Financing cash flows from finance leases(2)	8,234	6,039	5,285
ROU assets obtained in exchange for lease obligations:			
Operating leases	$ 18,570	$ 26,581	$ 35,542
Finance leases	8,259	7,906	4,177
Weighted average remaining lease term (in years)			
Operating leases	8 years	8 years	8 years
Finance leases	5 years	6 years	6 years
Weighted average discount rate (percent)			
Operating leases	4.1 %	4.0 %	3.9 %
Finance leases	4.6 %	3.9 %	3.4 %

(1) Included in our consolidated statement of cash flows, operating activities, prepaid expenses and other assets, net and retirement obligations and other
(2) Included in our consolidated statement of cash flows, financing activities, payments under other financing arrangements

Future undiscounted lease payments under operating and finance leases as of December 31, 2023, were as follows:

Year ending December 31,	**Operating Leases**	**Finance Leases**
	(Amounts in thousands)	
2024	37,872	6,500
2025	30,336	5,282
2026	24,709	3,512
2027	21,268	1,468
2028	19,095	743
Thereafter	66,112	4,261
Total future minimum lease payments	$ 199,392	$ 21,766
Less: Imputed interest	(28,345)	(2,392)
Total	$ 171,047	$ 19,374
Other current liabilities	$ 32,382	$ —
Operating lease liabilities	138,665	—
Debt due within one year	—	6,144
Long-term debt due after one year	—	13,230
Total	$ 171,047	$ 19,374

5. GOODWILL AND OTHER INTANGIBLE ASSETS

The changes in the carrying amount of goodwill for the years ended December 31, 2023 and 2022 are as follows:

	FPD	FCD	Total
	(Amounts in thousands)		
Balance as of December 31, 2021	$ 787,213	$ 409,266	$ 1,196,479
Currency translation and other	(14,940)	(13,415)	(28,355)
Balance as of December 31, 2022	$ 772,273	$ 395,851	$ 1,168,124
Currency translation and other	7,723	6,378	14,101
Balance as of December 31, 2023	$ 779,996	$ 402,229	$ 1,182,225

The following table provides information about our intangible assets for the years ended December 31, 2023 and 2022:

		December 31, 2023		December 31, 2022	
	Useful Life (Years)	Ending Gross Amount	Accumulated Amortization	Ending Gross Amount	Accumulated Amortization
	(Amounts in thousands, except years)				
Finite-lived intangible assets:					
Engineering drawings(1)	10-22	$ 92,105	$ (91,808)	$ 88,830	$ (88,256)
Existing customer relationships(2)	5-10	80,643	(76,121)	79,472	(70,015)
Patents	9-16	26,388	(26,388)	25,639	(25,639)
Other	4-40	92,307	(55,001)	92,798	(49,481)
		$ 291,443	$ (249,318)	$ 286,739	$ (233,391)
Indefinite-lived intangible assets(3)		$ 81,824	$ (1,701)	$ 82,640	$ (1,485)

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(1) Engineering drawings represent the estimated fair value associated with specific acquired product and component schematics.

(2) Existing customer relationships acquired prior to 2011 had a useful life of five years.

(3) Accumulated amortization for indefinite-lived intangible assets relates to amounts recorded prior to the implementation date of guidance issued in ASC 350.

The following schedule outlines actual amortization expense recognized during 2023 and an estimate of future amortization based upon the finite-lived intangible assets owned at December 31, 2023:

	Amortization Expense
	(Amounts in thousands)
Actual for year ended December 31, 2023	$ 11,308
Estimated for year ended December 31, 2024	6,636
Estimated for year ended December 31, 2025	1,907
Estimated for year ended December 31, 2026	1,783
Estimated for year ended December 31, 2027	1,783
Estimated for year ended December 31, 2028	1,783
Thereafter	28,233

Amortization expense for finite-lived intangible assets was $11.4 million in 2022 and $13.4 million in 2021.

6. INVENTORIES

Inventories, net consisted of the following:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Raw materials	$ 407,979	$ 360,039
Work in process	302,655	295,678
Finished goods	278,787	245,494
Less: Excess and obsolete reserve	(109,484)	(98,013)
Inventories, net	$ 879,937	$ 803,198

During 2023, 2022 and 2021, we recognized expenses of $21.5 million, $15.4 million and $15.6 million, respectively, for excess and obsolete inventory. These expenses are included in COS in our consolidated statements of income.

7. STOCK-BASED COMPENSATION PLANS

Effective January 1, 2020, our shareholders approved the Flowserve Corporation 2020 Long-Term Incentive Plan (“2020 Plan”). The 2020 Plan replaces and supersedes the Flowserve Corporation Equity and Incentive Compensation Plan ("2010 Plan") in its entirety. The 2020 Plan authorizes the issuance of 12,500,000 shares of our common stock in the form of restricted shares, restricted share units and performance-based units (collectively referred to as "Restricted Shares"), incentive stock options, non-statutory stock options, stock appreciation rights and bonus stock, in addition to any shares available for issuance or subject to forfeiture under the expired 2010 Plan. Of the shares of common stock authorized under the 2020 Plan and remaining shares under the 2010 Plan, 8,317,411 were available for issuance as of December 31, 2023. Restricted Shares primarily vest over a three year period. Restricted Shares granted to employees who retire and have achieved at least 55 years of age and 10 years of service continue to vest over the original vesting period ("55/10 Provision").

Stock Options — Options granted to officers, other employees and directors allow for the purchase of common shares at the market value of our stock on the date the options are granted. Options generally become exercisable after three years. Options generally expire ten years from the date of the grant or within a short period of time following the termination of employment or cessation of services by an option holder. As of December 31, 2023, 114,943 stock options were outstanding and exercisable, with a grant date fair value of $2.0 million recognized over three years and a weighted average exercise price of $48.63. Compensation cost associated with these stock options has been fully recognized. Using the Black-Scholes option pricing model to estimate the fair value of each option award, as of December 31, 2023 the total fair value of stock options vested was $2.0 million. No stock options were exercised during the years ended December 31, 2023, 2022 or 2021. No stock options were granted, canceled or vested during years ended December 31, 2023, 2022 or 2021. The weighted average remaining contractual life of options outstanding at December 31, 2023, 2022 and 2021 was 3.3 years, 4.3 years and 5.3 years, respectively.

Restricted Shares — Generally, the restrictions on Restricted Shares do not expire for a minimum of one year and a maximum of three years, and shares are subject to forfeiture during the restriction period. Most typically, Restricted Share grants have staggered vesting periods over one to three years from grant date. The intrinsic value of the Restricted Shares, which is typically the product of share price at the date of grant and the number of Restricted Shares granted, is amortized on a straight-line basis to compensation expense over the periods in which the restrictions lapse.

Awards of Restricted Shares are valued at the closing market price of our common stock on the date of grant. The unearned compensation is amortized to compensation expense over the vesting period of the Restricted Shares, except for awards related to the 55/10 Provision which are expensed when granted. As of December 31, 2023 and 2022, we had $18.5 million and $18.0 million, respectively, of unearned compensation cost related to unvested Restricted Shares, which is expected to be recognized over a weighted-average period of approximately one year. The total fair value of Restricted Shares vested during the years ended December 31, 2023, 2022 and 2021 was $24.2 million, $23.5 million and $25.2 million, respectively.

We recorded stock-based compensation for Restricted Shares as follows:

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in millions)		
Stock-based compensation expense	$ 27.8	$ 25.5	$ 29.5
Related income tax benefit	(6.3)	(5.8)	(6.7)
Net stock-based compensation expense	$ 21.5	$ 19.7	$ 22.8

The following table summarizes information regarding Restricted Shares:

	Year Ended December 31, 2023	
	Shares	Weighted Average Grant-Date Fair Value
Number of unvested Restricted Shares:		
Outstanding — beginning of year	1,697,779	$ 37.17
Granted	936,683	36.72
Vested	(645,946)	37.48
Canceled	(247,030)	42.42
Outstanding — end of year	1,741,486	$ 36.06

Unvested Restricted Shares outstanding as of December 31, 2023, includes approximately 473,000 units with performance-based vesting provisions issuable in common stock and vest upon the achievement of predefined performance metrics. Targets for outstanding performance awards are based on our average return on invested capital and free cash flow as a percent of net income over a three-year period. Performance units issued in 2023, 2022 and 2021 include a secondary measure, relative total shareholder return, which can increase or decrease the number of vesting units by 15% depending on the Company's performance versus peers. Performance units issued have a vesting percentage up to 230%. Compensation expense is recognized ratably over a cliff-vesting period of 36 months, based on the fair value of our common stock on the date of grant, adjusted for actual forfeitures. During the performance period, earned and unearned compensation expense is adjusted based on changes in the expected achievement of the performance targets for all performance-based units granted. Vesting provisions range from 0 to approximately 1,087,000 shares based on performance targets. As of December 31, 2023, we estimate vesting of approximately 370,000 shares based on expected achievement of performance targets.

8. DERIVATIVES AND HEDGING ACTIVITIES

Our risk management and foreign currency derivatives and hedging policy specifies the conditions under which we may enter into derivative contracts. See Note 1 for additional information on our purpose for entering into derivatives and our overall risk management strategies. We enter into foreign exchange forward contracts to hedge our cash flow risks associated with transactions denominated in currencies other than the local currency of the operation engaging in the transaction.

Foreign exchange contracts had notional values of $656.6 million and $459.2 million at December 31, 2023 and 2022, respectively. At December 31, 2023, the length of foreign exchange contracts currently in place ranged from 8 days to 16 months.

We are exposed to risk from credit-related losses resulting from nonperformance by counterparties to our financial instruments. We perform credit evaluations of our counterparties under forward exchange contracts and expect all counterparties to meet their obligations. We have not experienced credit losses from our counterparties.

The fair values of foreign exchange contracts are summarized below:

	Year Ended December 31, 2023	Year Ended December 31, 2022
	(Amounts in thousands)	
Current derivative assets	$ 1,915	$ 2,207
Noncurrent derivative assets	17	66
Current derivative liabilities	3,855	4,422
Noncurrent derivative liabilities	5	63

Current and noncurrent derivative assets are reported in our consolidated balance sheets in prepaid expenses and other and other assets, net, respectively. Current and noncurrent derivative liabilities are reported in our consolidated balance sheets in accrued liabilities and retirement obligations and other liabilities, respectively.

The impact of net changes in the fair values of foreign exchange contracts are summarized below:

	Year Ended December 31, 2023	2022	2021
	(Amounts in thousands)		
Gains (losses) recognized in income	$ (12,914)	$ (6,173)	$ 3,295

Gains and losses recognized in our consolidated statements of income for foreign exchange contracts are classified as other income (expense), net.

As a means of managing the volatility of foreign currency exposure with the Euro/U.S. dollar exchange rate, we entered into cross-currency swap agreements ("Swaps") as a hedge of our Euro investment in certain of our international subsidiaries. Accordingly, on April 14, 2021 and March 9, 2021, we entered into Swaps, with both having termination dates of October 1, 2030 and the March 9, 2021 cross currency swap having an early termination date of March 11, 2025. Also, during the third quarter of 2020 we entered into a cross currency swap agreement with a termination date of October 1, 2030 and an early termination date of September 22, 2025. The swap agreements were designated as net investment hedges and classified as Level II under the fair value hierarchy. On December 20, 2022 all outstanding swap agreements were early terminated resulting in net cash proceeds received of $66.0 million. Prior to the early termination the cross-currency swaps had a combined notional value of €423.2 million and a fair value of $68.2 million.

We excluded the interest accruals on the swaps from the assessment of hedge effectiveness and recognize the interest accruals in earnings within interest expense. For each reporting period, the change in the fair value of the swap attributable to changes in the spot rate and differences between the change in the fair value of the excluded components and the amounts recognized in earnings under the swap accrual process were reported in accumulated other comprehensive loss ("AOCL") on our consolidated balance sheets. For the period ended December 31, 2022, an interest accrual of $8.5 million was recognized within interest expense in our consolidated statements of income.

The cumulative net investment hedge (gain) loss, net of deferred taxes, under cross-currency swaps recorded in AOCL on our consolidated balance sheets are summarized below:

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in thousands)		
(Gain) loss-included component (1)	$ —	$ (37,135)	$ (15,578)
(Gain) loss-excluded component (2)	—	(11,875)	(2,111)
(Gain) loss recognized in AOCL	$ —	$ (49,010)	$ (17,689)

(1) Change in the fair value of the swaps attributable to changes in spot rates.
(2) Change in the fair value of the swaps due to changes other than those attributable to spot rates.

In March 2015, we designated €255.7 million of our 1.25% EUR Senior Notes ("2022 Euro Senior Notes") as a net investment hedge of our Euro investment in certain of our international subsidiaries. On September 22, 2020, we increased the designated hedged value on the 2022 Euro Senior Notes to €336.3 million, which reflected the remaining balance of the 2022 Euro Senior Notes. For each reporting period, the change in the carrying value due to the remeasurement of the effective portion is reported in AOCL on our consolidated balance sheets and the remaining change in the carrying value of the ineffective portion, if any, is recognized in other income (expense), net in our consolidated statements of income. As a result of the redemption of our 2022 Euro Senior Notes in the first quarter of 2021 we dedesignated the hedged value of our net investment hedge.

Prior to the dedesignation, the cumulative impact recorded in AOCL on our consolidated balance sheets from the change in carrying value due to the remeasurement of the effective portion of the net investment hedge are summarized below:

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in thousands)		
Loss recorded in AOCL	$ —	$ —	$ (29,554)

Prior to the dedesignation of the net investment hedge, we used the spot method to measure the effectiveness of both net investment hedges and evaluate the effectiveness on a prospective basis at the beginning of each quarter. We did not record any ineffectiveness for the period ended December 31, 2022.

9. FAIR VALUE OF FINANCIAL INSTRUMENTS

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Where available, fair value is based on observable market prices or parameters or derived from such prices or parameters. Where observable prices or inputs are not available, valuation models may be applied. Assets and liabilities recorded at fair value in our consolidated balance sheets are categorized by hierarchical levels based upon the level of judgment associated with the inputs used to measure their fair values. Recurring fair value measurements are limited to investments in derivative instruments. The fair value measurements of our derivative instruments are determined using models that maximize the use of the observable market inputs including interest rate curves and both forward and spot prices for currencies, and are classified as Level II under the fair value hierarchy. The fair values of our derivatives are included above in Note 8.

The carrying value of our financial instruments as reflected in our consolidated balance sheets approximates fair value, with the exception of our long-term debt. The estimated fair value of our long-term debt, excluding the Senior Notes, approximates the carrying value and is determined using Level II inputs under the fair value hierarchy. The carrying value of our debt is included in Note 12. The estimated fair value of our Senior Notes at December 31, 2023 was $855.7 million compared to the carrying value of $990.4 million. The estimated fair value of the Senior Notes is based on Level I quoted market rates. The carrying amounts of our other financial instruments (i.e., cash and cash equivalents, accounts receivable, net and accounts payable) approximated fair value due to their short-term nature at December 31, 2023 and December 31, 2022.

10. DETAILS OF CERTAIN CONSOLIDATED BALANCE SHEET CAPTIONS

The following tables present financial information of certain consolidated balance sheets captions.

Accounts Receivable, net — Accounts receivable, net were:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Trade accounts receivables	$ 935,297	$ 919,045
Less: allowance for expected credit losses	(67,487)	(66,444)
Other short-term receivables	26,585	32,649
Less: allowance for expected credit losses	(12,526)	(16,618)
Accounts receivable, net	$ 881,869	$ 868,632

Property, Plant and Equipment, net — Property, plant and equipment, net were:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Land	$ 60,312	$ 60,669
Buildings and improvements	427,332	425,019
Machinery, equipment and tooling	781,771	750,933
Software, furniture and fixtures and other	395,194	437,280
Gross property, plant and equipment	1,664,609	1,673,901
Less: accumulated depreciation	(1,158,451)	(1,172,956)
Property, plant and equipment, net	$ 506,158	$ 500,945

Accrued Liabilities — Accrued liabilities were:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Wages, compensation and other benefits	$ 264,914	$ 175,898
Commissions and royalties	20,570	18,526
Warranty costs and late delivery penalties	26,521	21,850
Sales and use tax	25,880	29,092
Income tax	24,643	32,968
Other	141,902	149,244
Accrued liabilities	$ 504,430	$ 427,578

"Other" accrued liabilities include professional fees, lease obligations, insurance, interest, freight, accrued cash dividends payable, legal and environmental matters, derivative liabilities, restructuring reserves and other items, none of which individually exceed 5% of current liabilities.

Retirement Obligations and Other Liabilities — Retirement obligations and other liabilities were:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Pension and postretirement benefits	$ 202,583	$ 142,204
Deferred taxes	1,335	7,901
Legal and environmental	93,989	90,207
Uncertain tax positions and other tax liabilities	51,584	37,604
Other	39,629	31,613
Retirement obligations and other liabilities	$ 389,120	$ 309,529

"Other" includes derivative liabilities, deferred compensation liabilities, asset retirement obligations, insurance-related liabilities and other items, none of which exceed 5% of total liabilities.

11. EQUITY METHOD INVESTMENTS

We occasionally enter into joint venture arrangements with local country partners as our preferred means of entry into countries where barriers to entry may exist. Similar to our consolidated subsidiaries, these unconsolidated joint ventures generally operate within our primary businesses of designing, manufacturing, assembling and distributing fluid motion and control products and services. We have agreements with certain of these joint ventures that restrict us from otherwise entering the respective market and certain joint ventures produce and/or sell our products as part of their broader product offering. Net earnings from investments in unconsolidated joint ventures is reported in net earnings from affiliates in our consolidated statements of income. Given the integrated role of the unconsolidated joint ventures in our business, net earnings from affiliates is presented as a component of operating income.

As of December 31, 2023, we had investments in five joint ventures, one located in each of Chile, India, Saudi Arabia, South Korea and the United Arab Emirates that were accounted for using the equity method and are immaterial for disclosure purposes.

12. DEBT AND FINANCE LEASE OBLIGATIONS

Debt, including finance lease obligations, consisted of:

	December 31,	
	2023	2022
	(Amounts in thousands)	
3.50% USD Senior Notes due October 1, 2030, net of unamortized discount and debt issuance costs of $4,479 and $5,055 at December 31, 2023 and 2022, respectively	495,521	494,945
2.80% USD Senior Notes due January 15, 2032, net of unamortized discount and debt issuance costs of $5,164 and $5,727 at December 31, 2023 and 2022, respectively	494,836	494,273
Term Loan Facility, interest rate of 6.70% and 5.98%, net of debt issuance costs of $274 and $444 at December 31, 2023 and 2022, respectively	219,726	259,556
Finance lease obligations and other borrowings	23,467	24,712
Debt and finance lease obligations	1,233,550	1,273,486
Less amounts due within one year	66,243	49,335
Total debt due after one year	$ 1,167,307	$ 1,224,151

Scheduled maturities of our Senior Notes and other debt, are (amounts in thousands):

	Term Loan	Senior Notes and other debt	Total
		(Amounts in thousands)	
2024	$ 59,863	$ 6,243	$ 66,106
2025	59,905	17,224	77,129
2026	99,958	—	99,958
2027	—	—	—
2028	—	—	—
Thereafter	—	990,357	990,357
Total	$ 219,726	$ 1,013,824	$ 1,233,550

Senior Credit Facility

On September 13, 2021, we amended and restated our credit agreement (the "Amended and Restated Credit Agreement") under our Senior Credit Facility (the "Credit Facility") with Bank of America, N.A. and the other lenders to provide greater flexibility in maintaining adequate liquidity and access to available borrowings. The Amended and Restated Credit Agreement, (i) retained, from the previous credit agreement, the $800.0 million unsecured Revolving Credit Facility (the "Revolving Credit Facility"), which includes a $750.0 million sublimit for the issuance of letters of credit and a $30.0 million sublimit for swing line loans ii) provides for an up to $300.0 million unsecured Term Loan Facility (the "Term Loan"), (iii) extends the maturity date of the agreement to September 13, 2026, (iv) reduces commitment fees, (v) extends net leverage ratio covenant definition through the maturity of the agreement, and (vi) provides the ability to make certain adjustments to the otherwise applicable commitment fee, interest rate and letter of credit fees based on the Company's performance against to-be-established key performance indicators with respect to certain of the Company's environmental, social and governance targets. Subsequently, on February 3, 2023, we amended and restated our credit agreement (the "Amendment") which (i) replaced LIBOR with Secured Overnight Financing Rate ("SOFR") as the benchmark reference rate, (ii) lowered the Material Acquisition (as defined in the Credit Facility) threshold from $250.0 million to $200.0 million and (iii) extended compliance dates for certain financial covenants. We believe this Amendment will provide greater flexibility and additional liquidity under our Credit Facility as we continue to pursue our business goals and strategy. Most other terms and conditions under the previous Credit Facility remained unchanged.

The interest rates per annum applicable to the Revolving Credit Facility, other than with respect to swing line loans, are adjusted Term Secured Overnight Financing Rate ("Adjusted Term SOFR") plus between 1.000% to 1.750%, depending on our debt rating by either Moody's Investors Service, Inc. ("Moody's") or Standard & Poor's Financial Services LLC ("S&P"), or, at our option, the Base Rate (as defined in the Senior Credit Agreement) plus between 0.000% to 0.750% depending on our debt rating by either Moody's or S&P. An additional credit spread adjustment of 0.100% is included within Adjusted Term SOFR to account for the transition from LIBOR to SOFR. At December 31, 2023, the interest rate on the Revolving Credit Facility was the Adjusted Term SOFR plus 1.375% in the case of Adjusted Term SOFR loans and the Base Rate plus 0.375% in the case of Base Rate loans. In addition, a commitment fee is payable quarterly in arrears on the daily unused portions of the Revolving Credit Facility. The commitment fee will be between 0.080% and 0.250% of unused amounts under the Revolving Credit Facility depending on our debt rating by either Moody's or S&P. The commitment fee was 0.175% (per annum) during the period ended December 31, 2023.

Under the terms and conditions of Senior Credit Agreement, interest rates per annum applicable to the Term Loan Facility are stated as Adjusted Term SOFR plus between 0.875% to 1.625%, depending on the Company's debt rating by either Moody's or S&P, or, at the option of the Company, the Base Rate plus between 0.000% to 0.625% depending on the Company's debt rating by either Moody's or S&P. At December 31, 2023, the interest rate on the Term Loan Facility was Adjusted Term SOFR plus 1.250% in the case of Adjusted Term SOFR loans and the Base Rate plus 0.250% in the case of Base Rate loans.

As of December 31, 2023, and December 31, 2022, we had no revolving loans outstanding under the Senior Credit Facility. We had outstanding letters of credit of $127.1 million and $71.7 million at December 31, 2023, and December 31, 2022, respectively. After consideration of the outstanding letters of credit as of December 31, 2023, the amount available for borrowings under the Senior Credit Facility was limited to $672.9 million. As of December 31, 2022, the amount available for borrowings under our Revolving Credit Facility was $293.9 million. We have scheduled repayments of $15.0 million, on the Term Loan, due in each of the subsequent four quarters through December 31, 2024.

Financial Covenants — Our compliance with the financial covenants under the Senior Notes and Senior Credit Facility are tested quarterly. We were in compliance with all covenants as of December 31, 2023.

13. PENSION AND POSTRETIREMENT BENEFITS

We sponsor several noncontributory defined benefit pension plans, covering substantially all U.S. employees and certain non-U.S. employees, which provide benefits based on years of service, age, job grade levels and type of compensation. Retirement benefits for all other covered employees are provided through contributory pension plans, cash balance pension plans and government-sponsored retirement programs. All funded defined benefit pension plans receive funding based on independent actuarial valuations to provide for current service and an amount sufficient to amortize unfunded prior service over periods not to exceed 30 years, with funding falling within the legal limits prescribed by prevailing regulation. We also maintain unfunded defined benefit plans that, as permitted by local regulations, receive funding only when benefits become due.

Our defined benefit plan strategy is to ensure that current and future benefit obligations are adequately funded in a cost-effective manner. Additionally, our investing objective is to achieve the highest level of investment performance that is compatible with our risk tolerance and prudent investment practices. Because of the long-term nature of our defined benefit plan liabilities, our funding strategy is based on a long-term perspective for formulating and implementing investment policies and evaluating their investment performance.

The asset allocation of our defined benefit plans reflects our decision about the proportion of the investment in equity and fixed income securities, and, where appropriate, the various sub-asset classes of each. At least annually, we complete a comprehensive review of our asset allocation policy and the underlying assumptions, which includes our long-term capital markets rate of return assumptions and our risk tolerances relative to our defined benefit plan liabilities.

The expected rates of return on defined benefit plan assets are derived from review of the asset allocation strategy, expected long-term performance of asset classes, risks and other factors adjusted for our specific investment strategy. These rates are impacted by changes in general market conditions, but because they are long-term in nature, short-term market changes do not significantly impact the rates.

Our U.S. defined benefit plan assets consist of a balanced portfolio of equity and fixed income securities. Our non-U.S. defined benefit plan assets include a significant concentration of United Kingdom ("U.K.") fixed income securities. We monitor investment allocations and manage plan assets to maintain acceptable levels of risk.

For all periods presented, we used a measurement date of December 31 for each of our U.S. pension plans, non-U.S. pension plans and postretirement medical plans.

U.S. Defined Benefit Plans

We maintain qualified and non-qualified defined benefit pension plans in the U.S. The qualified plan provides coverage for substantially all full-time U.S. employees who receive benefits, up to an earnings threshold specified by the U.S. Department of Labor. The non-qualified plans primarily cover a small number of employees including current and former members of senior management, providing them with benefit levels equivalent to other participants, but that are otherwise limited by U.S. Department of Labor rules. The U.S. plans are designed to operate as "cash balance" arrangements, under which the employee has the option to take a lump sum payment at the end of their service. The difference between total accumulated benefit obligation and total projected benefit obligation ("Benefit Obligation") is immaterial.

In August 2023, we amended the qualified plan in the U.S. for non-union employees to discontinue future benefit accruals under the qualified plan and freeze existing accrued benefits effective January 1, 2025. Benefits earned by participants under the qualified plan prior to January 1, 2025, are not affected. We also amended the U.S. non-qualified defined benefit pension plan that provides enhanced retirement benefits to select members of management. The qualified plan and the non-qualified plan are closed to new entrants effective January 1, 2024, and September 1, 2023, respectively. The amendments resulted in a curtailment of both plans during the year ended December 31, 2023. The curtailment loss incurred and the change in projected benefit obligation was immaterial.

The following are assumptions related to the U.S. defined benefit pension plans:

	Year Ended December 31,		
	2023	**2022**	**2021**
Weighted average assumptions used to determine Benefit Obligations:			
Discount rate	5.41 %	5.73 %	3.00 %
Rate of increase in compensation levels	4.00	3.50	3.50
Weighted average assumptions used to determine net pension expense:			
Long-term rate of return on assets	6.00 %	5.75 %	6.00 %
Discount rate	5.73	3.00	2.62
Rate of increase in compensation levels	3.50	3.50	3.50
Weighted-average interest crediting rates	4.00 %	3.79 %	3.79 %

At December 31, 2023 as compared with December 31, 2022, we decreased our discount rate from 5.73% to 5.41% based on an analysis of publicly-traded investment grade U.S. corporate bonds, which had a higher yield due to current market conditions. In determining 2023 expense, the expected rate of return on U.S. plan assets increased to 6.00%, primarily based on our target allocations and expected long-term asset returns. The long-term rate of return assumption is calculated using a quantitative approach that utilizes unadjusted historical returns and asset allocation as inputs for the calculation. For all U.S. plans, we adopted the Pri-2012 mortality tables and the MP-2021 improvement scale published in October 2021. We applied the Pri-2012 tables based on the constituency of our plan population for union and non-union participants. We adjusted the improvement scale to utilize the Proxy SSA Long Term Improvement Rates, consistent with assumptions adopted by the Social Security Administration trustees, based on long-term historical experience. Currently, we believe this approach provides the best estimate of our future obligation. Most plan participants elect to receive plan benefits as a lump sum at the end of service, rather than an annuity. As such, the updated mortality tables had an immaterial effect on our pension obligation.

Net pension expense for the U.S. defined benefit pension plans (including both qualified and non-qualified plans) was:

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in thousands)		
Service cost	$ 21,341	$ 24,680	$ 25,162
Interest cost	20,480	13,157	11,952
Expected return on plan assets	(23,931)	(25,345)	(25,377)
Settlement loss	15	—	—
Amortization of unrecognized prior service cost	185	175	188
Amortization of unrecognized net (gain) loss	(13)	3,461	7,725
U.S. net pension expense	$ 18,077	$ 16,128	$ 19,650

The following summarizes the net pension (liability) asset for U.S. plans:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Plan assets, at fair value	$ 361,174	$ 365,044
Benefit Obligation	(417,648)	(382,959)
Funded status	$ (56,474)	$ (17,915)

The following summarizes amounts recognized in the balance sheet for U.S. plans:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Current liabilities	(169)	(232)
Noncurrent liabilities	(56,305)	(17,683)
Funded status	$ (56,474)	$ (17,915)

The following is a summary of the changes in the U.S. defined benefit plans' pension obligations:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Balance — January 1	$ 382,959	$ 471,825
Service cost	21,341	24,680
Interest cost	20,480	13,157
Plan amendments and settlements	(3,103)	179
Actuarial loss (gain) (1)	31,912	(87,791)
Benefits paid	(35,941)	(39,091)
Balance — December 31	$ 417,648	$ 382,959
Accumulated benefit obligations at December 31	$ 417,648	$ 382,488

(1) The actuarial loss in 2023 and gain in 2022 primarily reflect the impact of changes in the discount rate. The increase in the interest crediting rate assumption also contributed to the actuarial loss in 2023.

The following table summarizes the expected cash benefit payments for the U.S. defined benefit pension plans in the future (amounts in millions):

2024	$ 43.4
2025	41.4
2026	38.8
2027	37.8
2028	35.3
2029-2033	154.1

The following table shows the change in accumulated other comprehensive loss attributable to the components of the net cost and the change in Benefit Obligations for U.S. plans, net of tax:

	December 31,	
	2023	**2022**
	(Amounts in thousands)	
Balance — January 1	$ (44,455)	$ (30,014)
Amortization of net (gain) loss	(10)	2,647
Amortization of prior service cost	141	134
Net loss arising during the year	(20,362)	(17,085)
Settlement loss and other	2,140	—
Prior service cost arising during the year	(56)	(137)
Balance — December 31	$ (62,602)	$ (44,455)

Amounts recorded in accumulated other comprehensive loss consist of:

	December 31,	
	2023	**2022**
	(Amounts in thousands)	
Unrecognized net loss	$ (61,904)	$ (43,725)
Unrecognized prior service cost	(698)	(730)
Accumulated other comprehensive loss, net of tax	$ (62,602)	$ (44,455)

The following is a reconciliation of the U.S. defined benefit pension plans' assets:

	December 31,	
	2023	**2022**
	(Amounts in thousands)	
Balance — January 1	$ 365,044	$ 488,281
Gain (loss) on plan assets	29,323	(84,785)
Company contributions	3,143	639
Benefits paid	(35,941)	(39,091)
Settlements	(395)	—
Balance — December 31	$ 361,174	$ 365,044

We contributed $3.1 million and $0.6 million to the U.S. defined benefit pension plans during 2023 and 2022, respectively.

All U.S. defined benefit plan assets are held by the qualified plan. The asset allocations for the qualified plan at the end of 2023 and 2022 by asset category, are as follows:

	Target Allocation at December 31,		Percentage of Actual Plan Assets at December 31,	
Asset category	**2023**	**2022**	**2023**	**2022**
Cash and cash equivalents	1 %	1 %	2 %	1 %
Cash and cash equivalents	1 %	1 %	2 %	1 %
Global Equity	20 %	20 %	21 %	21 %
Global Real Assets	14 %	14 %	15 %	13 %
Equity securities	34 %	34 %	36 %	34 %
Diversified Credit	14 %	14 %	15 %	18 %
Liability-Driven Investment	51 %	51 %	47 %	47 %
Fixed income	65 %	65 %	62 %	65 %

None of our common stock is directly held by our qualified plan. Our investment strategy is to earn a long-term rate of return consistent with an acceptable degree of risk and minimize our cash contributions over the life of the plan, while taking into account the liquidity needs of the plan. We preserve capital through diversified investments in high quality securities. Our current allocation target is to invest approximately 34% of plan assets in equity securities and 65% in fixed income securities. Within each investment category, assets are allocated to various investment strategies. Professional money management firms manage our assets, and we engage a consultant to assist in evaluating these activities. We periodically review the allocation target, generally in conjunction with an asset and liability study and in consideration of our future cash flow needs. We regularly rebalance the actual allocation to our target investment allocation.

Plan assets are invested in commingled funds. Our "Pension and Investment Committee" is responsible for setting the investment strategy and the target asset allocation for the plan's assets. As the qualified plan approached fully funded status, we implemented a Liability-Driven Investing ("LDI") strategy, which more closely aligns the duration of the plan's assets with the duration of its liabilities. The LDI strategy results in an asset portfolio that more closely matches the behavior of the liability, thereby reducing the volatility of the plan's funded status.

The plan's financial instruments, shown below, are presented at fair value. See Note 1 for further discussion on how the hierarchical levels of the fair values of the Plan's investments are determined. The fair values of our U.S. defined benefit plan assets were:

	At December 31, 2023				At December 31, 2022			
		Hierarchical Levels				Hierarchical Levels		
	Total	I	II	III	Total	I	II	III
	(Amounts in thousands)				(Amounts in thousands)			
Cash and cash equivalents	$ 5,798	$ 5,798	$ —	$ —	$ 4,072	$ 4,072	$ —	$ —
Commingled Funds:								
Equity securities								
Global Equity(a)	76,217	—	76,217	—	77,217	—	77,217	—
Global Real Assets(b)	54,025	—	54,025	—	46,476	—	46,476	—
Fixed income securities								
Diversified Credit(c)	54,756	—	54,756	—	64,877	—	64,877	—
Liability-Driven Investment(d)	170,378	—	170,378	—	172,402	—	172,402	—
	$ 361,174	$ 5,798	$ 355,376	$ —	$ 365,044	$ 4,072	$ 360,972	$ —

(a) Global Equity fund seeks to closely track the performance of the MSCI All Country World Index.
(b) Global Real Asset funds seek to provide exposure to the listed global real estate investment trusts and infrastructure markets.
(c) Diversified Credit funds seek to provide exposure to the high yield, emerging markets, bank loans and securitized credit markets.
(d) LDI funds seek to invest in high quality fixed income securities that collectively closely match those found in discount curves used to value the plan's liabilities.

Non-U.S. Defined Benefit Plans

We maintain defined benefit pension plans, which cover some or all of our employees in the following countries: Austria, Belgium, Canada, France, Germany, India, Italy, Japan, Mexico, The Netherlands, Switzerland and the U.K. The assets of the plans in the U.K. (two plans), The Netherlands and Canada represent 88% of the total non-U.S. plan assets ("non-U.S. assets"). Details of other countries' plan assets have not been provided due to immateriality.

The following are assumptions related to the non-U.S. defined benefit pension plans:

	Year Ended December 31,		
	2023	2022	2021
Weighted average assumptions used to determine Benefit Obligations:			
Discount rate	4.22 %	4.46 %	1.71 %
Rate of increase in compensation levels	3.24	3.61	3.18
Weighted average assumptions used to determine net pension expense:			
Long-term rate of return on assets	3.97 %	2.43 %	2.37 %
Discount rate	4.46	1.71	1.23
Rate of increase in compensation levels	3.62	3.18	3.11
Weighted-average interest crediting rates	2.29 %	1.49 %	1.41 %

At December 31, 2023, as compared with December 31, 2022, we decreased our average discount rate for non-U.S. plans from 4.46% to 4.22% based on analysis of bonds and other publicly-traded instruments, by country, which had lower yields due to market conditions. To determine 2023 pension expense, our average expected rate of return on plan assets increased to 3.97% based on our target allocations and expected long-term asset returns. As the expected rate of return on plan assets is long-term in nature, short-term market fluctuations do not significantly impact the rate.

Many of our non-U.S. defined benefit plans are unfunded, as permitted by local regulation. The expected long-term rate of return on assets for funded plans was determined by assessing the rates of return for each asset class and is calculated using a quantitative approach that utilizes unadjusted historical returns and asset allocation as inputs for the calculation. We work with our actuaries to determine the reasonableness of our long-term rate of return assumptions by looking at several factors including historical returns, expected future returns, asset allocation, risks by asset class and other items.

Net pension expense for non-U.S. defined benefit pension plans was:

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in thousands)		
Service cost	$ 4,611	$ 5,984	$ 7,336
Interest cost	11,897	6,506	5,544
Expected return on plan assets	(6,659)	(5,883)	(6,204)
Amortization of unrecognized net loss	1,270	2,729	4,509
Amortization of unrecognized prior service cost	300	293	300
Settlement (gain) loss and other	(23)	(75)	640
Non-U.S. net pension expense	$ 11,396	$ 9,554	$ 12,125

The following summarizes the net pension liability for non-U.S. plans:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Plan assets, at fair value	$ 179,450	$ 172,276
Benefit Obligation	(297,600)	(268,364)
Funded status - Underfunded	$ (118,150)	$ (96,088)

The following summarizes amounts recognized in the balance sheet for non-U.S. plans:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Noncurrent assets	$ 9,563	$ 15,305
Current liabilities	(7,682)	(6,877)
Noncurrent liabilities	(120,031)	(104,516)
Funded status	$ (118,150)	$ (96,088)

The following is a reconciliation of the non-U.S. plans' defined benefit pension obligations:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Balance — January 1	$ 268,364	$ 420,809
Service cost	4,611	5,984
Interest cost	11,897	6,506
Employee contributions	80	71
Settlements and other	(982)	(7,944)
Actuarial losses (gains)(1)	17,082	(108,546)
Net benefits and expenses paid	(15,181)	(15,797)
Currency translation impact(2)	11,729	(32,719)
Balance — December 31	$ 297,600	$ 268,364
Accumulated benefit obligations at December 31	$ 279,760	$ 253,428

(1) Actuarial losses (gains) primarily reflects the impact of changes in the discount rates for all plans.

(2) In 2023, the currency translation loss reflects the weakening of the U.S. dollar against the Euro and the British pound, while in 2022, the currency translation gains reflects the strengthening of the U.S. dollar against the Euro and the British pound.

The following table summarizes the expected cash benefit payments for the non-U.S. defined benefit plans in the future (amounts in millions):

2024	$ 17.5
2025	17.8
2026	18.7
2027	18.6
2028	19.8
2029-2033	101.2

The following table shows the change in accumulated other comprehensive loss attributable to the components of the net cost and the change in Benefit Obligations for non-U.S. plans, net of tax:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Balance — January 1	$ (42,421)	$ (70,581)
Amortization of net loss	1,631	2,450
Net (losses) gains arising during the year	(16,039)	21,099
Settlement (gains) losses	(23)	130
Prior service gain (cost) arising during the year	10	(233)
Currency translation impact and other	(3,126)	4,714
Balance — December 31	$ (59,968)	$ (42,421)

Amounts recorded in accumulated other comprehensive loss consist of:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Unrecognized net loss	$ (56,698)	$ (39,007)
Unrecognized prior service cost	(3,270)	(3,414)
Accumulated other comprehensive loss, net of tax	$ (59,968)	$ (42,421)

The following is a reconciliation of the non-U.S. plans' defined benefit pension assets:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Balance — January 1	$ 172,276	$ 275,941
Return (Loss) on plan assets	4,444	(71,104)
Employee contributions	80	71
Company contributions	10,221	15,657
Settlements	(967)	(8,039)
Currency translation impact	8,577	(24,453)
Net benefits and expenses paid	(15,181)	(15,797)
Balance — December 31	$ 179,450	$ 172,276

In 2023, the UK and The Netherlands plans contributed to the increase in plan assets. UK pension plans contributed to the change in the non-US plan assets due to lower asset returns in 2022. Our contributions to non-U.S. defined benefit pension plans in 2024 are expected to be approximately $2 million, excluding direct benefits paid.

The asset allocations for the non-U.S. defined benefit pension plans at the end of 2023 and 2022 are as follows:

Asset category	Target Allocation at December 31, 2023	Target Allocation at December 31, 2022	Percentage of Actual Plan Assets at December 31, 2023	Percentage of Actual Plan Assets at December 31, 2022
Cash and cash equivalents	— %	1 %	— %	1 %
Cash and cash equivalents	— %	1 %	— %	1 %
U.K. Government Gilt Index	39 %	38 %	39 %	38 %
Liability-Driven Investment	12 %	12 %	12 %	12 %
Fixed income	51 %	50 %	51 %	50 %
Multi-asset	19 %	20 %	19 %	20 %
Buy-in Contracts	18 %	19 %	18 %	19 %
Other	12 %	10 %	12 %	10 %
Other types	49 %	49 %	49 %	49 %

None of our common stock is held directly by these plans. In all cases, our investment strategy for these plans is to earn a long-term rate of return consistent with an acceptable degree of risk and minimize our cash contributions over the life of the plan, while taking into account the liquidity needs of the plan and the legal requirements of the particular country. We preserve capital through diversified investments in high quality securities.

Asset allocation differs by plan based upon the plan's benefit obligation to participants, as well as the results of asset and liability studies that are conducted for each plan and in consideration of our future cash flow needs. Professional money management firms manage plan assets and we engage a consultant in the U.K. to assist in evaluation of these activities. The assets of the U.K. plans are overseen by a group of Trustees who review the investment strategy, asset allocation and fund selection. These assets are passively managed as they are invested in index funds that attempt to match the performance of the specified benchmark index.

The fair values of the non-U.S. assets were:

	At December 31, 2023				At December 31, 2022			
		Hierarchical Levels				Hierarchical Levels		
	Total	I	II	III	Total	I	II	III
	(Amounts in thousands)				(Amounts in thousands)			
Cash	$ 706	$ 706	$ —	—	$ 2,134	$ 2,134	$ —	$ —
Commingled Funds:								
Fixed income securities								
U.K. Government Gilt Index(a)	69,566	—	69,566	—	65,650	—	65,650	—
Liability-Driven Investment(b)	21,873	—	21,873	—	20,849	—	20,849	—
Other Types of Investments:								
Multi-asset(c)	34,693	—	34,693	—	34,268	—	34,268	—
Buy-in Contracts(d)	31,692	—	—	31,692	32,313	—	—	32,313
Other(e)	20,920	—	—	20,920	17,062	—	—	17,062
	$ 179,450	$ 706	$ 126,132	$ 52,612	$ 172,276	$ 2,134	$ 120,767	$ 49,375

(a) U.K. Government Gilt Index represents U.K. government issued fixed income investments which are passively managed to track their respective benchmarks.
(b) LDI seeks to invest in fixed income securities that collectively closely match those found in discount curves used to value the plan's liabilities.

(c) Multi-asset seeks an attractive risk-adjusted return by investing in a diversified portfolio of strategies, including equities and fixed income.
(d) The Buy-in Contracts ("Contract" or "Contracts") represent assets held by plans, whereby the cost of providing benefits to plan participants is funded by the Contract. The Contracts are held by the plans for the benefit of plan participants in the Netherlands and U.K. The fair value of these assets are based on the current present value of accrued benefits and will fluctuate based on changes in the obligations associated with covered plan members as well as the assumptions used in the present value calculation. The fair value of asset held in the Netherlands Contract as of January 1, 2023 was $15.7 million, with contributions and currency adjustments resulting in a fair value of $16.9 million at December 31, 2023. Similarly, the fair value of asset held in the U.K. plan Contract as of January 1, 2023 was $16.6 million, with contributions and currency adjustments resulting in a fair value of $14.8 million at December 31, 2023.
(e) Includes assets held by plans outside the United Kingdom, the Netherlands and Canada. Details have not been provided due to immateriality.

Defined Benefit Pension Plans with Accumulated Benefit Obligations in Excess of Plan Assets

The following summarizes key pension plan information regarding U.S. and non-U.S. plans whose accumulated benefit obligations exceed the fair value of their respective plan assets.

	December 31,	
	2023	2022
	(Amounts in thousands)	
Benefit Obligation	$ 590,015	$ 529,531
Accumulated benefit obligation	577,942	519,287
Fair value of plan assets	407,307	401,285

Postretirement Medical Plans

We sponsor several defined benefit postretirement medical plans covering certain current retirees and a limited number of future retirees in the U.S. These plans provide for medical and dental benefits and are administered through insurance companies and health maintenance organizations. The plans include participant contributions, deductibles, co-insurance provisions and other limitations and are integrated with Medicare and other group plans. We fund the plans as benefits and health maintenance organization premiums are paid, such that the plans hold no assets in any period presented. Accordingly, we have no investment strategy or targeted allocations for plan assets. Benefits under our postretirement medical plans are not available to new employees or most existing employees.

The following are assumptions related to postretirement benefits:

	Year Ended December 31,		
	2023	2022	2021
Weighted average assumptions used to determine Benefit Obligation:			
Discount rate	5.57 %	5.83 %	2.83 %
Weighted average assumptions used to determine net expense:			
Discount rate	5.83 %	2.83 %	2.32 %

The assumed ranges for the annual rates of increase in medical costs used to determine net expense were 7.00% for 2023, 7.25% for 2022 and 7.50% for 2021, with a gradual decrease to 5.00% for 2032 and future years.

Net postretirement benefit cost for postretirement medical plans was:

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in thousands)		
Interest cost	$ 761	$ 464	$ 399
Amortization of unrecognized prior service cost	122	122	122
Amortization of unrecognized net loss (gain)	53	192	(21)
Net postretirement benefit expense	$ 936	$ 778	$ 500

The following summarizes the accrued postretirement benefits liability for the postretirement medical plans:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Postretirement Benefit Obligation	$ 12,417	$ 13,353
Funded status	$ (12,417)	$ (13,353)

The following summarizes amounts recognized in the balance sheet for postretirement Benefit Obligation:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Current liabilities	$ (2,037)	$ (2,086)
Noncurrent liabilities	(10,380)	(11,267)
Funded status	$ (12,417)	$ (13,353)

The following is a reconciliation of the postretirement Benefit Obligation:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Balance — January 1	$ 13,353	$ 17,021
Interest cost	761	464
Employee contributions	379	792
Medicare subsidies receivable	60	—
Actuarial gain	(49)	(1,747)
Net benefits and expenses paid	(2,087)	(3,177)
Balance — December 31	$ 12,417	$ 13,353

The following presents expected benefit payments for future periods (amounts in millions):

	Expected Payments
2024	$ 2.1
2025	1.9
2026	1.7
2027	1.5
2028	1.3
2029-2033	4.7

The following table shows the change in accumulated other comprehensive loss attributable to the components of the net cost and the change in Benefit Obligations for postretirement benefits, net of tax:

	2023	2022
	(Amounts in thousands)	
Balance — January 1	$ (496)	$ (2,072)
Amortization of net loss	41	147
Amortization of prior service cost	93	93
Net gain arising during the year	37	1,336
Balance — December 31	$ (325)	$ (496)

Amounts recorded in accumulated other comprehensive loss consist of:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Unrecognized net gain	$ 130	$ 55
Unrecognized prior service cost	(455)	(551)
Accumulated other comprehensive income, net of tax	$ (325)	$ (496)

We made contributions to the postretirement medical plans to pay benefits of $1.6 million in 2023, $2.4 million in 2022 and $3.3 million in 2021. Because the postretirement medical plans are unfunded, we make contributions as the covered individuals' claims are approved for payment. Accordingly, contributions during any period are directly correlated to the benefits paid.

Defined Contribution Plans

We sponsor several defined contribution plans covering substantially all U.S. and Canadian employees and certain other non-U.S. employees. Employees may contribute to these plans, and these contributions are matched in varying amounts by us, including opportunities for discretionary matching contributions by us. Defined contribution plan expense was $23.6 million in 2023, $21.9 million in 2022 and $19.9 million in 2021.

14. EARNINGS PER SHARE

The following is a reconciliation of net earnings of Flowserve Corporation and weighted average shares for calculating net earnings per common share. Earnings per weighted average common share outstanding was calculated as follows:

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in thousands, except per share data)		
Net earnings of Flowserve Corporation	$ 186,743	$ 188,689	$ 125,949
Dividends on restricted shares not expected to vest	—	—	—
Earnings attributable to common and participating shareholders	$ 186,743	$ 188,689	$ 125,949
Weighted average shares:			
Common stock	131,074	130,591	130,277
Participating securities	43	39	28
Denominator for basic earnings per common share	131,117	130,630	130,305
Effect of potentially dilutive securities	814	685	552
Denominator for diluted earnings per common share	131,931	131,315	130,857
Net earnings per share attributable to Flowserve Corporation common shareholders:			
Basic	$ 1.42	$ 1.44	$ 0.97
Diluted	1.42	1.44	0.96

Diluted earnings per share is based upon the weighted average number of shares as determined for basic earnings per share plus shares potentially issuable in conjunction with stock options, restricted shares, restricted share units and performance share units.

For the years ended December 31, 2023, 2022 and 2021, unvested restricted shares of 118,781, 118,334 and 156,578, respectively, were excluded from the computation of diluted earnings per share because the effect of their exercise would be anti-dilutive.

15. LEGAL MATTERS AND CONTINGENCIES

Asbestos-Related Claims

We are a defendant in a substantial number of lawsuits that seek to recover damages for personal injury allegedly caused by exposure to asbestos-containing products manufactured and/or distributed by our heritage companies in the past. Typically, these lawsuits have been brought against multiple defendants in state and federal courts. While the overall number of asbestos-related claims in which we or our predecessors have been named has generally declined in recent years, there can be no assurance that this trend will continue, or that the average cost per claim to us will not further increase. Asbestos-containing materials incorporated into any such products were encapsulated and used as internal components of process equipment, and we do not believe that significant emission of asbestos fibers occurred during the use of this equipment.

Our practice is to vigorously contest and resolve these claims, and we have been successful in resolving a majority of claims with little or no payment, other than legal fees. Activity related to asbestos claims during the periods indicated was as follows**:**

	2023	2022	2021
Beginning claims, January 1,(1)	8,139	8,712	8,366
New claims	2,470	2,454	2,482
Resolved claims	(2,545)	(2,204)	(2,211)
Other(2)	172	(823)	75
Ending claims, December 31,(1)	8,236	8,139	8,712

(1) Beginning and ending claims data in each period excludes inactive claims, as the Company assumes that inactive cases will not be pursued further by the respective plaintiffs. A claim is classified as inactive either due to inactivity over a period of time or if designated as inactive by the applicable court.

(2) Represents the net change in claims as a result of the reclassification of active cases as inactive and inactive cases as active during the period indicated. Cases moved from active to inactive status are removed from the claims count without being accounted for as a "Resolved claim", and cases moved from inactive status to active status are added back to the claims count without being accounted for as a “New claim”.

The following table presents the changes in the estimated asbestos liability as of December 31, 2023, 2022 and 2021:

(Amounts in thousands)	2023	2022	2021
Beginning balance, January 1,	$ 98,652	$ 94,423	$ 99,530
Asbestos liability adjustments, net	22,237	14,782	4,783
Cash payment activity	(12,589)	(5,733)	(7,521)
Other, net	(5,397)	(4,820)	(2,369)
Ending balance, December 31,	$ 102,903	$ 98,652	$ 94,423

The Company incurred expenses of approximately $22.1 million, $14.8 million and $10.0 million during the periods ended December 31, 2023, 2022 and 2021, respectively, to defend, resolve or otherwise dispose of outstanding claims, including legal and other related expenses. These expenses are included within SG&A in the Consolidated Statements of Income.

The Company had cash inflows/(outflows) (net of insurance and/or indemnity) to defend, resolve or otherwise dispose of outstanding claims, including legal and other related expenses of approximately $(18.4) million, $4.2 million and $(4.7) million during the periods ended December 31, 2023, 2022 and 2021, respectively.

Historically, a high percentage of resolved claims have been covered by applicable insurance or indemnities from other companies, and we believe that a portion of existing claims should continue to be covered by insurance or indemnities, in whole or in part.

We believe that our reserve for asbestos claims and the receivable for recoveries from insurance carriers that we have recorded for these claims reflects reasonable and probable estimates of these amounts. Our estimate of our ultimate exposure for asbestos claims, however, is subject to significant uncertainties, including the timing, number and types of new claims, unfavorable court rulings, judgments or settlement terms and ultimate costs to settle. Additionally, the continued viability of carriers, may also impact the amount of probable insurance recoveries. We believe that these uncertainties could have a material adverse impact on our business, financial condition, results of operations and cash flows, though we currently believe the likelihood is remote.

Additionally, we have claims pending against certain insurers that, if in future periods are resolved more favorably than reflected in the recorded receivables, would result in discrete gains in the applicable year.

Other

We are currently involved as a potentially responsible party at four former public waste disposal sites in various stages of evaluation or remediation. The projected cost of remediation at these sites, as well as our alleged "fair share" allocation, will remain uncertain until all studies have been completed and the parties have either negotiated an amicable resolution or the matter has been judicially resolved. At each site, there are many other parties who have similarly been identified. Many of the other parties identified are financially strong and solvent companies that appear able to pay their share of the remediation costs. Based on our information about the waste disposal practices at these sites and the environmental regulatory process in general, we believe that it is likely that ultimate remediation liability costs for each site will be apportioned among all liable parties, including site owners and waste transporters, according to the volumes and/or toxicity of the wastes shown to have been disposed of at the sites. We believe that our financial exposure for existing disposal sites will not be materially in excess of accrued reserves.

We are also a defendant in a number of other lawsuits, including product liability claims, that are insured, subject to the applicable deductibles, arising in the ordinary course of business, and we are also involved in other uninsured routine litigation incidental to our business. We currently believe none of such litigation, either individually or in the aggregate, is material to our business, operations or overall financial condition. However, litigation is inherently unpredictable, and resolutions or dispositions of claims or lawsuits by settlement or otherwise could have an adverse impact on our financial position, results of operations or cash flows for the reporting period in which any such resolution or disposition occurs.

Although none of the aforementioned potential liabilities can be quantified with absolute certainty except as otherwise indicated above, we have established or adjusted reserves covering exposures relating to contingencies, to the extent believed to be reasonably estimable and probable based on past experience and available facts. While additional exposures beyond these reserves could exist, they currently cannot be estimated. We will continue to evaluate and update the reserves as necessary and appropriate.

16. WARRANTY RESERVE

We have recorded reserves for product warranty claims that are included in current liabilities. The following is a summary of the activity in the warranty reserve:

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in thousands)		
Balance — January 1	$ 22,047	$ 23,893	$ 27,944
Accruals for warranty expense, net of adjustments	26,528	17,342	19,179
Settlements made	(21,877)	(19,188)	(23,230)
Balance — December 31	$ 26,698	$ 22,047	$ 23,893

17. SHAREHOLDERS' EQUITY

Dividends – Generally, our dividend date-of-record is in the last month of the quarter, and the dividend is paid the following month. Any subsequent dividends will be reviewed by our Board of Directors and declared at its discretion.

Dividends declared per share were as follows:

	Year Ended December 31,		
	2023	2022	2021
Dividends declared per share	$ 0.80	$ 0.80	$ 0.80

Share Repurchase Program – In 2014, our Board of Directors approved a $500.0 million share repurchase authorization. Our share repurchase program does not have an expiration date, and we reserve the right to limit or terminate the repurchase program at any time without notice.

We repurchased no shares of our outstanding common stock during the years ended December 31, 2023 and 2022, compared to 440,000 repurchases of shares of our outstanding common stock for $17.5 million during the year ended December 31, 2021. As of December 31, 2023, we had $96.1 million of remaining capacity under our current share repurchase program. Effective February 19, 2024, the Board of Directors authorized an increase in our total remaining capacity in the share repurchase program to $300.0 million.

18. INCOME TAXES

The provision (benefit) for income taxes consists of the following:

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in thousands)		
Current:			
U.S. federal	$ 24,766	$ 45,130	$ 66,486
Foreign	51,431	40,876	29,987
State and local	5,018	6,177	1,478
Total current provision (benefit)	81,215	92,183	97,951
Deferred:			
U.S. federal	3,665	(88,498)	(92,021)
Foreign	(62,944)	(42,756)	(4,339)
State and local	(3,374)	(4,568)	(4,185)
Total deferred provision (benefit)	(62,653)	(135,822)	(100,545)
Total provision (benefit)	$ 18,562	$ (43,639)	$ (2,594)

The provision for income taxes differs from the statutory corporate rate due to the following:

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in millions)		
Statutory federal income tax at 21%	$ 47.0	$ 32.4	$ 28.1
Base Erosion and Anti-abuse Tax	—	(7.6)	7.6
Foreign impact, net	10.4	(22.3)	(158.0)
Change in valuation allowances	(34.5)	(50.5)	146.6
State and local income taxes, net	1.6	1.6	(2.7)
Reversal of deferred tax liabilities following legal entity reorganizations	—	—	(22.6)
Research and development credit	(2.9)	(1.0)	(3.6)
Non-deductible items	2.6	2.3	4.4
U.S. federal tax return to accrual adjustments, not separately disclosed in other categories	(4.8)	1.8	(0.8)
Recognition of compensation costs related to restricted shares	0.7	2.4	(1.3)
Intercompany profit in inventory	0.2	(2.0)	(0.3)
Other, net	(1.7)	(0.7)	—
Total	18.6	(43.6)	(2.6)
Effective tax rate	8.3 %	(28.3)%	(1.9)%

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act of 2017 (the “Tax Reform Act”), which provided the base-erosion and anti-abuse tax (“BEAT”) provision which effectively creates a new minimum tax on certain deductible payments to foreign affiliates. For the year ended December 31, 2023, we are not subject to BEAT tax, and the previously recorded 2021 BEAT tax was reversed in 2022 following finalization of the 2021 U.S. federal income tax return.

For the year ended December 31, 2023, the change in valuation allowances is driven mainly by the release of the valuation allowance against our deferred tax assets by $18.9 million in Brazil and $14.6 million in France. The Company determined that the net deferred tax assets in Brazil and France are realizable based on recent history of profitability and future income projections.

For the year ended December 31, 2022, the change in valuation allowances is driven mainly by the release of the valuation allowance against our deferred tax assets by $13.2 million in Germany, $22.4 million in Mexico and $44.4 million release of the valuation allowance on our U.S. foreign tax credit carryforwards on general category income partially offset by a valuation allowance establishment of $13.6 million in Argentina. The Company determined that the net deferred tax assets in Germany and Mexico are realizable based on recent history of profitability and future income projections. In addition, we determined that the U.S. foreign tax credit carryforwards on general category income were realizable based on the development of a tax planning strategy.

For the years ended December 31, 2023, 2022 and 2021 we have asserted indefinite reinvestment on certain earnings of our foreign subsidiaries. As of December 31, 2023, we have not recorded approximately $28.7 million of deferred tax liabilities associated with remaining unremitted earnings considered indefinitely reinvested, specifically related to foreign withholding taxes that would be due upon repatriation of the designated earnings to the U.S. While the company has estimated the foreign withholding tax impact related to distributing earnings currently deemed permanently reinvested, the calculation of the potential US tax consequences associated with the distribution of earnings currently deemed permanently reinvested is impracticable.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the consolidated deferred tax assets and liabilities were:

	December 31,	
	2023	2022
	(Amounts in thousands)	
Deferred tax assets related to:		
Retirement benefits	$ 34,526	$ 20,553
Net operating loss carryforwards	186,337	183,541
Compensation accruals	41,688	22,046
Credit and capital loss carryforwards	185,162	197,774
Warranty and accrued liabilities	47,614	49,302
Capitalized research and experimental expenditures	60,542	54,486
Other	122,678	126,334
Total deferred tax assets	678,547	654,036
Valuation allowances	(347,673)	(356,557)
Net deferred tax assets	$ 330,874	$ 297,479
Deferred tax liabilities related to:		
Goodwill and intangibles	$ (81,245)	$ (123,088)
Foreign undistributed earnings	(10,477)	(11,154)
Operating lease right-of-use-assets	(20,198)	(20,453)
Other	(1,930)	(1,395)
Total deferred tax liabilities	(113,850)	(156,090)
Deferred tax asset (liabilities), net	$ 217,024	$ 141,389

We had $1,555.3 million of U.S. and foreign net operating loss carryforwards at December 31, 2023. Of this total, $14.8 million are state net operating losses. State net operating losses generated in the U.S., if unused, will expire in 2027. $226.3 million of our foreign net operating losses carry forward without expiration. The majority of our Hungarian net operating loss of $1,177.6 million that has a full valuation allowance (see discussion below), if unused, will expire in 2024, 2025 and 2028. The remaining foreign net operating losses of $136.6 million that do not carry forward without expiration, if unused, will expire between 2024-2043. Additionally, we had $63.5 million of foreign tax credit carryforwards at December 31, 2023, that have a valuation allowance on the foreign branch category income (see discussion below), if unused, will expire between 2028-2033.

The following schedule presents the changes in deferred tax asset valuation allowance as follows:

(Amounts in thousands)	Balance at beginning of year	Additions charged to cost and expenses	Additions charged to other accounts - currency effects and other, net	Deductions from reserve	Balance at end of year
Year Ended December 31, 2023					
Deferred tax asset valuation allowance(1):	$ 356,557	$ 19,684	$ 25,367	$ (53,936)	$ 347,672
Year Ended December 31, 2022					
Deferred tax asset valuation allowance(1):	415,962	36,822	(11,775)	(84,452)	356,557
Year Ended December 31, 2021					
Deferred tax asset valuation allowance(1):	287,410	178,203	(15,572)	(34,079)	415,962

(1) Deductions from reserve result from the release of valuation allowances on deferred tax assets, expiration or utilization of net operating losses and foreign tax credits previously reserved. Additions to reserve result from the establishment of valuation allowances on deferred tax assets, generation of net operating losses and foreign tax credits.

The Company maintains a full valuation allowance against the net deferred tax assets in certain foreign jurisdictions as of December 31, 2023. As of each reporting date, management considers new evidence, both positive and negative that could affect its view of the future realization of net deferred tax assets. We asses our forecast of future taxable income and available tax planning strategies that could be implemented to realize the net deferred tax assets in determining the sufficiency of our valuation allowances. Failure to achieve forecasted taxable income in the applicable tax jurisdictions could affect the ultimate realization of deferred tax assets and could result in an increase in our effective tax rate on future earnings. It is possible there may be sufficient positive evidence to release a portion of the remaining valuation allowance in those foreign jurisdictions. Release of the valuation allowance would result in a benefit to income tax expense for the period the release is recorded, which could have a material impact on net earnings. The timing and amount of the potential valuation allowance release are subject to significant management judgment and the level of profitability achieved.

Our valuation allowances primarily relate to the deferred tax assets established for U.S. foreign tax credit carryforwards on foreign branch category income of $49.1 million, Hungarian net operating loss carryforward of $106.0 million, a foreign capital loss carryforward of $114.7 million, and other foreign deferred tax assets of $77.9 million. The Hungarian net operating loss carryforward was a result of a local statutory impairment of investments in subsidiaries in 2021. It is more likely than not that the loss will not be utilized within its five year carryforward period and, therefore, has a full valuation allowance. The foreign capital loss carryforward was the result of a reorganization of certain foreign subsidiaries in 2019. Due to its capital nature, it is more likely than not that the loss will not be utilized within its ten year carryforward period and, therefore, has a full valuation allowance.

Earnings before income taxes comprised:

	Year Ended December 31,		
	2023	2022	2021
	(Amounts in thousands)		
U.S.	$ 212,631	$ 63,508	$ (52,915)
Foreign	11,119	90,868	186,504
Total	$ 223,750	$ 154,376	$ 133,589

A tabular reconciliation of the total gross amount of unrecognized tax benefits, excluding interest and penalties, is as follows (in millions):

	2023	2022	2021
Balance — January 1	$ 50.2	$ 49.9	$ 54.8
Gross amount of increase (decrease) in unrecognized tax benefits resulting from tax positions taken:			
During a prior year	(9.1)	5.4	8.0
During the current period	7.4	5.8	4.5
Decreases in unrecognized tax benefits relating to:			
Settlements with taxing authorities	(2.8)	(5.5)	(10.2)
Lapse of the applicable statute of limitations	(1.4)	(4.1)	(5.1)
Increase (decrease) in unrecognized tax benefits relating to foreign currency translation adjustments	1.9	(1.3)	(2.1)
Balance — December 31	$ 46.2	$ 50.2	$ 49.9

The amount of gross unrecognized tax benefits at December 31, 2023, was $71.2 million, which includes $25.0 million of accrued interest and penalties. Of this amount $53.2 million, if recognized, would favorably impact our effective tax rate.

With limited exception, we are no longer subject to U.S. federal income tax audits for years through 2017, state and local income tax audits for years through 2017 or foreign income tax audits for years through 2016. We are currently under examination for various years in Austria, Canada, China, Germany, India, Indonesia, Italy, Kenya, Madagascar, Malaysia, Mexico, Morocco, the Philippines, Saudi Arabia, Singapore, Switzerland, the U.S. and Venezuela.

It is reasonably possible that within the next 12 months the effective tax rate will be impacted by the resolution of some or all of the matters audited by various taxing authorities. It is also reasonably possible that we will have the statute of limitations close in various taxing jurisdictions within the next 12 months. As such, we estimate we could record a reduction in our tax expense up to approximately $4.0 million within the next 12 months.

19. BUSINESS SEGMENT INFORMATION

Our business segments, which are the same as our reportable segments, share a focus on industrial flow control technology and have a high number of common customers. These segments also have complementary product offerings and technologies that are often combined in applications that provide us a net competitive advantage. Our segments also benefit from our global footprint and our economies of scale in reducing administrative and overhead costs to serve customers more cost effectively.

We conduct our operations through two business segments based on type of product and how we manage the business:

- FPD for custom, highly-engineered pumps, pre-configured industrial pumps, pump systems, mechanical seals, auxiliary systems and replacement parts and related services; and

• FCD for engineered-to-order and configured-to-order isolation values, control valves, valve automation products and related equipment.

Our corporate headquarters does not constitute a separate division or business segment. Amounts classified as "Eliminations and All Other" include corporate headquarters costs and other minor entities that do not constitute separate segments. Inter segment sales and transfers are recorded at cost plus a profit margin, with the sales and related margin on such sales eliminated in consolidation.

The following is a summary of the financial information of our reportable segments as of and for the years ended December 31, 2023, 2022 and 2021 reconciled to the amounts reported in the consolidated financial statements.

	FPD	FCD	Subtotal—Reportable Segments	Eliminations and All Other	Consolidated Total
			(Amounts in thousands)		
Year Ended December 31, 2023:					
Sales to external customers	$3,060,993	$ 1,259,584	$ 4,320,577	$ —	$ 4,320,577
Intersegment sales	3,487	6,448	9,935	(9,935)	—
Segment operating income (loss)	348,867	148,034	496,901	(163,348)	333,553
Depreciation and amortization	47,628	17,249	64,877	18,870	83,747
Identifiable assets	3,191,726	1,333,973	4,525,699	583,020	5,108,719
Capital expenditures	41,613	15,953	57,566	9,793	67,359

	FPD	FCD	Subtotal—Reportable Segments	Eliminations and All Other	Consolidated Total
			(Amounts in thousands)		
Year Ended December 31, 2022:					
Sales to external customers	$2,518,000	$ 1,097,120	$ 3,615,120	$ —	$ 3,615,120
Intersegment sales	4,508	3,489	7,997	(7,997)	—
Segment operating income (loss)	207,957	113,417	321,374	(124,155)	197,219
Depreciation and amortization	49,654	18,931	68,585	22,368	90,953
Identifiable assets	3,110,733	1,269,690	4,380,423	410,211	4,790,634
Capital expenditures	34,295	17,178	51,473	24,814	76,287

	FPD	FCD	Subtotal—Reportable Segments	Eliminations and All Other	Consolidated Total
			(Amounts in thousands)		
Year Ended December 31, 2021:					
Sales to external customers	$ 2,468,098	$ 1,072,962	$ 3,541,060	$ —	$ 3,541,060
Intersegment sales	2,750	2,924	5,674	(5,674)	—
Segment operating income (loss)	243,203	119,651	362,854	(92,095)	270,759
Depreciation and amortization	51,094	21,286	72,380	27,442	99,822
Identifiable assets	2,927,346	1,223,316	4,150,662	599,106	4,749,768
Capital expenditures	21,575	12,283	33,858	21,078	54,936

Geographic Information — We attribute sales to different geographic areas based on our facilities' locations. Long-lived assets are classified based on the geographic area in which the assets are located and exclude deferred taxes, goodwill and intangible assets. Sales and long-lived assets by geographic area are as follows:

	Year Ended December 31, 2023			
	Sales	Percentage	Long-Lived Assets	Percentage
	(Amounts in thousands, except percentages)			
United States	$ 1,821,751	42.2 %	$ 394,395	44.7 %
EMA(1)	1,503,776	34.8 %	289,061	32.8 %
Asia(2)	584,759	13.5 %	140,596	15.9 %
Other(3)	410,291	9.5 %	58,059	6.6 %
Consolidated total	$ 4,320,577	100.0 %	$ 882,111	100.0 %

	Year Ended December 31, 2022			
	Sales	Percentage	Long-Lived Assets	Percentage
	(Amounts in thousands, except percentages)			
United States	$ 1,536,961	42.5 %	$ 412,896	46.6 %
EMA(1)	1,210,436	33.5 %	274,511	30.9 %
Asia(2)	524,952	14.5 %	144,206	16.2 %
Other(3)	342,771	9.5 %	56,132	6.3 %
Consolidated total	$ 3,615,120	100.0 %	$ 887,745	100.0 %

	Year Ended December 31, 2021			
	Sales	Percentage	Long-Lived Assets	Percentage
	(Amounts in thousands, except percentages)			
United States	$ 1,376,771	38.9 %	$ 476,176	49.2 %
EMA(1)	1,270,326	35.9 %	298,426	30.8 %
Asia(2)	557,314	15.7 %	141,810	14.6 %
Other(3)	336,649	9.5 %	51,688	5.4 %
Consolidated total	$ 3,541,060	100.0 %	$ 968,100	100.0 %

(1) "EMA" includes Europe, the Middle East and Africa. U. K. accounted for approximately 11% for 2023, 10% for 2022 and 10% for 2021, of consolidated long-lived assets. No other individual country within this group represents 10% or more of consolidated totals for any period presented.
(2) "Asia" includes Asia and Australia. No individual country within this group represents 10% or more of consolidated totals for any period presented.
(3) "Other" includes Canada and Latin America. No individual country within this group represents 10% or more of consolidated totals for any period presented.

Net sales to international customers, including export sales from the U.S., represented approximately 62% of total sales in both 2023 and 2022 and 67% of total sales in 2021.

Major Customer Information — We have a large number of customers across a large number of manufacturing and service facilities and do not have sales to any individual customer that represent 10% or more of consolidated sales for any of the years presented.

20. ACCUMULATED OTHER COMPREHENSIVE LOSS

The following presents the components of accumulated other comprehensive loss (AOCL), net of related tax effects:

(Amounts in thousands)	2023 Foreign currency translation items(1)	2023 Pension and other post-retirement effects	2023 Cash flow hedging activity (2)	2023 Total(1)	2022 Foreign currency translation items(1)	2022 Pension and other post-retirement effects	2022 Cash flow hedging activity (2)	2022 Total(1)
Balance - January 1	$ (554,683)	$ (86,356)	$ (933)	$ (641,972)	$ (456,025)	$ (101,665)	$ (1,336)	$ (559,026)
Other comprehensive income (loss) before reclassifications (3)	30,810	(37,218)	—	(6,408)	(98,658)	16,684	314	(81,660)
Amounts reclassified from AOCL	—	1,692	120	1,812	—	(1,375)	89	(1,286)
Net current-period other comprehensive income (loss) (3)	30,810	(35,526)	120	(4,596)	(98,658)	15,309	403	(82,946)
Balance - December 31	$ (523,873)	$ (121,882)	$ (813)	$ (646,568)	$ (554,683)	$ (86,356)	$ (933)	$ (641,972)

(1) Includes foreign currency translation adjustments attributable to noncontrolling interests of $(7.0) million, $5.8 million and $4.6 million for December 31, 2023, 2022 and 2021, respectively. Also includes the cumulative impacts from the changes in fair value of our cross-currency swaps, which were $49.0 million and $17.7 million for December 31, 2022 and 2021, respectively.

(2) Other comprehensive loss before reclassifications and amounts reclassified from AOCL to interest expense related to designated cash flow hedges.

(3) Amounts in parentheses indicate an increase to AOCL.

The following table presents the reclassifications out of AOCL:

(Amounts in thousands)	Affected line item in the statement of income	2023(1)	2022(1)
Pension and other postretirement effects			
Amortization of actuarial losses(2)	Other income (expense), net	$ (1,310)	$ (6,382)
Prior service costs(2)	Other income (expense), net	(608)	(591)
Settlements and other(2)	Other income (expense), net	8	(75)
	Tax benefit (expense)	218	8,423
	Net of tax	$ (1,692)	$ 1,375
Cash flow hedging activity			
Amortization of Treasury rate lock	Interest income (expense)	$ (120)	$ (117)
	Tax benefit (expense)	—	28
	Net of tax	$ (120)	$ (89)

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(1) Amounts in parentheses indicate decreases to income. None of the reclassification amounts have a noncontrolling interest component.
(2) These AOCL components are included in the computation of net periodic pension cost. See Note 13 for additional details.

21. REALIGNMENT PROGRAMS

In the second quarter of 2020, we identified and initiated certain realignment activities to right-size our organizational operations based on the current business environment, with the overall objective to reduce our workforce costs, including manufacturing optimization through the consolidation of certain facilities ("2020 Realignment Program"). As of December 31, 2022, the 2020 Realignment Program was substantially complete.

In the first quarter of 2023, we identified and initiated certain realignment activities concurrent with the consolidation of our aftermarket and pump operations into a single operating model. This consolidated operating model is designed to better align our go to market strategy with our product offerings, enable end-to-end lifecycle responsibility and accountability, and to facilitate more efficient operations. Additionally, we committed to an estimated $50 million in cost reduction efforts to begin in 2023. Collectively, the above realignment activities are referred to as the "2023 Realignment Program." The 2023 Realignment Program activities were identified and implemented in phases throughout 2023. The realignment activities consist of restructuring and non-restructuring charges. Restructuring charges represent costs associated with the relocation of certain business activities and facility closures and include related severance costs. Non-restructuring charges are primarily employee severance associated with workforce reductions and professional service fees. Expenses are primarily reported in cost of sales ("COS") or selling, general and administrative ("SG&A"), as applicable, in our consolidated statements of income. We currently anticipate a total investment in realignment activities that have been evaluated and initiated of approximately $87 million of which $17 million is estimated to be non-cash. There are certain remaining realignment activities that are currently being evaluated, but have not yet been approved and therefore are not included in the above anticipated total investment.

Generally, the aforementioned charges will be paid in cash, except for asset write-downs, which are non-cash charges. The following is a summary of total charges, net of adjustments, incurred related to our Realignment Programs:

	December 31, 2023				
(Amounts in thousands)	FPD	FCD	Subtotal–Reportable Segments	All Other	Consolidated Total
Restructuring Charges					
COS	$ 2,962	$ 6,405	$ 9,367	$ 66	$ 9,433
SG&A	50	9,777	9,827	—	9,827
	$ 3,012	$ 16,182	$ 19,194	$ 66	$ 19,260
Non-Restructuring Charges					
COS	$ 7,835	$ 4,171	$ 12,006	$ (427)	$ 11,579
SG&A	14,483	1,616	16,099	19,099	35,198
	$ 22,318	$ 5,787	$ 28,105	$ 18,672	$ 46,777
Total Realignment Charges					
COS	$ 10,797	$ 10,576	$ 21,373	$ (361)	$ 21,012
SG&A	14,533	11,393	25,926	19,099	45,025
Total	$ 25,330	$ 21,969	$ 47,299	$ 18,738	$ 66,037

	December 31, 2022				
(Amounts in thousands)	FPD	FCD	Subtotal–Reportable Segments	All Other	Consolidated Total
Restructuring Charges					
COS	$ 768	$ 93	$ 861	$ —	$ 861
SG&A	—	(4)	(4)	—	(4)
	$ 768	$ 89	$ 857	$ —	$ 857
Non-Restructuring Charges					
COS	$ (530)	$ 86	$ (444)	$ (61)	$ (505)
SG&A	148	(391)	(243)	(274)	(517)
	$ (382)	$ (305)	$ (687)	$ (335)	$ (1,022)
Total Realignment Charges					
COS	$ 238	$ 179	$ 417	$ (61)	$ 356
SG&A	148	(395)	(247)	(274)	(521)
Total	$ 386	$ (216)	$ 170	$ (335)	$ (165)

(Amounts in thousands)	December 31, 2021				
	FPD	FCD	Subtotal–Reportable Segments	All Other	Consolidated Total
Restructuring Charges					
COS	$ 8,046	$ 811	$ 8,857	$ —	$ 8,857
SG&A	665	(9)	656	—	656
	$ 8,711	$ 802	$ 9,513	$ —	$ 9,513
Non-Restructuring Charges					
COS	$ 6,203	$ 1,196	$ 7,399	$ 590	$ 7,989
SG&A	368	708	1,076	3,913	4,989
	$ 6,571	$ 1,904	$ 8,475	$ 4,503	$ 12,978
Total Realignment Charges					
COS	$ 14,249	$ 2,007	$ 16,256	$ 590	$ 16,846
SG&A	1,033	699	1,732	3,913	5,645
Total	$ 15,282	$ 2,706	$ 17,988	$ 4,503	$ 22,491

The following is a summary of total inception to date charges, net of adjustments, related to the 2023 Realignment Program:

(Amounts in thousands)	Inception to Date				
	FPD	FCD	Subtotal–Reportable Segments	All Other	Consolidated Total
Restructuring Charges					
COS	$ 2,962	$ 6,405	$ 9,367	$ 66	$ 9,433
SG&A	50	9,777	9,827	—	9,827
	$ 3,012	$ 16,182	$ 19,194	$ 66	$ 19,260
Non-Restructuring Charges					
COS	$ 7,835	$ 4,171	$ 12,006	$ (427)	$ 11,579
SG&A	14,483	1,616	16,099	19,099	35,198
	$ 22,318	$ 5,787	$ 28,105	$ 18,672	$ 46,777
Total Realignment Charges					
COS	$ 10,797	$ 10,576	$ 21,373	$ (361)	$ 21,012
SG&A	14,533	11,393	25,926	19,099	45,025
Total	$ 25,330	$ 21,969	$ 47,299	$ 18,738	$ 66,037

Restructuring charges represent costs associated with the relocation or reorganization of certain business activities and facility closures and include costs related to employee severance at closed facilities, contract termination costs, asset write-downs and other costs. Severance costs primarily include costs associated with involuntary termination benefits. Contract termination costs include costs related to the termination of operating leases or other contract termination costs. Asset write-downs include accelerated depreciation of fixed assets, accelerated amortization of intangible assets, divestiture of certain non-strategic assets and inventory write-downs. Other costs generally include costs related to employee relocation, asset relocation, vacant facility costs (i.e., taxes and insurance) and other charges. Restructuring charges include charges related to approved, but not yet announced, site closures.

The following is a summary of restructuring charges, net of adjustments, for our restructuring activities related to our Realignment Programs:

	December 31, 2023				
(Amounts in thousands)	Severance	Contract Termination	Asset Write-Downs	Other	Total
COS	$ 7,085	$ 301	$ 794	$ 1,253	$ 9,433
SG&A	950	—	8,871	6	9,827
Total	$ 8,035	$ 301	$ 9,665	$ 1,259	$ 19,260

	December 31, 2022				
(Amounts in thousands)	Severance	Contract Termination	Asset Write-Downs	Other	Total
COS	$ 122	$ 327	$ 273	$ 139	$ 861
SG&A	(4)	—	—	—	(4)
Total	$ 118	$ 327	$ 273	$ 139	$ 857

	December 31, 2021				
(Amounts in thousands)	Severance	Contract Termination	Asset Write-Downs	Other	Total
COS	$ 964	$ 34	$ 2,683	$ 5,176	$ 8,857
SG&A	167	—	—	489	656
Total	$ 1,131	$ 34	$ 2,683	$ 5,665	$ 9,513

The following is a summary of total inception to date restructuring charges, net of adjustments, related to our 2023 Realignment Program:

	Inception to Date				
(Amounts in thousands)	Severance	Contract Termination	Asset Write-Downs	Other	Total
COS	$ 7,085	$ 301	$ 794	$ 1,253	$ 9,433
SG&A	950	—	8,871	6	9,827
Total	$ 8,035	$ 301	$ 9,665	$ 1,259	$ 19,260

The following represents the activity, primarily severance, related to the restructuring reserve for the Realignment Programs for the years ended December 31, 2023 and 2022:

(Amounts in thousands)	2023	2022
Balance at January 1,	$ 965	$ 4,868
Charges	9,594	584
Cash expenditures	(2,110)	(3,518)
Other non-cash adjustments, including currency	(265)	(969)
Balance at December 31,	$ 8,184	$ 965

ITEM 9. *CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE*

None.

ITEM 9A. *CONTROLS AND PROCEDURES*

Disclosure Controls and Procedures

Our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act") are designed to provide reasonable assurance that the information, which we are required to disclose in the reports that we file or submit under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the U.S. SEC rules and forms, and that such information is accumulated and communicated to our management, including our Principal Executive Officer and Principal Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

In connection with the preparation of this Annual Report on Form 10-K for the year ended December 31, 2023, our management, under the supervision and with the participation of our Principal Executive Officer and our Principal Financial Officer, carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2023. Based on this evaluation, our Principal Executive Officer and Principal Financial Officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2023.

Management's Report on Internal Control Over Financial Reporting

Our management, under the supervision and with the participation of our Principal Executive Officer and Principal Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. 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 in the United States ("U.S. GAAP"). Internal control over financial reporting includes policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Under the supervision and with the participation of our Principal Executive Officer and Principal Financial Officer, our management conducted an assessment of our internal control over financial reporting as of December 31, 2023, based on the criteria established in Internal Control - Integrated Framework (2013), issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, our management concluded our internal control over financial reporting was effective as of December 31, 2023, based on criteria in *Internal Control - Integrated Framework* (2013) issued by the COSO.

The effectiveness of our internal control over financial reporting as of December 31, 2023, has been audited by PricewaterhouseCoopers LLP, our independent registered public accounting firm, as stated in their report, which is included herein.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) during the quarter ended December 31, 2023 that have materially affected, or are reasonably likely to materially affect our internal control over financial reporting.

Other

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 existing policies or procedures may deteriorate.

ITEM 9B. *OTHER INFORMATION*

Insider Trading Arrangements.

Our directors and executive officers may, from time to time, enter into plans or other arrangements for the purchase or sale of our shares that are intended to satisfy the affirmative defense conditions of Rule 10b5 -1(c) or may represent a non-Rule 10b5-1 trading arrangement under the Exchange Act. During the quarter ended December 31, 2023, no such plans or other arrangements were adopted, terminated or modified.

ITEM 9C. *DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS*

Not applicable.

PART III

ITEM 10. *DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE*

The information required in this Item 10 is incorporated by reference to all information under the captions “Security Ownership of Directors and Certain Executive Officers,” “Security Ownership of Certain Beneficial Owners,” “Proposal One: Election of Directors,” “Executive Officers,” “Shareholder Proposals and Nominations,” “Delinquent Section 16(a) Reports,” to the extent applicable, and “Certain Relationships and Related Transactions" in our definitive Proxy Statement relating to our 2024 annual meeting of shareholders.

We have adopted a Code of Conduct that applies to all of our directors, officers and employees, including our Principal Executive, Principal Financial and Principal Accounting Officers, or persons performing similar functions. Our Code of Conduct is available on the Company’s website at www.flowserve.com under the “Investors - Corporate Governance” caption. We intend to disclose future amendments to certain provisions of the Code of Conduct, and waivers of the Code of Conduct granted to executive officers and directors, on the website within four business days following the date of the amendment or waiver.

ITEM 11. ***EXECUTIVE COMPENSATION***

The information required in this Item 11 is incorporated by reference to all information under the captions "Executive Compensation," "Proposal Two: Advisory Vote to Approve Executive Compensation," "Delinquent Section 16(a) Reports," to the extent applicable, "Security Ownership of Directors and Certain Executive Officers," "Compensation Committee Interlocks and Insider Participation" and "Certain Relationships and Related Transactions" in our definitive Proxy Statement relating to our 2024 annual meeting of shareholders.

ITEM 12. ***SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS***

The information required in this Item 12 is incorporated by reference to all information under the captions "Security Ownership of Directors and Certain Executive Officers," "Security Ownership of Certain Beneficial Owners," "Equity Compensation Plan Information" and "Executive Compensation" in our definitive Proxy Statement relating to our 2024 annual meeting of shareholders.

ITEM 13. ***CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE***

The information required in this Item 13 is incorporated by reference to all information under the captions "Role of the Board; Corporate Governance Matters," "Board Committees" and "Certain Relationships and Related Transactions" in our definitive Proxy Statement relating to our 2024 annual meeting of shareholders.

ITEM 14. ***PRINCIPAL ACCOUNTANT FEES AND SERVICES***

The information required in this Item 14 is incorporated by reference to all information under the caption "Other Audit Information" in our definitive Proxy Statement relating to our 2024 annual meeting of shareholders.

PART IV

ITEM 15. ***EXHIBITS AND FINANCIAL STATEMENT SCHEDULES***

(a) Documents filed as a part of this Annual Report:

1. *Consolidated Financial Statements*

The following consolidated financial statements and notes thereto are filed as part of this Annual Report:

Report of Independent Registered Public Accounting Firm (PCAOB ID 238)

Flowserve Corporation Consolidated Financial Statements:

Consolidated Balance Sheets at December 31, 2023 and 2022:

For each of the three years in the period ended December 31, 2023:

Consolidated Statements of Income

Consolidated Statements of Comprehensive Income

Consolidated Statements of Shareholders' Equity

Consolidated Statements of Cash Flows

Notes to Consolidated Financial Statements

2. *Consolidated Financial Statement Schedules*

None

Financial statement schedules not included in this Annual Report have been omitted because they are not applicable or the required information is shown in the consolidated financial statements or notes thereto.

3. *Exhibits*

The exhibits of this Annual Report on Form 10-K included herein are set forth below.

Exhibit No.	Description
3.1	Restated Certificate of Incorporation of Flowserve Corporation, as amended and restated effective May 20, 2021 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated May 25, 2021).
3.2	Flowserve Corporation By-Laws, as amended and restated effective April 12, 2023 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-13179) filed on April 12, 2023).
4.1	Senior Indenture, dated September 11, 2012, by and between Flowserve Corporation and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated September 11, 2012).
4.2	First Supplemental Indenture, dated September 11, 2012, by and among Flowserve Corporation, certain of its subsidiaries and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated September 11, 2012).
4.3	Second Supplemental Indenture, dated November 1, 2013, by and among Flowserve Corporation, certain of its subsidiaries and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated November 1, 2013).
4.4	Third Supplemental Indenture, dated March 17, 2015, by and among Flowserve Corporation, certain of its subsidiaries and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated March 17, 2015).
4.5	Fourth Supplemental Indenture, dated September 21, 2020, between Flowserve Corporation and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated September 22, 2020).
4.6	Fifth Supplemental Indenture, dated September 23, 2021, by and between Flowserve Corporation and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated September 23, 2021).
4.7	Description of Registrant’s Securities (incorporated by reference to Exhibit 4.5 to the Registrant’s Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2019).
10.1	Amended and Restated Credit Agreement, dated as of September 13, 2021, among Flowserve Corporation, Bank of America, N.A., as swing line lender, a letter of credit issuer and administrative agent, and the other lenders and sing line lenders referred to therein (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated September 13, 2021).
10.2	First Amendment to Amended and Restated Credit Agreement, dated as of February 3, 2023, among Flowserve Corporation, Bank of American, N.A., as administrative agent, and the other lenders referred to therein (incorporated by reference to Exhibit 10.2 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2022).
10.3	Amended and Restated Flowserve Corporation Director Cash Deferral Plan, effective January 1, 2009 (incorporated by reference to Exhibit 10.7 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2008).*
10.4	Amended and Restated Flowserve Corporation Director Stock Deferral Plan, dated effective January 1, 2009 (incorporated by reference to Exhibit 10.8 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2008).*
10.5	Trust for Non-Qualified Deferred Compensation Benefit Plans, dated February 11, 2011 (incorporated by reference to Exhibit 10.8 to the Registrant’s Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2010).*

Exhibit No.	Description
10.6	Flowserve Corporation Deferred Compensation Plan (incorporated by reference to Exhibit 10.23 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2000).*
10.7	Amendment No. 1 to the Flowserve Corporation Deferred Compensation Plan (incorporated by reference to Exhibit 10.50 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2002).*
10.8	Amendment to the Flowserve Corporation Deferred Compensation Plan (incorporated by reference to Exhibit 10.70 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2004).*
10.9	Amendment No. 3 to the Flowserve Corporation Deferred Compensation Plan (incorporated by reference to Exhibit 10.22 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2007).*
10.10+	Flowserve Corporation Senior Management Retirement Plan, amended and restated effective January 1, 2024.*
10.11+	Flowserve Corporation Retirement Savings Plan, amended and restated effective January 1, 2024.*
10.12	Flowserve Corporation Supplemental Executive Retirement Plan, amended and restated effective November 2, 2018 (incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2018).*
10.13+	Amendment No. 1 to the Flowserve Corporation Supplemental Executive Retirement Plan dated August 29, 2023.*
10.14+	Amendment No. 2 to the Flowserve Corporation Supplemental Executive Retirement Plan dated December 15, 2023.*
10.15+	Flowserve Corporation Supplemental Retirement Savings Plan effective as of January 1, 2024.*
10.16	Flowserve Corporation Equity and Incentive Compensation Plan (incorporated by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A (File No. 001-13179) dated April 3, 2009).*
10.17	Flowserve Corporation 2020 Long-Term Incentive Plan (incorporated by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A (File No. 001-13179) dated April 11, 2019).*
10.18	Amendment to Flowserve Corporation 2020 Long-Term Incentive Plan, dated December 8, 2022 (incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2022).*
10.19	Form of Indemnification Agreement for all Directors and Officers (incorporated by reference to Exhibit 10.47 to the Registrant’s Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2015).
10.20	Offer Letter, dated as of February 6, 2017, by and between Flowserve Corporation and R. Scott Rowe (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K (File No. 001-13179) dated as of February 8, 2017).*
10.21	Flowserve Corporation Change In Control Severance Plan, amended and restated effective November 2, 2018 (incorporated by reference to Exhibit 10.1 to the Registrant’s Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended September 30, 2018).*
10.22	Flowserve Corporation Executive Officer Severance Plan, as amended and restated effective August 17, 2022 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended September 30, 2022).*
10.23	Flowserve Corporation Annual Incentive Plan, amended and restated effective August 17, 2022 (incorporated by reference to Exhibit 10.2 to the Registrant’s Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended September 30, 2022).*
10.24	Form of 2023 Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan (Annual Award) (incorporated by reference to Exhibit 10.21 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2022).*
10.25	Form of 2021 Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan (Retention Award) (incorporated by reference to Exhibit 10.23 to the Registrant’s Annual report on Form 10-K (File No. 001-13179) for the year ended December 31, 2021).*

Exhibit No.	Description
10.26	Form of 2022 Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended March 31, 2022).*
10.27	Form of 2023 Performance Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.26 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2022).*
10.28	Form of 2022 Performance Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended March 31, 2022).*
10.29	Amendment to Performance Restricted Stock Unit Agreements under the Flowserve Corporation 2020 Long-Term Incentive Plan by and between Flowserve Corporation and R. Scott Rowe dated April 19, 2022 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended June 30, 2022).*
14.1	Flowserve Corporation Employee Code of Conduct (incorporated by reference to Exhibit 14.1 to the Registrant’s Current Report on Form 8-K (File No. 001-13179) dated as of August 15, 2019).
21.1+	Subsidiaries of the Registrant.
23.1+	Consent of PricewaterhouseCoopers LLP.
31.1+	Certification of Principal Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2+	Certification of Principal Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1++	Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2++	Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
97.1+	Flowserve Corporation Dodd-Frank Clawback Policy.
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	The cover page from the Company’s Annual Report on Form 10-K for the year ended December 31, 2023, formatted in Inline XBRL (included as Exhibit 101).

* Management contract or compensatory plan or arrangement.
+ Filed herewith.
++ Furnished herewith.

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.

FLOWSERVE CORPORATION

By: /s/ R. Scott Rowe

R. Scott Rowe
President and Chief Executive Officer

Date: February 20, 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 date indicated.

Signature	Title	Date
/s/ David E. Roberts David E. Roberts	Non-Executive Chairman of the Board	February 20, 2024
/s/ R. Scott Rowe R. Scott Rowe	President, Chief Executive Officer and Director (Principal Executive Officer)	February 20, 2024
/s/ Amy B. Schwetz Amy B. Schwetz	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 20, 2024
/s/ Scott K. Vopni Scott K. Vopni	Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 20, 2024
/s/ Sujeet Chand Sujeet Chand	Director	February 20, 2024
/s/ Ruby R. Chandy Ruby R. Chandy	Director	February 20, 2024
/s/ Gayla J. Delly Gayla J. Delly	Director	February 20, 2024
/s/ John L. Garrison John L. Garrison	Director	February 20, 2024
/s/ Cheryl H. Johnson Cheryl H. Johnson	Director	February 20, 2024
/s/ Michael C. McMurray Michael C. McMurray	Director	February 20, 2024
/s/ Thomas B. Okray Thomas B. Okray	Director	February 20, 2024
/s/ Kenneth I. Siegel Kenneth I. Siegel	Director	February 20, 2024
/s/ Carlyn R. Taylor Carlyn R. Taylor	Director	February 20, 2024

EXHIBIT 10.10

FLOWSERVE CORPORATION SENIOR MANAGER RETIREMENT PLAN

Amended and Restated Effective as of January 1, 2024

The Flowserve Corporation Senior Manager Retirement Plan, as amended and restated effective as of January 1, 2024, (the "**Plan**") is set forth below. The Plan is sponsored by Flowserve Corporation for certain eligible highly compensated and management employees and is exempt from the participation, vesting, funding and fiduciary requirements of Title I of the Employee Retirement Income Security Act of 1974, as amended ("**ERISA**").

ARTICLE I
PURPOSE AND EFFECTIVE DATE

1.1 Purpose of the Plan. The primary purpose of the Company in establishing this Plan is to make up the benefits lost by Eligible Employees under the Qualified Plan as a result of the maximum individual benefit limitations and restrictions imposed upon includable compensation in qualified plans under ERISA and the Internal Revenue Code of 1986, as amended (the "**Code**").

1.2 Effective Date. The Plan, which is effective January 1, 2024, is an amendment and restatement of the Flowserve Corporation Senior Manager Retirement Plan, which was originally adopted July 1, 1999 (the "**Prior Plan**") and previously amended and restated on November 2, 2018. Except as otherwise provided herein, any Eligible Employee who is a Participant and who terminated employment prior to November 2, 2018, shall be entitled to those benefits, if any, provided by the Prior Plan, as modified, where appropriate, to comply with the requirements of Section 409A of the Code and the guidance issued thereunder as then in effect.

ARTICLE II
DEFINITIONS

2.1 Definitions. Whenever used in the Plan, the following terms shall have the respective meanings set forth below:

(a) "**Beneficiary**" means one or more persons, trusts, estates or other entities, designated in accordance with the procedures established by the Committee, that are entitled to receive benefits under this Plan upon the death of a Participant. In the absence of a properly designated Beneficiary or if such Beneficiary has predeceased the Participant, the "Beneficiary" shall be the Participant's estate.

(b) "**Board**" or "**Board of Directors**" means the Board of Directors of the Company.

(c) "**Change in Control**" shall have the meaning ascribed to it under the Company's 2020 Long-Term Incentive Plan; provided that for purposes of this Plan, such Change in Control must also qualify as a "change in control" within the meaning of Code Section 409A(a)(2)(A)(v).

(d) "**Code**" means the Internal Revenue Code of 1986, as amended, and any successor provision thereto.

(e) "**Committee**" means the Pension and Investment Committee of the Company.

(f) “**Company**” means Flowserve Corporation and any subsidiary participating in the Qualified Plan.

(g) “**Eligible Employee**” means any person who is (i) a participant in the Qualified Plan; (ii) a highly compensated or management employee whose compensation exceeds the maximum individual benefit limitations and restrictions imposed upon includable compensation in qualified plans under ERISA and the Internal Revenue Code; and (iii) is either an Executive Officer, Officer, Vice President, or director level employee of the Company or is designated by the Committee to participate in the Plan. Notwithstanding the foregoing or any provision of the Plan to the contrary, no employee of the Company or any subsidiary of the Company who, as of January 1, 2024, was not a Participant in the Plan shall be an Eligible Employee or otherwise eligible to become a Participant in the Plan; provided, however, that a Participant who is rehired on or after January 1, 2024 and prior to January 1, 2025 may resume status as an Eligible Employee in accordance with the terms of Section 3.1.

(h) “**Participant**” means any Eligible Employee who is designated by the Committee as a participant in this Plan.

(i) “**Qualified Plan**” means the Flowserve Corporation Pension Plan, as amended from time to time, or any successor to such Plan, and any other qualified pension plan that may be designated by the Committee.

(j) “**Separation from Service**” means a Participant dies, retires, or otherwise suffers a termination of employment, as determined in accordance with the requirements of Section 409A of the Code and the final regulations issued thereunder. For purposes of the Plan, a Participant shall not be considered to have separated from service while the Participant is on military leave, sick leave or other bona fide leave of absence if the period of such leave of absence does not exceed six months, or, if longer, so long as the Participant retains the right to reemployment with the Company or its subsidiaries under an applicable statute or by contract. A leave of absence constitutes a bona fide leave of absence only if there is a reasonable expectation that the Participant will return to perform services for the Company or any of its subsidiaries. If the period of leave exceeds six months and the Participant does not retain a right to reemployment under an applicable statute or by contract, the employment relationship is deemed to terminate on the first date immediately following such six-month period. Notwithstanding the foregoing, where a leave of absence is due to any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than six months, where such impairment causes the Participant to be unable to perform the duties of his or her position of employment Flowserve Corporation Senior Manager Retirement Plan or any substantially similar position of employment, a 29-month period of absence shall be substituted for the six-month period in the immediately preceding sentence.

Any other term used in this Plan which is defined in the Qualified Plan shall have the meaning set forth therein.

ARTICLE III
PARTICIPATION

3.1 Participation. An employee shall become a Participant as of the first day of the calendar month coincident with or next following the date he or she first becomes an Eligible Employee (the “**Entry Date**”), provided that he or she is still an Eligible Employee on his or her Entry Date. Once eligible for participation in the Plan, an Eligible Employee shall be entitled to accrue benefits for the remainder of the Plan Year, provided that he or she remains a member of the select group of highly compensated or management employees for whom this Plan is designed.

ARTICLE IV
BENEFITS FOR PARTICIPANTS

4.1 Eligibility. A Participant or the Beneficiary of a Participant shall be eligible to receive benefits under this Plan; provided, however, the Company may in its discretion restrict on a prospective basis the classification of persons who are eligible to receive benefits under this Plan.

4.2 Amount of Benefits. The amount of benefits payable under the Plan to a Participant who is eligible for benefits under the Qualified Plan shall be the amount computed under Section 4.2(a) minus the amount computed under Section 4.2(b).

(a) The amount of benefits that would be payable under the Qualified Plan to such Participant or Beneficiary without regard to any restrictions ("**Restrictions**") imposed by ERISA and the Code upon (i) the maximum amount of benefits which may be paid out of a qualified plan, or (ii) the compensation which may be recognized by a qualified plan;

(b) The amount of benefits actually payable under the applicable Qualified Plan to such Participant or Beneficiary.

Notwithstanding the foregoing or any provision of the Plan to the contrary, benefits payable under the Plan shall be frozen as of January 1, 2025, and no Participant will accrue any additional benefits under the Plan from or after such date. For the avoidance of doubt, each Participant shall continue to vest in their benefit under the Plan in accordance with Article V below.

4.3 Commencement and Form. Subject to the provisions of this Article IV, a Participant will receive benefits under the Plan in the form of a lump sum payment, payable within 90 days of the date of the Participant's Separation from Service; provided that the Company retains the sole discretion to determine when during the 90-day period the payment will be made, Notwithstanding the foregoing or any other provision of this Plan to the contrary, if a Participant who is entitled to payments under this Plan is a "specified employee", as defined in Section 1.409A-1(i) of the final regulations issued under Section 409A of the Code, any payment under this Plan shall be made in a lump sum on the date which is six (6) months following the date of the Participant's Separation from Service, or if earlier, on the date of the Participant's death. All payments that are delayed for six (6) months as provided in this Section 4.3 shall continue to accrue interest under the terms of the Plan for the period from the Participant's Separation from Service until the date such payment is actually made. For the avoidance of doubt, however, all interest accruals under the Plan shall be frozen as of January 1, 2025.

ARTICLE V
VESTING

5.1 Vesting Schedule. A Participant shall vest in any benefit under this Plan in the same manner and to the same extent as under the vesting provisions of the Qualified Plan. Once a Participant is vested, all of such Participant's rights to receive benefits under this Plan shall be nonforfeitable but shall be subject to any rights of the Company's creditors.

5.2 Change in Control Vesting. In the event of a Change in Control, the Eligible Employee shall immediately be fully vested in his or her benefit under the Plan.

ARTICLE VI
ADMINISTRATION

6.1 Administration. The Committee shall be responsible for the general administration of the Plan and the carrying out of the provisions thereof, and shall have all rights and powers required in connection therewith, including the right to establish rules for the administration of the Plan and the methods to be used in calculating benefits. The Committee shall have the discretionary power and authority to interpret and administer the Plan according to its terms, including the power to construe and interpret the Plan, to supply any omissions therein, to reconcile and correct any errors or inconsistencies, to decide any questions in the administration and application of the Plan, and to make equitable adjustments for any mistakes or errors in the administration and application of the Plan. The Committee shall have such additional powers as may be necessary to discharge its duties and responsibilities hereunder.

6.2 Application for Benefits. The Committee shall determine a Participant's or Beneficiary's eligibility for benefits. Each Eligible Employee or Beneficiary claiming a benefit under the Plan shall complete an application form and file it with the Committee or an administrator designated by the Committee. The Committee shall take action on all applications for benefits within ninety (90) days of receipt. If an application is approved, the Committee shall determine, or cause to be determined, the applicant's benefits under the Plan.

6.3 Claims Procedure. If an application for benefits is denied or benefits are forfeited, in whole or in part, the following claims procedure shall be applicable:

(a) The Committee will provide the claimant with a written notice of denial, setting forth (i) an explanation as to why the claim was denied or benefit forfeited, (ii) the provisions of the Plan upon which the denial or forfeiture was based, and (iii) an explanation of the Plan's claims procedure. If the Committee does not deny a claim on its merits, but rejects the application for failure to furnish certain necessary material or information, the written notice to the claimant will explain what additional material is needed and why, and advise the claimant that he or she may refile a proper application.

(b) Within sixty (60) days after the receipt of the Committee's notice of denial or forfeiture, the claimant must file a written notice of appeal of the denial or forfeiture of benefits with the Committee. In addition, within such appeal period, the claimant may review pertinent documents at such reasonable times and places as the Committee may specify and may submit any additional written material pertinent to the appeal, and the claimant shall be entitled to appear before the Committee to present his or her claim.

(c) The Committee will make a written decision on the appeal not later than sixty (60) days after its receipt of the notice of appeal, unless special circumstances require an extension of time, in which case a decision will be given as soon as possible, but not later than one hundred-twenty (120) days after receipt of the notice of appeal. The decision on the appeal will be in writing and shall include specific reasons for the decision, making specific reference to the provisions of the Plan upon which the decision was based.

In the event the Committee fails to take any action on the claimant's initial application for benefits within ninety (90) day after receipt, the application will be deemed denied, and the applicant's appeal rights under this Section 6.3 will be in effect as of the end of such period.

ARTICLE VII
FINANCING

7.1 Financing of Benefits. No Participant shall be required or permitted to make any contribution under the Plan. The Company may provide security for payment of benefits using any method approved by the Committee for this purpose that is subject to the claims of the Company's general unsecured creditors. As an alternative to and notwithstanding the above, the Company may elect to directly pay such benefits to a Participant, subject to the approval of the Committee. For a Participant terminating employment as a result of a Change in Control, vested benefits shall be funded in such manner as shall be determined by the Committee, provided that at all times such funding method shall be subject to the claims of the Company's general unsecured creditors.

7.2 Unsecured General Creditor. Notwithstanding anything to the contrary contained herein, no Participant or Beneficiary (or any of their heirs, successors, or assigns) shall have any legal or equitable rights, interests or claims in any property or assets of the Company or its subsidiaries. For purposes of the payment of benefits under this Plan, any and all assets of the Company and its subsidiaries shall be, and shall remain, the general, unpledged, unrestricted assets of the Company and its subsidiaries, as applicable. The Company and its subsidiaries obligations under this Plan shall be merely that of an unfunded and unsecured promise to pay money in the future.

ARTICLE VIII
GENERAL PROVISIONS

8.1 Non-Alienation of Benefits. No benefit which shall be payable under this Plan shall be subject in any manner to anticipation, alienation, sale, transfer, assignment, pledge, garnishment, encumbrance, or charge by a Participant, Beneficiary, or survivor or anyone claiming under any of them except pursuant to a **Domestic Relations Order** (as defined below). If a Participant, Beneficiary or survivor or anyone claiming under any of them shall attempt to or shall subject in any manner any benefit which shall be payable under this Plan to anticipation, alienation, sale, transfer, assignment, pledge, garnishment, encumbrance, or charge, his or her interest in any such benefit shall terminate and the Committee shall hold or apply it to or for the benefit of such person, his or her spouse, children or other dependents, or any of them as the Committee may decide.

8.2 Incompetency. Every person receiving or claiming benefits under the Plan shall be conclusively presumed to be mentally competent and of age until the Committee receives written notice, in a form and manner acceptable to it, that such person is incompetent, and that a guardian, conservator, statutory committee, or other person legally vested with the care of his or her estate has been appointed. In the event that the Committee finds that any person to whom a benefit is payable under the Plan is unable to properly care for his or her affairs, then any payment due (unless a prior claim therefore shall have been made by a duly appointed legal representative) may be paid to the spouse, a child, a parent, or a brother or sister, or to any person deemed by the Committee to have incurred expense for such person otherwise entitled to payment. In the event a guardian or conservator or statutory committee of the estate of any person receiving or claiming benefits under the Plan shall be appointed by a court of competent jurisdiction, payment shall be made to such guardian or conservator or statutory committee, provided that proper proof of appointment is furnished in a form and manner suitable to the Committee. Any payment made under the provision of this Section 8.2 shall be a complete discharge of liability therefore under the Plan.

8.3 Employment Rights. The establishment of the Plan shall not be construed as conferring any legal rights upon any Eligible Employee or any other person for a continuation of employment, nor shall it interfere with the rights of the Company to discharge any person or to treat him or her without regard to the effect which such treatment might have upon him or her as a person covered by this Plan.

8.4 Notices. Any notice required or permitted to be given hereunder to an Eligible Employee, a Participant, or Beneficiary will be properly given if delivered or mailed, postage prepaid, to the Eligible Employee or Beneficiary at the last post office address as shown on the Company's records. Any notice to the Company shall be properly given or filed if delivered or mailed, postage prepaid, to the Corporate Secretary of the Company at its principal place of business.

8.5 Waiver of Notice. Any notice required hereunder may be waived by the person entitled thereto.

8.6 Action by Company. Any action required or permitted to be taken hereunder by the Company shall be taken by the Committee, or by any person or persons or committee otherwise authorized by its Board of Directors.

8.7 Uniform Rules. In administrating the Plan, the Committee will apply uniform rules to all Eligible Employees similarly situated.

8.8 Notice of Address. Any payment to a Participant, or in case of his or her death to his or her Beneficiary or survivor, at the last known post office address of the distributee on file with the Company, shall constitute a complete acquittance and discharge to the Company with respect thereto unless the Company shall have received prior written notice of any change in the condition, status or location of the distributee. The Company shall have no duty or obligation to search for or ascertain the whereabouts of any Eligible Employee or Beneficiary.

8.9 Record. The records of the Company with respect to the Plan shall be conclusive on all Eligible Employees, beneficiaries and survivors, and all other persons whomsoever.

8.10 No Individual Liability. It is declared to be the express purpose and intention of the Plan that no liability whatever shall attach to or be incurred by the shareholders, officers, or directors of the Company, or any representatives appointed hereunder by the Company, under or by reason of any of the terms or conditions of the Plan.

8.11 Illegality of Particular Provision. If any particular provision of this Plan shall be found to be illegal or unenforceable, such provision shall not affect the other provisions thereof, but the Plan shall be construed in all respects as if such invalid provision were omitted.

8.12 Status of Plan. The Plan is intended to be a plan that is not qualified within the meaning of Section 401(a) of the Code and that "is unfunded and is maintained by an employer primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees" within the meaning of ERISA Sections 201(2), 301(a)(3) and 401(a)(1), and as such it is intended that the Plan be exempt from the participation, vesting, funding, and fiduciary responsibility requirements of Title I of ERISA. This Plan is also intended to qualify for simplified reporting under U.S. Department of Labor Regulation Section 2530.104- 23, which provides for an alternative method of compliance for plans described in such regulation. The Plan shall be administered and interpreted to the extent possible in a manner consistent with that intent.

8.13 Tax Withholding. The Company and its subsidiaries shall have the right to deduct from all amounts paid in cash or other form under this Plan any Federal, state, local or other taxes required by law to be withheld.

8.14 Domestic Relations Order. Notwithstanding any provision of the Plan to the contrary, all or any portion of a Participant's vested benefits under the Plan may be distributed to an alternate payee in accordance with the terms and conditions of a "**Domestic Relations Order**", as such term is defined in Code Section 414(p)(1)(B). The Plan hereby specifically permits and authorizes distribution of a Participant's vested benefits under the Plan to an alternate payee in accordance with a Domestic Relations Order prior to the date of the Participant's Separation from Service.

ARTICLE IX
AMENDMENT AND TERMINATION

9.1 Amendment and Termination. The Company expects the Plan to be permanent, but since future conditions affecting the Company cannot be anticipated or foreseen, the Company must necessarily and does hereby reserve the right to amend or terminate the Plan at any time by action of its Board of Directors, provided, however, that no amendment or termination may change the time and form of payment to be made under the provisions of the Plan as in effect before such amendment or termination, except as otherwise permitted under Section 409A of the Code and the regulations issued thereunder. Notwithstanding any of the foregoing provisions of this Section 9.1 or any other terms and conditions of the Plan to the contrary, the Committee reserves the right, in its sole discretion, to amend the Plan in any manner it deems necessary or desirable in order to comply with or otherwise address issues resulting from Section 409A of the Code.

9.2 Contingencies Affecting the Company. In the event of a merger or consolidation of the Company, or the transfer of substantially all of the assets of the Company to another corporation, such successor corporation shall be substituted for the Company under the terms and provisions of the Plan.

9.3 Protected Benefits. If the Plan is amended or terminated, the full benefits payable to each retired Eligible Employee, Beneficiary or survivor shall not be reduced. A Participant who is in active service at the time of Plan amendment or termination shall be entitled to no less than the benefits he or she has accrued under the Plan to the date of such amendment or termination. The time and manner of payment of benefits subsequent to such date shall remain subject to the terms and conditions of the Plan, as they may have been amended. Subject to the foregoing provision, the Eligible Employee shall have a contractual right to all benefits applicable to him or her under the Plan. For the avoidance of doubt, nothing contained in this Section 9.3 shall be deemed to alter the status of an Eligible Employee, Beneficiary or survivor, as applicable, as an unsecured general creditor of the Company per Section 7.2 of the Plan.

9.4 Reimbursement of Legal Fees and Expenses. In the event that a Participant brings a legal action after a "**Change in Control**" as defined in Section 2.1(c) to enforce any of his or her rights hereunder, the Company shall reimburse the Eligible Employee for his or her actual documented legal fees and expenses in bringing such action, provided that (i) such action is based upon an actual bona fide claim for damages under applicable law, as determined by the Committee based on the facts and circumstances and in accordance with the requirements of Section 409A of the Code (and the regulations issued thereunder); (ii) the Participant provides written documentation to the Company of such legal fees and expenses no later than one hundred eight (180) days following the close of the taxable year in which such expenses were incurred; and (iii) it is judicially determined that such action was not frivolous or brought in bad faith. Any reimbursement of legal fees and expenses made pursuant to the immediately preceding sentence in one taxable year shall not affect the legal fees and expenses eligible for reimbursement pursuant to this Section 9.4 in any other taxable year. Reimbursement of legal fees and expenses pursuant to this Section 9.4 shall be made by the Company no later than the last day of the Participant's taxable year following the taxable year in which the fees or expenses were incurred.

ARTICLE X
APPLICABLE LAW

10.1 Applicable Law. The Plan shall be governed by and construed according to the law of the State of Texas, except to the extent otherwise preempted by ERISA, or any other Federal law.

***

IN WITNESS WHEREOF, Flowserve Corporation has caused this amended and restated Plan to be executed by its duly authorized officer.

FLOWSERVE CORPORATION

By: /s/ Susan C. Hudson
Susan Hudson
Senior Vice President & Chief Legal Officer

15-Dec-2023

Dated

EXHIBIT 10.11

FLOWSERVE CORPORATION RETIREMENT SAVINGS PLAN
Amended and Restated Effective January 1, 2024

FLOWSERVE CORPORATION RETIREMENT SAVINGS PLAN

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FLOWSERVE CORPORATION RETIREMENT SAVINGS PLAN

ARTICLE 1 - INTRODUCTION

1.1 Introduction. The Flowserve Corporation Retirement Savings Plan (the "Plan") is maintained by Flowserve Corporation to provide eligible employees of Flowserve Corporation and its Affiliates with retirement savings opportunities. Notwithstanding that contributions may be made under the Plan without regard to the current or accumulated earnings of Flowserve Corporation, the Plan is intended to be a profit sharing plan, qualified under Section 401(a) of the Code, to include a qualified or deferred arrangement as described in Section 401(k) of the Code, and to satisfy the applicable requirements of the Employee Retirement Income Security Act of 1974, as amended.

1.2 Background. Flowserve Corporation previously maintained: (i) the Flowserve Corporation Retirement Savings Plan (formerly named the Flowserve Corporation Savings and Thrift Plan), as restated April 1, 1992 (the "Savings and Thrift Plan"); (ii) the Flowserve Corporation Retirement Plan for Salaried Employees and Employees of Valtek, Incorporated, as amended and restated April 1, 1996 (the "Valtek Plan"); (iii) the Flowserve Corporation Pump and Foundry Divisions, Hourly Employees Savings & Thrift Plan, as amended and restated January 1,1991 (the "Foundry Plan") and (iv) the Rotating Equipment Division Springboro Operations Retirement Savings Plan, as restated January 1, 1993 (the "Springboro Plan"). Flowserve FSD Corporation (successor by merger to Durametallic Corporation) previously maintained the Charles C. Hall Profit Sharing Retirement Plan, as amended and restated October 1, 1996 (the "C. C. Hall Plan"). Flowserve International, Inc. previously maintained the BW/IP International, Inc. Capital Accumulation Plan (adopted as of May 20, 1987, as the successor plan to the Borg-Warner Corporation Investment Plan), restated as of January 1, 1997 (the "CAP Plan"). Automax, Inc. previously maintained the Automax, Inc. 401(k) Retirement Savings Plan and Trust (the "Automax Plan"). Flowserve Corporation, Flowserve FSD Corporation, Flowserve International, Inc. and Automax, Inc. are Affiliates (as defined in Article 2.1).

Effective July 1, 1999 (the "Effective Date"), the Valtek Plan, the Foundry Plan, the C. C. Hall Plan, the CAP Plan, and the Automax were are merged into the Flowserve Corporation Retirement Savings Plan (together "Merged Plans"). Effective July 1, 1999, assets of all Salaried Employees participating in the Springboro Plan were transferred to the Flowserve Corporation Retirement Savings Plan. Except as otherwise specifically provided below, the provisions of the Plan as set forth herein shall apply only to Participants whose employment with the Employer terminates on or after July 1, 1999. If a Participant's employment with the Employer terminated before July 1, 1999 his right to benefits, if any, and the amount thereof will be determined in accordance with the provisions of the applicable Plan as in effect before his termination date. In accordance with Article 4.9 and Article 6.2, the Recordkeeper shall maintain separate accounts in the name of each Participant to account for assets merged or transferred into the Plan so that optional forms of benefits available to Participants under the Merged Plans or the Springboro Plan immediately prior to the Effective Date shall be preserved to the extent required by the Code and the regulations and rulings thereunder.

Effective November 1, 2000, the Ingersoll-Dresser Pump Company Savings and Investment Plan (the "I-R Plan") sponsored by Ingersoll-Dresser Pump Company, was merged into the Plan. All amounts held under the I-R Plan are subject to the rules set forth in the Plan; provided, however, that all amounts transferred to this Plan from the I-R Plan continued to be 100% vested to the extent they were 100% vested under the I-R Plan.

Effective February 1, 2001, the Continental Field Machining Co., Inc. 401(k) Plan (the "Continental Plan") sponsored by Cypress Industries, Inc., a wholly owned subsidiary of Flowserve Corporation, was merged into the Plan. All amounts held under the Continental Plan are subject to the rules set forth in the Plan; provided, however, that all amounts transferred to this Plan from the Continental Plan continued to be 100% vested to the extent they were 100% vested under the Continental Plan.

Effective February 1, 2001, the International Piping Services Company 401(k) Plan (the "International Plan") sponsored by International Piping Services Co., a wholly owned subsidiary of Flowserve Corporation, was merged into the Plan. All amounts held under the International Plan are subject to the rules set forth in the Plan; provided, however, that all amounts transferred to this Plan from the International Plan continued to be 100% vested to the extent they were 100% vested under the International Plan.

1.3 Effective Date. The Plan was most recently restated effective January 1, 2022. By execution of this document, Flowserve Corporation does hereby amend and restate the Plan, effective as of January 1, 2024, in order to incorporate prior Plan amendments and to reflect certain other changes, including certain law changes.

ARTICLE 2 - DEFINITIONS

2.1 "Affiliate" means any corporation which is included in a controlled group of corporations (within the meaning of Section 414(b) of the Code) of which the Company is a member, any trade or business which is under common control with the Company (within the meaning of Section 414(c) of the Code), any affiliated service group (within the meaning of 414(m) of the Code) of which the Company is a member, and any other entity required to be aggregated with the Employer pursuant to 414(o) of the Code.

2.2 "Beneficiary" means a person or persons (natural or otherwise) designated by a Participant in accordance with Article 8.8 to receive any undistributed amounts credited to the Participant's separate accounts under the Plan at the time of the Participant's death.

2.3 "Break in Service" means the 12-consecutive-month period beginning on the Employee's severance from service date (as described in Section 7.3) during which the Employee is not credited with an Hour of Service.

2.4 "Code" means the Internal Revenue Code of 1986, including any amendments thereto.

2.5 "Compensation" means (subject to adjustments thereto in Section 11.1 for purposes of Section 11.1) amounts actually paid by the Employer to the Participant while participating in the Plan during the Plan Year for personal services actually rendered in the course of employment with the Employer and all Affiliates, including all Employee Pre-Tax Contributions made to the Plan on behalf of the Participant for the Plan Year and all pre-tax elective contributions made to any other plan by the Employer for the Plan Year pursuant to a salary reduction agreement with the Participant which are not includible in the Participant's gross income under Sections 125, 402(e)(3) or 132(f)(4) of the Code. For purposes of this definition, Compensation includes salary or other regular wages, overtime, shift differentials, field pay, lead pay, vacation pay (excluding vacation pay paid in a lump sum on termination of employment), sick pay, short-term disability pay paid by the Employer, holiday pay, jury duty, bereavement pay, military pay, incentive pay, commissions and lump sum awards paid in lieu of merit increases. Compensation does not include special payments, including, but not limited to, educational reimbursements, expense allowances, fringe benefits (cash and noncash), long-term disability income not paid by the Employer, severance pay, moving expenses, long-term incentive plan awards, imputed income, discretionary awards, welfare benefits, amounts realized from the exercise of stock options or on settlement of restricted stock units, reimbursements from other benefit plans or foreign service allowances.

Notwithstanding anything to the contrary, effective for Limitation Years (as defined in Section 11.1(i) of the Plan) beginning on and after July 1, 2007, severance amounts paid after severance from employment shall be excluded from Compensation, except a payment of regular compensation for services during the Participant's regular working hours, or compensation for services outside the Participant's regular working hours (such as overtime or shift differentials), commissions, bonuses, or other similar payments provided that such payment (i) would have been made prior to the Participant's severance from employment if the Participant had continued employment, and (ii) is made by the later of (A) 2-1/2 months after, or (B) the end of the Limitation Year that includes the date of the Participant's severance from employment. "Severance amounts" excluded from Compensation under this paragraph specifically include (X) payment for bona fide sick, vacation or other leave that the Participant would have been able to use if employment had continued, and (Y) post-severance payment of nonqualified unfunded deferred compensation if such amount would have been paid at the same time if the Participant had not experienced a severance from employment. A Participant will have a "severance from employment" when the Participant ceases to be an Employee; a Participant will not have a "severance from employment" if, in connection with a change of employment, the individual's new employer maintains such plan with respect to the individual.

Notwithstanding anything to the contrary, effective for Limitation Years (as defined in Section 11.1(i) of the Plan) beginning on and after July 1, 2007, Compensation does include payments made to an individual who does not currently perform services for the Employer by reason of qualified military service (as that term is used in Code Section 414(u)(1)) to the extent these payments do not exceed the amounts the individual would have received if the individual had continued to perform services for the Employer rather than entering qualified military service.

In no event shall the amount of Compensation of any Participant taken into account for purposes of determining any benefits under the Plan for any Plan Year exceed the Annual Compensation Limit. For this purpose, the Annual Compensation Limit for each Plan Year is $200,000, (subject to adjustment annually as provided in Code Sections 401(a)(17)(B) and 415(d); provided, however, that the dollar increase in effect on January 1 of any calendar year, if any, is effective for Plan Years beginning in such calendar year).

2.6 "Disability" means an inability to perform the duties of the Employee's employment by reason of any medically determinable physical or mental impairment which can be expected to result in death or be of a long-continued and indefinite duration, in the sole discretion of the Plan Administrator or its delegate. The permanence and degree of such impairment shall be supported by medical evidence.

2.7 "Employee" means any individual who is employed by the Employer.

2.8 "Employee After-Tax Contribution" means an after-tax contribution to the Plan by a Participant in accordance with Article 4.4 which is includible in the Participant's gross income for federal income tax purposes in the year of contribution.

2.9 "Employee After-Tax Contribution Account" means the separate account established in the name of a Participant pursuant to Article 6.2(a)(2) to record the Employee After-Tax Contributions by the Participant and the earnings, losses and expenses allocated thereto.

2.10 "Employee Basic Contribution" means an Employee Pre-Tax Contribution to the Plan on behalf of a Participant in accordance with Article 4.1, an Employee After-Tax Contribution to the Plan by a Participant in accordance with Article 4.4, and an Employee Roth Contribution to the Plan on behalf of a Participant in accordance with Article 4.11; provided, however, that the aggregate percentage of Employee Pre-Tax Contributions, Employee After-Tax Contributions and Employee Roth Contributions comprising the Employee Basic Contribution shall not exceed 6% of the Employee's Compensation.

2.11 "Employee Pre-Tax Contribution" means a pre-tax contribution to the Plan by the Employer on behalf of a Participant in accordance with the Participant's election under Article 4.1 to have the amount contributed to the Plan rather than paid to the Participant as current-year compensation.

2.12 "Employee Pre-Tax Contribution Account" means the separate account established in the name of a Participant pursuant to Article 6.2(a)(1) to record the Employee Pre-Tax Contributions on behalf of the Participant and the earnings, losses and expenses allocated thereto.

2.13 "Employee Roth Contribution" means a Roth contribution to the Plan by the Employer on behalf of a Participant in accordance with the Participant's election under Article 4.11 to have the amount contributed to the Plan rather than paid to the Participant as current-year compensation which is designated as a Roth contribution and includible in the Participant's gross income for federal income tax purposes in the year of contribution.

2.14 “Employee Roth Contribution Account” means the separate account established in the name of a Participant pursuant to Article 6.2(a)(7) to record any Employee Roth Contributions, and the attributable investment experience, expenses, distributions and withdrawals attributable to such amounts on or after January 1, 2022.

2.15 “Employer” means Flowserve Corporation or any of its business units, subsidiaries or Affiliates that adopts the Plan on behalf of its eligible Employees.

2.16 “Employer Discretionary Contribution” means a contribution to the Plan by the Employer on behalf of a Participant in accordance with Article 4.5(c) on account of such Participant’s Compensation.

2.17 “Employer Discretionary Contribution Account” means the separate account established in the name of a Participant pursuant to Article 6.2(a)(4) to record the Employer Discretionary Contributions on behalf of the Participant and the earnings, losses and expenses allocated thereto.

2.18 “Employer Discretionary Matching Contribution” means a contribution to the Plan by the Employer on behalf of a Participant in accordance with Article 4.5(b) on account of the Employee Basic Contributions by the Participant to the Plan. Effective for Plan Years beginning on or after January 1, 2008 no amounts shall be contributed to the Plan as Employer Discretionary Matching Contributions.

2.19 “Employer Discretionary Matching Contribution Account” means the separate account established in the name of a Participant pursuant to Article 6.2(a)(3) to record the Employer Discretionary Matching Contributions on behalf of the Participant and the earnings, losses and expenses allocated thereto. Effective for Plan Years beginning on or after January 1, 2008, no amounts shall be contributed to the Employer Discretionary Matching Contribution Account as Employer Discretionary Matching Contributions.

2.20 “Employer Fixed Matching Contribution” means a contribution to the Plan by the Employer on behalf of a Participant in accordance with Article 4.5(a) on account of the Employee Basic Contributions, or the Employee Pre-Tax Contributions and the Employee Roth Contributions, by the Participant to the Plan.

2.21 “Employer Fixed Matching Contribution Account” means the separate account established in the name of a Participant pursuant to Article 6.2(a)(3) to record the Employer Fixed Matching Contributions on behalf of the Participant and the earnings, losses and expenses allocated thereto.

2.22 “Employer Matching Contribution” means both the “Employer Fixed Matching Contribution” and the “Employer Discretionary Matching Contribution.” Effective for Plan Years beginning on or after January 1, 2008, no amounts shall be contributed to the Plan as Employer Discretionary Matching Contributions.

2.23 “Employer Matching Contribution Account” means both the “Employer Fixed Matching Contribution Account” and the “Employer Discretionary Matching Contribution

Account." Effective for Plan Years beginning on or after January 1, 2008, no amounts shall be contributed to the Employer Discretionary Matching Contribution Account as Employer Discretionary Matching Contributions.

2.24 "Employer Nonelective Contribution" means a contribution to the Plan by the Employer on behalf of a Participant for a Plan Year in accordance with Article 4.6.

2.25 "Employer Nonelective Contribution Account" means the separate account established in the name of the Participant pursuant to Article 6.2(a)(5) to record the Employer Nonelective Contributions on behalf of the Participant and the earnings, losses and expenses allocated thereto.

2.26 "ERISA Account" means the separate account established under the Plan to record the credits or payments made to this Plan attributable to revenue sharing or fee capture arrangements between the Plan's third party administrator or Recordkeeper and the Plan and/or the Employer.

2.27 "Excess Elective Deferral" means the amount of a Participant's elective deferrals (as defined in Article 4.3(a)) for a taxable year which, for pre-tax elective deferrals, are includible in the Participant's gross income for the taxable year for the reason they exceed the dollar limitation in effect under Section 402(g) of the Code.

2.28 "Forfeiture" means the portion of a Participant's Employer Matching Contribution Account and Employer Discretionary Contribution Account which is forfeited, in accordance with the provisions of Article 8.5, on account of the Participant's termination of employment prior to full vesting under Article 7.2. Forfeitures shall also include any Employer Matching Contributions and Employer Discretionary Contributions on behalf of Highly Compensated Employees (as defined in Article 5.1(i)) which are forfeited in accordance with the provisions of Article 4.5 and any Excess Aggregate Contributions on behalf of Highly Compensated Employees which are forfeited in accordance with the provisions of Article 5.7(c).

2.29 "Hour of Service" means, for the elapsed time method of crediting service in this Plan, each hour for which an Employee or Participant is paid or entitled to be paid for the performance of duties for the Employer or for which back pay, irrespective of mitigation of damages, has been awarded to the Employee or Participant or agreed to by the Employer or an Affiliate, determined and credited in accordance with Department of Labor Reg. Sec. 2530.200b-2.

Payments considered for purposes of the foregoing sentence shall include payments unrelated to the length of the period during which no duties are performed, but shall not include payments made solely as reimbursement for medically related expenses or solely for the purpose of complying with applicable worker's compensation, unemployment compensation or disability insurance laws. Hours of Service under this paragraph shall be credited to the individual for the computation period in which the duties are performed.

Solely for purposes of determining whether a Break in Service has occurred for vesting purposes, an individual who is absent from work for maternity or paternity reasons shall receive credit for the Hours of Service which would otherwise normally have been credited to such individual but for such absence. For purposes of this paragraph, an absence from work for maternity or paternity reasons means an absence: (i) by reason of the pregnancy of the individual; (ii) by reason of the birth of a child of the individual; (iii) by reason of the placement of a child with the individual in connection with the adoption of such child by such individual; or (iv) for purposes of caring for such child for a period beginning immediately following such birth or placement. The Hours of Service credited under this paragraph shall be credited: (1) in the eligibility computation period or Plan Year in which the absence begins if the crediting is necessary to prevent a Break in Service in that period; or (2) in all other cases, in the following eligibility computation period or Plan Year. The Employee must timely furnish to the Employer information reasonably required to establish (A) that an absence from work is for a reason specified above, and (B) the number of days for which the absence continued.

2.30 "Investment Funds" means any of the investment funds specified by the Plan Administrator in accordance with the terms of the Trust that the Plan Administrator determines, in its exclusive discretion, meets the criteria set forth in the Plan's investment policy, as such policy may be modified by the Plan Administrator from time to time. Such investment options shall include the Flowserve Corporation Stock Fund; provided, however, that no new investments may be directed into the Flowserve Corporation Stock Fund on or after January 1, 2013.

2.31 "Normal Retirement Age" means age 65.

2.32 "Participant" means an Employee who is participating in the Plan in accordance with the provisions of Article 3.

2.33 "Plan" means this Flowserve Corporation Retirement Savings Plan, as amended from time to time.

2.34 "Plan Administrator" means the Pension and Investment Committee, as more fully described in Article 13.1.

2.35 "Plan Year" means the twelve-month period beginning on January 1 and ending on the following December 31.

2.36 "Recordkeeper" means the individual(s) or firm selected by the Plan Administrator to provide recordkeeping and participant accounting services for the Plan, including the maintenance of separate accounts for Participants in accordance with the provisions of Article 6.

2.37 "Rollover Contribution Account" means the separate account established in the name of a Participant pursuant to Article 6.2(a)(6) to record any rollover contributions to the Plan by or on behalf of the Participant under Article 4.7 and the earnings, losses and expenses allocated thereto.

2.38 "Roth In-Plan Conversion" means those contributions which are converted to Roth contributions pursuant to Article 8.12.

2.39 "Roth In-Plan Conversion Account" means the separate account established in the name of a Participant pursuant to Article 6.2(a)(8) to record any Roth In-Plan Conversions and the attributable investment experience, expenses, distributions and withdrawals attributable to such amounts on or after January 1, 2022.

2.40 "Roth Rollover Contribution Account" means the separate account established in the name of the Participant pursuant to Article 6.2(a)(9) to record any Roth rollover contributions to the Plan by or on behalf of the Participant under Article 4.7 and the earnings, losses and expenses allocated thereto.

2.41 "Trust" means the trust maintained by the Trustee to hold the assets of the Plan in accordance with the terms and conditions of the Trust Agreement.

2.42 "Trust Agreement" means one or more agreements between the Employer and Trustee which governs the management and administration of the Trust. Rights and benefits under the Plan are subject to the terms and provisions of the Trust Agreement which implements and forms a part of the Plan.

2.43 "Trustee" means any financial institution and/or individuals appointed by the Plan Administrator and any successor thereto.

2.44 "Valuation Date" means any business day that the New York Stock Exchange is open for trading.

2.45 "Year of Service" means a 12-consecutive month period ("elapsed time") during which the Employee performs duties for the Employer as determined under Article 7.3 for purposes of determining the Employee's vested percentage under the Plan.

ARTICLE 3 - PARTICIPATION IN THE PLAN

3.1 Eligibility to Participate. An Employee on the U.S. payroll of the Employer and a member of a group of employees to which the Plan has been and continues to be extended by his or her Employer shall be eligible to participate in the Plan except for (i) interns, co- ops and temporary employees (including an employee who is employed as a temporary part-time field service valve technician in connection with the operations of the Company or its Affiliates in Williamsport, Pennsylvania) and (ii) employees who are nonresident aliens (within the meaning of Section 7701(b)(1)(B) of the Code) and who receive no earned income (within the meaning of Section 911(d)(2) of the Code) from the Employer which constitutes income from sources within the United States (within the meaning of Section 861(a)(3) of the Code). An eligible Employee may also include any citizen of the United States employed by a foreign subsidiary of the Company, as to which an agreement entered into by the Company or a subsidiary of the Company under Section 3121(1) of the Code is in effect and as to whom no contributions under a funded plan of deferred compensation are being provided with respect to the compensation paid to such individual by the foreign subsidiary. An Employee who is covered under a collective bargaining agreement with an Employer is not an eligible Employee unless such agreement or ancillary agreement thereto provides for his or her inclusion under the Plan. Notwithstanding the foregoing, effective for all periods on and after February 1, 2011, an Employee who is employed by an Employer in a territory of the United States, whether incorporated or unincorporated, shall not be eligible to participate in the Plan.

3.2 Commencement of Participation. Each Employee who is already a Participant in the Plan as of July 1, 1999, will continue to be a Participant in the Plan. Each other Employee who satisfied the eligibility requirements designated in 3.1 above shall commence participation in the Plan on the date on which the Employee first performs an Hour of Service for the Employer (the Employee's "employment commencement date").

ARTICLE 4 - CONTRIBUTIONS

4.1 Employee Pre-Tax Contributions. A Participant may elect under a salary reduction agreement as described in Article 4.2 to have the Employer make Employee Pre-Tax Contributions to the Plan on the Participant's behalf in an amount, when combined with any Employee After-Tax Contributions and Employee Roth Contributions that are elected under Section 4.11, of up to 50% of the Compensation otherwise payable to the Participant, subject to the limitations of Article 4.3 and Article 11. All Employee Pre-Tax Contributions shall be made to the Trust by the earlier of the date such amounts reasonably can be segregated from Employer assets and the date that is 15 business days following the month in which such amounts would otherwise have been payable to the Participant in cash.

4.2 Salary Reduction Agreement.

(a) Nature of Agreement. The salary reduction agreement referred to in Articles 4.1, 4.4 and 4.11 shall be on a form or in such other manner prescribed by the Plan Administrator whereby the Participant agrees to reduce his or her Compensation by specified amounts for purposes of having the Employer contribute the reduced Compensation amount to the Plan as Employee Pre-Tax Contributions on behalf of the Participant under Article 4.1, Employee After-Tax Contributions of the Participant under Article 4.4, and/or Employee Roth Contributions on behalf of the Participant under Article 4.11, provided that under such procedures each Participant must have an effective opportunity to make (or change) an election of salary reduction amounts at least once during each Plan Year.

(b) Commencement of Agreement. Every Employee who is eligible to participate in the Plan under Article 3.1 shall be offered a reasonable opportunity by the Plan Administrator to enter into a salary reduction agreement and to elect to have Employee Pre-Tax Contributions made to the Plan on his or her behalf under Article 4.1, Employee After-Tax Contributions made to the Plan on his or her behalf under Article 4.4, and/or Employee Roth Contributions made to the Plan on his or her behalf under Article 4.11. Notwithstanding any provision of this Article 4.2 to the contrary, effective for Plan Years beginning on or after January 1, 2008, in the event an Employee who is eligible to participate in the Plan under Article 3.1 does not make a timely election or complete and file a salary reduction agreement in accordance with this Article 4.2, such Employee shall be deemed to have made an election to reduce his Compensation by 3% for each payroll period and shall be automatically enrolled in the Plan. Any automatic contributions deferred in accordance with this Article 4.2(b) shall be Employee Pre-Tax Contributions. An automatic enrollment shall be effective and an Employee's Compensation shall be reduced by 3% beginning with the first pay period following the date on which the Plan Administrator determines, in its sole discretion, that the Employee has not made a timely election or completed and filed a salary reduction agreement. A Participant's salary reduction agreement shall be effective as soon as practicable following the date the agreement is received in the manner prescribed by the Plan Administrator, provided such effective date shall be no earlier than the date the Participant would otherwise commence participation in the Plan under Article 3.2. Under no circumstances shall a Participant's salary reduction agreement be adopted retroactively. A Participant's salary reduction agreement shall remain in effect until amended or terminated by the Participant.

(c) Cutback in Employee Pre-Tax and Employee Roth Contributions. If the Plan Administrator reasonably determines that all or any part of the Participant's reduced Compensation amount for any Plan Year may not be contributed to the Plan as Employee Pre-Tax contributions under Article 4.1 and/or Employee Roth Contributions on behalf of the Participant under Article 4.11 without causing the Plan to fail the nondiscrimination requirements of Article 5 or the contribution limitations of Article 11, the Employer may pay such reduced Compensation amount directly to the Participant, rather than as a contribution made pursuant to a salary reduction agreement.

(d) Transfer to or from Non-Covered Employment. A Participant's salary reduction agreement shall automatically terminate if the Participant is no longer a member of the category of Employees who are eligible to participate in the Plan. If such a Participant subsequently returns to the category of eligible Employees, the Participant shall be permitted to execute a new salary reduction agreement and resume having Employee Pre-Tax Contributions made to the Plan on his or her behalf under Article 4.1, Employee After-Tax Contributions made to the Plan on his or her behalf under Article 4.4 and/or Employee Roth Contributions made to the Plan on his or her behalf under Article 4.11.

(e) Termination of Employment. A Participant's salary reduction agreement shall automatically terminate upon termination of employment except for amounts received in the Participant's final paycheck.

(f) Automatic Increase of Employee Pre-Tax Contributions. Effective for each Plan Year beginning on or after January 1, 2008, each Participant shall be deemed to have made an election to increase his or her Employee Pre-Tax Contribution salary reduction percentage for such Plan Year by an additional 1%. The 1% increase shall occur on an annual basis and shall take effect (i) for Participants

whose employment is not covered by a collective bargaining agreement, as soon as administratively practicable following the Employer's annual salary review process for the Plan Year, and (ii) for Participants whose employment is covered by a collective bargaining agreement, as soon as administratively practicable following the anniversary of the signature of the applicable collective bargaining agreement then in effect. The automatic increases of Employee Pre-Tax Contributions shall continue for each subsequent Plan Year until either (i) the Participant elects a different rate of Employee Pre-Tax Contributions or (ii) the Participant's aggregate salary reduction percentage equals 10%. Notwithstanding the foregoing, the provisions of this Article 4.2(f) shall not apply to the first Plan Year in which a Participant is automatically enrolled in the Plan pursuant to Article 4.2(b).

(g) Notice of Automatic Enrollment. At least thirty (30) but not more than ninety (90) days before the beginning of the Plan Year, each Employee shall be provided with a notice, written in a manner calculated to be understood by the average Employee, that explains (i) the automatic enrollment process described under Article 4.2(b), (ii) the automatic increase process described under Article 4.2(f), (iii) the Employee's right to elect a different rate of Employee Pre-Tax Contributions or no Employee Pre-Tax Contributions, (iv) how Employee Pre-Tax Contributions automatically made to the Plan will be invested in the absence of the Employee's investment instructions, and (v) the Employee's right to make a withdrawal of Employee Pre-Tax Contributions automatically made to the Plan in accordance with Article 4.2(h), and the procedure to elect such a withdrawal. If an Employee becomes eligible to participate in the Plan after the ninetieth (90th) day before the beginning of the Plan Year and does not receive the notice for that reason, the notice will be provided as soon as practicable after the date the employee is first eligible to participate.

(h) Withdrawal of Automatic Employee Pre-Tax Contributions

(i) No later than ninety (90) days after Employee Pre-Tax Contributions are first withheld automatically from an Employee's Compensation in accordance with Article 4.2(b), the Employee may request a distribution of his or her automatic Employee Pre-Tax Contributions. No spousal consent is required for a withdrawal under this Article 4.2(h).

(ii) The amount to be distributed from the Plan upon the Employee's request is equal to the amount of Employee Pre-Tax Contributions made through the earlier of (a) the pay date for the second payroll period that begins after the Employee's withdrawal request and (b) the first pay date that occurs at least thirty (30) days after the Employee's request, plus attributable earnings through the date of distribution. Any fee charged to the Employee for the withdrawal shall not be greater than any other fee charged for a cash distribution.

(iii) Unless the Employee affirmatively elects otherwise, any withdrawal request will be treated as an affirmative election to stop having Employee Pre-Tax Contributions made on the Employee's behalf as of the date specified in Article 4.2(h)(ii), above.

(iv) Employee Pre-Tax Contributions distributed pursuant to this Article 4.2(h) are not counted towards the dollar limitation on Employee Pre-Tax Contributions contained in Section 402(g) of the Code nor for the Actual Deferral Percentage test described in Article 5.2. Employer Fixed Matching Contributions and/or Employer Discretionary Matching Contributions that might be allocated to an Employee's Employer Matching Contribution Account on behalf of Employee Pre-Tax Contributions automatically made to the Plan will not be allocated to the extent the Employee withdraws such Employee Pre-Tax Contributions pursuant to this Article 4.2(h), and any Employer Fixed Matching Contributions and/or Employer Discretionary Matching Contributions already made on account of Employee Pre-Tax Contributions that are later withdrawn pursuant to this Article 4.2(h) will be forfeited.

4.3 Maximum Amount of Employee Pre-Tax Contributions and Employee Roth Contributions.

(a) Limitation on Employee Pre-Tax Contributions and Employee Roth Contributions. No Participant shall be permitted to have aggregate elective deferrals made to the Plan or any other qualified plans maintained by the Employer during any taxable year in excess of the dollar limitation of Section 402(g) of the Code in effect at the beginning of such taxable year. For these purposes, a Participant's "elective deferrals" include: (i) the Participant's Employee Pre-Tax Contributions to this Plan (excluding any Employee Pre-Tax Contributions returned to the Participant as an Excess Amount under Article 11); (ii) the Participant's Employee Roth Contributions to this Plan (excluding any Employee Roth Contributions returned to the Participant as an Excess Amount under Article 11); and (iii) Employer contributions made on behalf of the Participant pursuant to an election to defer under any other plan with a qualified cash or deferred arrangement under Section 401(k) of the Code.

(b) Allocation of Excess Elective Deferrals. If a Participant has made Excess Elective Deferrals for any taxable year, the Participant may assign to this Plan any portion of such Excess Elective Deferrals by notifying the Plan Administrator no later than March 1 following the close of the taxable year. Such notification shall specify the amount of such Excess Elective Deferrals to be allocated to the Plan for the taxable year. A Participant shall be deemed to have notified the Plan Administrator of the existence of any Excess Elective Deferrals which arise by taking into account only those elective deferrals on behalf of the Participant to this Plan and any other plans maintained by the Employer, and to have assigned those Excess Elective Deferrals to such plans maintained by the Employer.

(c) Distribution of Excess Elective Deferrals. Notwithstanding any provision of the Plan to the contrary, if a Participant has assigned Excess Elective Deferrals to this Plan for a taxable year, the amount of such Excess Elective Deferrals, plus any income or minus any loss allocable thereto for such taxable year, shall be distributed to the Participant pro-rata from the Participant's Employee Pre- Tax Contribution Account or Employee Roth Contribution Account, as applicable, no later than the April 15 following the close of the taxable year.

(d) Income or Loss Allocable to Excess Elective Deferrals. Effective for Plan Years beginning on or after January 1, 2006, any Excess Elective Deferrals distributed in accordance with subsection (c) above shall be adjusted for any income or loss up to the date of distribution. The income or loss allocable to any excess distributed under subsection (c) above is the sum of (i) the income or loss allocable to the Participant's Employee Pre-Tax Contribution Account or Employee Roth Contribution Account, as applicable, for the Plan Year, multiplied by a fraction, the numerator of which is the excess to be distributed to such Participant under subsection (c) above for such year and the denominator of which is the Employee's Pre-Tax Contribution Account balance, or Employee Roth Contribution Account balance, as applicable, attributable to the Employee's Pre-Tax Contributions or Employee Roth Contribution Account, as applicable, without regard to any income or loss occurring during such taxable year; and (ii) 10 percent of the amount determined under (i) multiplied by the number of whole calendar months between the end of the Participant's taxable year and the date of distribution, counting the month of distribution as a whole month if the distribution occurs after the 15th day of such month.

4.4 Employee After-Tax Contributions. A Participant may elect to make Employee After- Tax Contributions to the Plan for a Plan Year provided the maximum amount of Employee Pre-Tax Contributions, Employee Roth Contributions, and Employee After-Tax Contributions which a Participant may elect to make to the Plan for any Plan Year shall not exceed 50% of the Participant's Compensation for the Plan Year subject to the limitations of Article 11. All Employee After-Tax Contributions shall be made to the Trust by the earlier of the date such amounts reasonably can be segregated from Employer assets and the date that is 15 business days following the month in which such amounts would otherwise have been payable to the Participant in cash.

4.5 Employer Matching Contributions & Employer Discretionary Contributions.

(a) Fixed Match. Except as otherwise provided below, the Employer shall make an Employer Fixed Matching Contribution on behalf of each Participant (other than those Participants described in the immediately following sentence) equal to:

(i) 75% of Employee Basic Contributions through December 31, 2024, for Participants (A) hired on or before December 31, 2023 or (B) rehired on or after January 1, 2024 and before January 1, 2025, and

(ii) 100% of Employee Pre-Tax Contributions and Employee Roth Contributions (and, for the avoidance of doubt, 0% of Employee After-Tax Contributions), not to exceed 5% of the Participant's Compensation (A) commencing January 1, 2024 for all Participants first hired on or after January 1, 2024 and (B) commencing January 1, 2025, for Participants (X) hired on or before December 31, 2023 or (Y) rehired on or after January 1, 2024 and before January 1, 2025.

Notwithstanding the immediately preceding sentence, in lieu of the contribution described in the immediately preceding sentence the Employer shall make an Employer Fixed Matching Contribution on behalf of each Participant equal to 50% of Employee Basic Contributions if such Participant is either in the bargaining unit represented by (i) the United Steelworkers of America at the Vernon, California plant, or (ii) the United Steelworkers of America, AFL-CIO-CLC, District 30 Local Number 3320 at the Dayton, Ohio plant and foundries (the "Durco Bargaining Unit Employees").

Effective as of (i) January 1, 2024, for Participants first hired on or after January 1, 2024 and (ii) January 1, 2025, for Participants (A) hired on or before December 31, 2023 or (B) rehired on or after January 1, 2024 and before January 1, 2025, following the end of each Plan Year, the Employer shall make an additional "true-up" Employer Fixed Matching Contribution on behalf of each Participant who was employed by the Employer on the last day of such Plan Year to the extent that the Employer Fixed Matching Contributions made on behalf of such Participant were less than they would have been had the formula for calculating the Employer Fixed Matching Contributions been calculated on the basis of the entire Plan Year rather than on a payroll period basis. Such additional Fixed Matching Contribution shall be in an amount equal to the difference, if any, between (X) the amount of the Employer Fixed Matching Contribution that would have been made on behalf of such Participant during the Plan Year had the formula for calculating the Employer Fixed Matching Contribution been calculated on the basis of the entire Plan Year, rather than on a payroll period basis; and (Y) the amount of the Employer Fixed Matching Contributions actually contributed by the Employer to the Plan for such Plan Year for such Participant.

The Employer Fixed Matching Contribution shall be made to the trust no later than the end of the quarter immediately following the quarter to which the Employer Fixed Matching Contribution relates except that any true up Employer Fixed Matching Contribution shall be made to the trust by no later than the due date of the Employer's tax return, including extensions, to be filed immediately following the close of the Plan Year to which such true up Employer Fixed Matching Contribution relates.

(b) Employer Discretionary Match. The Employer shall make an Employer Discretionary Matching Contribution as a percentage of Employee Basic Contributions for each Plan Year based upon the Company's meeting a performance target, which target shall be annually determined by the Company in its sole discretion. The Employer Discretionary Matching Contribution shall be made to Participants who are employed by the Employer on the last day of the Plan Year and to Participants who terminated employment during the Plan Year because of death, Disability or immediate commencement of retirement. The Employer Discretionary Matching Contribution shall be made to the Trust no later than the end of the 12- month period immediately following the close of the Plan Year. Notwithstanding anything herein to the contrary, Limitorque Bargaining Unit Employees are ineligible to receive an Employer Discretionary Matching Contribution. Notwithstanding anything to the contrary contained herein, effective for Plan Years beginning on or after January 1, 2008, no additional Employer Discretionary Matching Contributions shall be made to the Plan.

(c) Employer Discretionary Contribution. Commencing as of (i) January 1, 2024, for all Participants first hired on or after January 1, 2024 and (ii) January 1, 2025, for Participants (A) hired on or before December 31, 2023 or (B) rehired on or after January 1, 2024 and before January 1, 2025, the Employer shall make an Employer Discretionary Contribution to each Participant's Employer Discretionary Contribution Account in an amount equal to a percentage of such Participant's Compensation for each Plan Year, which percentage shall be annually determined by the Company in its sole discretion, and which the Company has initially established as 1.5% of such Participant's Compensation for the Plan Year. The Employer Discretionary Contribution shall be made to Participants who are employed by the Employer on the last day of the Plan Year and to Participants who terminated employment during the Plan Year because of death, Disability, or retirement after attaining Normal Retirement Age. The Employer Discretionary Contribution shall be made to the Trust no later than the due date of the Employer's tax return, including extensions, to be filed immediately following the close of the Plan Year to which such Employer Discretionary Contribution Relates.

(d) Forfeiture. If any Employer Matching Contribution or Employer Discretionary Contribution on behalf of any Highly Compensated Employee (as defined in Article 5.1(i)) relates to an Excess Elective Deferral, Excess Contribution (as defined in Article 5.1(g)) or an Excess Aggregate Contribution (as defined in Article 5.1(h)) which is distributed to the Highly Compensated Employee, such Employer Matching Contribution or Employer Discretionary Contribution shall be forfeited no later than the end of the 12-month period immediately following the close of the Plan Year.

4.6 Employer Nonelective Contributions. For any Plan Year in which the Plan does not satisfy one of the Average Actual Deferral Percentage tests of Article 5.2 or one of the Average Contribution Percentage tests of Article 5.5, the Employer shall be permitted, in its sole and absolute discretion to make Employer Nonelective Contributions which qualify as

Qualified Nonelective Contributions (as defined in Article 5.1(k)) to the Plan on behalf of Eligible Employees who are Non-Highly Compensated Employees (as defined in Article 5.1(j)) for the Plan Year in an amount sufficient to enable the Plan to satisfy one of the Average Actual Deferral Percentage tests or one of the Average Contribution Percentage tests for the Plan Year. All Qualified Nonelective Contributions for a Plan Year shall be made to the Trust no later than the end of the 12-month period immediately following the close of the Plan Year. Any such additional contributions shall meet the requirements of Treasury Regulation Sections 1.401(m)-2(a)(6) and 1.401(k)-2(a)(6) (or any successor thereto), as applicable.

4.7 Rollover Contributions. An Employee who has participated in any other qualified plan described in Section 401(a) of the Code or in a qualified annuity plan described in Section 403(a) of the Code shall be permitted, subject to the approval of the Plan Administrator, to make a rollover contribution to the Plan of an amount received by the Employee which is attributable to participation in such other plan (reduced by any employee after-tax contributions made to the plan), provided that the rollover contribution complies with all applicable requirements of the Code and the regulations and rulings thereunder. An Employee may make pre-tax rollover contributions into a Rollover Contribution Account, and Roth rollover contributions into a Roth Rollover Contribution Account. If after accepting a rollover contribution, the Plan Administrator determines the rollover contribution includes an invalid rollover amount, such invalid amount plus allowable income shall be distributed to the Participant within a reasonable time after such determination.

Notwithstanding any other provision herein, an Employee who participated in the Administaff 401(k) Plan and Trust shall be permitted to make a direct rollover contribution to the Plan that includes an outstanding loan balance in the Administaff 401(k) Plan and Trust, subject to the approval of the Plan Administrator and provided such loan transfer complies with all applicable requirements of the Code and the rulings thereunder If such a loan is directly rolled over into this Plan, the loan shall continue to be repaid in accordance with the terms of the promissory note and shall be subject to all of the rules and restrictions of Article 10.

Notwithstanding any other provision herein, an Employee who participated in the Invensys 401(k) Plan shall be permitted to make a direct rollover contribution to the Plan that includes after-tax employee contributions and, subject to the approval of the Plan Administrator, an outstanding loan balance in the Invensys 401(k) Plan provided such rollover and loan transfer comply with all applicable requirements of the Code and the rulings thereunder. Notwithstanding any other provision herein, if such a loan is directly rolled over into this Plan, the loan shall continue to be repaid in accordance with the terms of the promissory note and shall be subject to all of the rules and restrictions of Article 10.

Notwithstanding any other provision herein, an Employee who participated in the Lawrence Pumps, Inc. 401(k) Savings Plan shall be permitted to make a direct rollover contribution to the Plan that includes an outstanding loan balance in the Lawrence Pumps, Inc. 401(k) Savings Plan, subject to the approval of the Plan Administrator and provided such loan transfer complies with all applicable requirements of the Code and the rulings thereunder. Notwithstanding any other provision herein, if such a loan is directly rolled over into this Plan, the loan shall continue to be repaid in accordance with the terms of the promissory note and shall be subject to all of the rules and restrictions of Article 10.

4.8 Manner of Making Contributions. All contributions to the Trust shall be paid directly to the Trustee. Contributions may be made by check, bank wire or money order. The Plan Administrator shall furnish the Recordkeeper with allocation instructions with respect to each contribution which: (i) identify each Participant on whose behalf the contribution is being made and the amount thereof; (ii) identify whether the amount contributed on behalf of the Participant represents an Employee Pre-Tax Contribution, Employee After-Tax Contribution, Employer Matching Contribution, Employer Discretionary Contribution, Employee Roth Contribution, or rollover contribution; and (iii) direct the investment of the amount contributed on behalf of the Participant in accordance with the provisions of Article 6.4.

4.9 Transfer of Assets. If so authorized by the Plan Administrator, the Trustee may accept transfer of assets from the trustee of any other qualified plan described in Section 401(a) of the Code or from a qualified annuity plan described in Section 403(a) of the Code on behalf of any one or more Employees to the extent permitted by the Code and the regulations and rulings thereunder, as determined by the Plan Administrator.

4.10 Catch-Up Contributions. All Employees who are eligible to make elective deferrals under the Plan and who have attained age 50 before the close of the Plan Year shall be eligible to make catch-up contributions in accordance with, and subject to the limitations of Section 414(v) of the Code ("Catch-Up Contributions"). Such Catch-Up Contributions shall not be taken into account for purposes of the provisions of the Plan implementing Sections 402(g) and 415 of the Code. The Plan shall not be treated as failing to satisfy then provisions of the Plan implementing the requirements of Sections 401(k)(3), 401(k)(11), 401(k)(12), 410(b) or 416 of the Code, as applicable, by reason of the making of such Catch-Up Contributions. Catch-Up Contributions may be designated as Employee Pre-Tax Contributions and/or Employee Roth Contributions.

4.11 Employee Roth Contributions. Effective January 1, 2022, a Participant shall be permitted to make Employee Roth Contributions to the Plan as follows:

(a) Percentage for Employee Roth Contributions. A Participant may irrevocably elect under a salary reduction agreement as described in Article 4.2 to have the Employer make Employee Roth Contributions to the Plan on the Participant's behalf in an amount, when combined with any Employee Pre-Tax Contributions that are elected under Section 4.1 and Employee After-Tax Contributions that are elected under Section 4.4, of up to 50% of the Compensation otherwise payable to the Participant, subject to the limitations of Article 4.3 and Article 11. All Employee Roth Contributions shall be made to the Trust by the earlier of the date such amounts reasonably can be segregated from Employer assets and the date that is 15 business days following the month in which such amounts would otherwise have been payable to the Participant in cash.

(b) Employee Roth Contributions. An Employee Roth Contribution is an after-tax contribution made on or after January 1, 2022 by the Employer on a Participant's behalf: (i) pursuant to the Participant's elective deferral election, in lieu of all or a portion of the Employee Pre-Tax Contributions and Employee After- Tax Contributions the Participant is otherwise eligible to make under the Plan; (ii) that is includible in the Participant's gross income at the time the Participant would have received that amount in cash but for the Participant's elective deferral election; and (iii) that has been irrevocably designated as an Employee Roth Contribution by the Participant in his or her elective deferral election. Each Participant's Employee Roth Contributions shall be allocated to the Participant's Employee Roth Contribution Account under the Plan. Contributions and withdrawals of Employee Roth Contributions will be credited and debited to the Employee Roth Contribution Account maintained for each Participant. The Plan will maintain a record of the amount of Employee Roth Contributions in each Participant's Employee Roth Contribution Account. Gains, losses, and other credits or charges must be separately allocated on a reasonable and consistent basis to each Participant's Employee Roth Contribution Account and the Participant's other accounts under the Plan. No contributions other than Employee Roth Contributions and properly attributable earnings will be credited to each Participant's Employee Roth Contribution Account.

ARTICLE 5 - NONDISCRIMINATION REQUIREMENTS

5.1 Definitions. For purposes of this Article 5, the following terms shall be defined as follows:

(a) "Actual Deferral Percentage" means the ratio of the amount of Employee Pre-Tax Contributions and Employee Roth Contributions on behalf of an Eligible Employee for a Plan Year to the Employee's Compensation for the Plan Year, whether or not the Employee was a Participant in the Plan for the entire Plan Year. For these purposes, an Eligible Employee's Employee Pre-Tax Contributions shall include Qualified Nonelective Contributions on behalf of the Eligible Employee for the Plan Year which the Employer elects to treat as Employee Pre-Tax Contributions under Article 5.4, but shall not include any Qualified Nonelective Contributions on behalf of the Eligible Employee for the Plan Year which the Employer elects to treat as Employer Matching Contributions under Article 5.8. A Highly Compensated Employee's Employee Pre-Tax Contributions and Employee Roth Contributions shall include any Excess Elective Deferrals on behalf of the Highly Compensated Employee for the Plan Year. Any Eligible Employee who does not elect to make Employee Pre-Tax Contributions or Employee Roth Contributions and who does not receive any allocation of Qualified Nonelective Contributions which are treated as Employee Pre-Tax Contributions for a Plan Year shall have a zero Actual Deferral Percentage for the Plan Year. An Eligible Employee's Actual Deferral Percentage for a Plan Year shall be calculated by disregarding any Employee Pre-Tax

Contributions and Employee Roth Contributions on behalf of the Eligible Employee for the Plan year which are properly returned to the Eligible Employee as an Excess Amount under Article 11. In calculating the Actual Deferral Percentage of a Highly Compensated Employee who participates in more than one plan maintained by an Employer or an Affiliate, all elective deferrals (as defined in Code Section 401(m)(4)) of such Highly Compensated Employee shall be aggregated for purposes of determining such percentage.

(b) "Average Actual Deferral Percentage" means, for the group of Eligible Employees who are Highly Compensated Employees for a Plan Year or the group of Eligible Employees who are Non-Highly Compensated Employees for the Plan Year, the average of the Actual Deferral Percentages of all Eligible Employees in such group for the Plan Year.

(c) "Average Contribution Percentage" means, for the group of Eligible Employees who are Highly Compensated Employees for a Plan Year or the group of Eligible Employees who are Non-Highly Compensated Employees for the Plan Year, the average of the Contribution Percentages of all Eligible Employees in such group for the Plan Year. In calculating the Average Contribution Percentage, all Employee contributions and matching contributions (as defined in Code Section 401(m)(4)) of any Highly Compensated Employee who participates in more than one plan maintained by an Employer or an Affiliate shall be aggregated for purposes of determining such percentage.

In calculating the Average Contribution Percentage, all Employee contributions and matching contributions (as defined in Code Section 401(m)(4)) to any plan required to be aggregated with the Plan for purposes of Code Section 401(a)(4) or 410(b) shall be treated as if made under the Plan. If the Plan is permissively aggregated with another plan in order to comply with the

Average Contribution Percentage limitations, such aggregated plans must also meet the requirements of Code Sections 401(a)(4) and 410(b) as a single plan. If the Average Contribution Percentage under is determined under the current year testing method, the Plan may not be permissively aggregated with another plan in order to comply with the Average Contribution Percentage limitations if such other plan determines Average Contribution Percentage under the prior year testing method.

(d) "Contribution Percentage" means the ratio of the sum of Employer Matching Contributions, Employee After-Tax Contributions, and any Employee Pre- Tax Contributions, Employee Roth Contributions and Qualified Nonelective Contributions treated as Employer Matching Contributions under Article 5.6, on behalf of an Eligible Employee for a Plan Year to the Employee's Compensation for the Plan Year, whether or not the Employee was a Participant in the Plan for the entire Plan Year. For these purposes, an Eligible Employee's Contribution Percentage for any Plan Year shall be calculated by excluding any Employer

Matching Contributions which are forfeited either to correct Excess Aggregate Contributions or because the contributions to which they relate are Excess Elective Deferrals, Excess Contributions, or Excess Aggregate Contributions. An Eligible Employee's Contribution Percentage for a Plan Year shall be calculated by disregarding any Employee After-Tax Contributions, Employee Pre-Tax Contributions or Employee Roth Contributions on behalf of the Eligible Employee for the Plan Year which are properly returned to the Eligible Employee as an Excess Amount under Article 11.

(e) "Compensation" means Compensation as defined in Article 2.5 of the Plan.

(f) "Eligible Employee" means, with respect to any Plan Year, any Employee who is eligible to commence participation in the Plan under Article 3.2 and to have Employee Pre-Tax Contributions or Employee Roth Contributions made to the Plan under Article 4.1 for the Plan Year regardless of whether any contributions are made to the Plan on behalf of the Employee for the Plan Year.

(g) "Excess Contributions" means, with respect to any Plan Year the excess of the aggregate amount of Employee Pre-Tax Contributions and Employee Roth Contributions, including any Qualified Nonelective Contributions actually made to the Plan on behalf of Highly Compensated Employees for the Plan Year over the maximum amount of such contributions permitted under Article 5.2.

(h) "Excess Aggregate Contributions" means, with respect to any Plan Year, the excess of the aggregate amount of Employer Matching Contributions, Employee After-Tax Contributions and any Employee Pre-Tax Contributions, Employee Roth Contributions and Qualified Nonelective Contributions treated as Employer Matching Contributions under Article 5.6 actually made to the Plan on behalf of Highly Compensated Employees for the Plan Year over the maximum amount of such contributions permitted under Article 5.5.

(i) "Highly Compensated Employee" includes, for any Plan Year, all active Highly Compensated Employees (an "Highly Compensated Active Employee") and all former Highly Compensated Employees (a "Highly Compensated Former Employee"):

(1) A Highly Compensated Active Employee includes any Employee who performs service for the Employer during the current Plan Year and who during the preceding Plan Year:

(i) received Compensation from the Employer in excess of $80,000 (as adjusted pursuant to Section 415(d) of the Code, except that the base period shall be the quarter ending September 30, 1996); and

(ii) if the Employer elects to limit the group of Employees earning in excess of $80,000 that are considered "Highly Compensated Employees," was in the group of Employees consisting of the top 20% of the Employees when ranked on the basis of Compensation paid during such year.

(2) A Highly Compensated Active Employee also includes any Employee who is a five percent owner (as defined in Section 416(1)(1) of the Code) of the Employer at any time during the current Plan Year or preceding Plan Year.

(3) A Highly Compensated Former Employee includes any Employee who separated from service with the Employer (or was deemed to have separated from service) prior to the current Plan Year, performs no service for the Employer during the current Plan Year, and was a Highly Compensated Active Employee for either the year of separation from service or any Plan Year ending on or after the Employee's 55th birthday.

(4) The determination of Highly Compensated Employees, including the determination of the number and identity of Employees in the top-paid group and the Compensation that is taken into account with respect to each Employee, shall be made in accordance with Section 414(q) of the Code and the regulations thereunder.

(j) "Non-Highly Compensated Employee" means, for any Plan Year, an Employee who is not a Highly Compensated Employee.

(k) "Qualified Nonelective Contributions" means any Employer Nonelective Contributions to this Plan on behalf of Eligible Employees, and any qualified nonelective contributions (as defined in Section 401(m)(4)(C) of the Code) by the Employer to any other plan or plans on behalf of Eligible Employees that Eligible Employees may not elect to receive in cash until distributed from the plan, which are non-forfeitable (fully-vested) when made, and which are subject to the distribution restrictions of Section 401(k)(2)(B) of the Code, provided that amounts attributable to such contributions are not distributable merely on account of the Employee's hardship. Qualified Nonelective Contributions shall meet the requirements of Treasury Regulation Section 1.401(m)-2(a)(6) and 1.401(k)-2(a)(6) (or any successor thereto), as applicable.

5.2 Average Actual Deferral Percentage Tests. For each Plan Year, the Plan shall satisfy one of the following Average Actual Deferral Percentage tests with respect to the Employee Roth Contributions, Employee Pre-Tax Contributions, and any Qualified Nonelective Contributions treated as Employee Pre-Tax Contributions under Article 5.3, made to the Plan for the Plan Year:

(a) the Average Actual Deferral Percentage for the group of Eligible Employees who are Highly Compensated Employees for the Plan Year shall not exceed the Average Actual Deferral Percentage for the group of Eligible Employees who are Non-Highly Compensated Employees for the Plan Year multiplied by 1.25; or

(b) the Average Actual Deferral Percentage for the group of Eligible Employees who are Highly Compensated Employees for the Plan Year shall not exceed the Average Actual Deferral Percentage for the group of Eligible Employees who are Non-Highly Compensated Employees for the Plan Year multiplied by two, provided that the Average Actual Deferral Percentage for the group of Eligible Employees who are Highly Compensated Employees for the Plan Year does not exceed the Average Actual Deferral Percentage for the group of Eligible Employees who are Non-Highly Compensated Employees by more than two percentage points.

The nondiscrimination testing required under this Article 5.2 shall be performed pursuant to Section 401(k)(3) of the Code and the regulations thereunder. The Actual Deferral Percentage for the Highly Compensated Employees and for the Non-Highly Compensated Employees shall be determined for the current Plan Year.

5.3 Treatment of Qualified Nonelective Contributions as Employee Pre-Tax Contributions.
If any Qualified Nonelective Contributions are made on behalf of Eligible Employees for a Plan Year, the Employer may elect, in accordance with the regulations of the Secretary of Treasury under Section 401(k) of the Code, to treat all or a portion of such Qualified Nonelective Contributions as Employee Pre-Tax Contributions for purposes of calculating the Actual Deferral Percentages of Eligible Employees for the Plan Year. Any such Qualified Nonelective Contributions for a Plan Year must be made no later than the end of the 12- month period immediately following the close of the Plan Year.

5.4 Adjustment to Actual Deferral Percentage Tests General Rule.

(a) General Rule. If the Plan does not satisfy one of the Average Actual Deferral Percentage tests of Article 5.2 as of the end of a Plan Year, the Excess Contributions for the Plan Year shall be corrected (i) if the Employer makes Qualified Nonelective Contributions to the Plan on behalf of Non-Highly Compensated Employees in accordance with Article 4.6 in an amount sufficient to enable the Plan to satisfy one of the Average Actual Deferral Percentage tests of Article 5.2 for the Plan Year, or (ii) if the Excess Contributions for the Plan Year are timely distributed to Highly Compensated Employees in accordance with subsection (c) below.

(b) Allocation of Excess Contributions. In the event Excess Contributions are made to the Plan for a Plan Year, the Highly Compensated Employee with the highest Employee Roth Contributions and Employee Pre-Tax Contributions, including Qualified Nonelective Contributions treated as Employee Pre-Tax Contributions under Article 5.3 for the Plan Year, shall be reduced to the minimum extent necessary either:

(1) to enable the Plan to satisfy one of the Average Actual Deferral Percentage tests of Article 5.2 for the Plan Year; or

(2) to cause the Employee's Employee Roth Contributions and Employee Pre-Tax Contributions, including Qualified Nonelective Contributions treated as Employee Pre-Tax Contributions under Article 5.3, to equal the second highest amount of Employee Roth Contributions and Employee Pre-Tax Contributions, including Qualified Nonelective Contributions treated as Employee Pre-Tax Contributions under Article 5.3 of any Highly Compensated Employee for the Plan Year.

This process shall be repeated until the Excess Contributions for the group of Eligible Employees who are Highly Compensated Employees is sufficiently reduced to enable the Plan to satisfy one of the Average Actual Deferral Percentage tests of Article 5.2 for the Plan Year.

(c) Distribution and/or Recharacterization of Excess Contributions. If any Excess Contributions allocated to Highly Compensated Employees for a Plan Year are not corrected by Qualified Nonelective Contributions under Article 4.6, such Excess Contributions, plus any income and minus any loss allocable thereto, shall be distributed to Highly Compensated Employees no later than 12 months following the close of the Plan Year; provided, however, where the Employer has decided to recharacterize Excess Contributions, distribution shall be made to the extent that excess contributions are not so recharacterized. Such distributions shall be made to Highly Compensated Employees pro-rata on the basis of the amount of the Employee Roth Contributions and Employee Pre-Tax Contributions, including Qualified Nonelective Contributions treated as Employee Pre-Tax Contributions under Article 5.3, attributable to each such Highly Compensated Employee. Excess Contributions (and the income thereon) with the amount of such Excess Contributions calculated by reducing the contributions made on behalf of Highly Compensated Employees in the order of the actual deferral percentages beginning with the highest such percentage and continuing to reduce the elective contributions of the Highly Compensated Employees with the next highest contribution percentages in a like manner in descending order based on rates of contribution percentages until such percentages satisfy the Average Actual Deferral Percentage test shall be distributed or recharacterized to the Highly Compensated Employees. In distributing or recharacterizing Excess Contributions, the following rules shall apply: The Excess Contributions shall first be applied to reduce the dollar amount elected by all those Highly Compensated Employees who have elected the highest dollar amount of elective contributions compared to the dollar amount elected by all those Highly Compensated Employees (including those Employees whose dollar amount was previously reduced) whose elected dollar amount is at the next highest dollar amount of elective contributions and shall thereafter continue to be applied to the extent necessary in like manner in descending order on the basis of elected contribution amounts until the reductions equal the Excess

Contributions and enable the elective contributions to conform to the limitations of the Average Actual Deferral Percentage test.

The amount of Excess Contributions to be distributed or recharacterized to each affected Highly Compensated Employee is equal to the elective contributions on behalf of such Employee (prior to reduction of the Excess Contributions) less the product of such Employee's Actual Deferral Percentage (after reduction for such Excess Contributions) times such Employee's total Compensation, rounded to the nearest one cent ($.01), and likewise is equal to the amount of reduction provided for herein.

The amount of Excess Contributions that may be distributed or recharacterized under this Subsection with respect to a Highly Compensated Employee for a Plan Year shall be reduced by any Excess Elective Deferrals attributable to such Plan Year previously distributed to such Employee. In the event a distribution of elective contributions constitutes a distribution of Excess Contributions and a distribution of Excess Elective Deferrals, the amounts distributed shall be treated as a simultaneous distribution of both Excess Contributions and Excess Elective Deferrals.

If the distribution of Excess Contributions is made as provided above, the test provided in Section 401(k)(3) of the Code shall be deemed to be met regardless of whether the test provided in Article 5.2, if recalculated after distribution of the Excess Contributions, would satisfy Section 401(k)(3) of the Code. For purposes of Section 401(m)(9) of the Code, if a corrective distribution of Excess Contributions has been made, the Actual Deferral Percentage for Highly Compensated Employees is deemed to be the largest amount permitted under Section 401(k)(3) of the Code. The Employer may treat the Excess Contributions of a Participant as Employee After-Tax Contributions. Recharacterized amounts will remain nonforfeitable and subject to the same distribution requirements as Employee Pre-Tax Contributions. Recharacterization must occur no later than 2½ months after the last day of the Plan Year in which the Excess Contributions arose, and is deemed to occur no earlier than the date the last Participant is informed by the Plan Administrator of the amount recharacterized and the consequences thereof.

In addition, the Employer may designate all or part of any Employer Matching Contributions that have not yet been contributed to the Trust and allocated to a Participant's account as qualified matching contributions or non- qualified matching contributions, respectively, which shall be so designated at the time of contribution to the Trust, and which shall be included in the Actual Deferral Percentage calculations to the extent necessary to insure that the Actual Deferral Percentage limitations are met, provided such use complies with the requirements of Treasury Regulation Section 1.401(k)-2(a)(6) (or any successor thereto). Any Employer Matching Contributions so designated shall not be included in the Actual Contribution Percentage calculations under, shall be treated as Elective

Deferrals, shall be allocated to such Participant's Elective Deferral Account, shall be immediately fully vested and shall be subject to the distribution restrictions applicable to Elective Deferrals.

(d) Income or Loss Allocable to Excess Contributions. Effective for Plan Years beginning on or after January 1, 2008, Excess Contributions distributed under subsection (c) above shall be adjusted for any income or loss through the end of the Plan Year to which the Excess Contributions relates. The income or loss allocable to Excess Contributions is equal to the income or loss allocable to the Participant's Elective Deferral account for the taxable year, multiplied by a fraction, the numerator of which is such Participant's Excess Contributions for such year and the denominator of which is the Participant's Elective Deferral account balance attributable to the Elective Deferrals without regard to any income or loss occurring during such taxable year.

(e) Coordination with Excess Elective Deferrals. The amount of any Excess Contributions to be distributed under subsection (c) above with respect to any Highly Compensated Employee for a Plan Year shall be reduced by any Excess Elective Deferrals previously distributed to the Highly Compensated Employee under Article 4.3(c) for the Employee's taxable year ending with or within the Plan Year.

(f) Accounting for Excess Contributions. The amount of Excess Contributions allocated to a Highly Compensated Employee for a Plan Year which is distributed under subsection (c) above shall be attributed first to the Participant's Employee Pre-Tax Contributions for the Plan Year and then, to the extent such Excess Contributions exceed the Participant's Employee Pre-Tax Contributions for the Plan Year, attributed to amounts treated as Employee Pre-Tax Contributions under Article 5.3 in proportion to the amounts of such contributions on behalf of the Participant for the Plan Year.

(g) Excise Tax. If Excess Contributions for a Plan Year are corrected (either by distribution or recharacterization) more than 2½ months after the last day of the Plan Year in which the excess amounts arose, an excise tax equal to 10% of the excess amounts will be imposed on the Employer maintaining the Plan.

5.5 Average Contribution Percentage Tests. For each Plan Year for which any Employer Matching Contributions are made to the Plan or any Employee After-Tax Contributions are made to the Plan, the Plan shall satisfy one of the following Average Contribution Percentage tests for the Plan Year:

(a) the Average Contribution Percentage for the group of Eligible Employees who are Highly Compensated Employees for the Plan Year shall not exceed the Average Contribution Percentage for the group of Eligible Employees who are Non-Highly Compensation Employees for the Plan Year multiplied by 1.25; or

(b) the Average Contribution Percentage for the group of Eligible Employees who are Highly Compensated Employees for the Plan Year shall not exceed the Average Contribution Percentage for the group of Eligible Employees who are Non-Highly Compensated Employees for the Plan Year multiplied by two, provided that the Average Contribution Percentage for the group of Eligible Employees who are Highly Compensated Employees for the Plan Year does not exceed the Average Contribution Percentage for the group of Eligible Employees who are Non-Highly Compensated Employees by more than two percentage points.

The nondiscrimination testing required under this Article 5.5 shall be performed pursuant to Section 401(m)(2) of the Code and the regulations thereunder. The Contribution Percentage for the Highly Compensated Employees and for the Non- Highly Compensated Employees shall be determined for the current Plan Year.

In calculating the Average Contribution Percentage, all matching contributions (as defined in Code Section 401(m)(4)) and after-tax contributions to any plan required to be aggregated with the Plan for purposes of Code Section 401(a)(4) or 410(b) shall be treated as if made under the Plan. If the Plan is permissively aggregated with another plan in order to comply with the limitations of this Section 5.5, such aggregated plans must also meet the requirements of Code Sections 401(a)(4) and 410(b) as a single plan.

In calculating the Average Contribution Percentage, all matching contributions (as defined in Code Section 401(m)(4)) and after-tax contributions of any Highly Compensated Employee who participates in more than one plan maintained by an Employer or an Affiliate shall be aggregated for purposes of determining such percentage.

5.6 Treatment of Employee Pre-Tax Contributions, Employee Roth Contributions and Qualified Nonelective Contributions as Employer Matching Contributions. The Employer may elect, in accordance with the regulations of the Secretary of Treasury under Section 401(m) of the Code, to treat all or a portion of the Employee Pre-Tax Contributions, Employee Roth Contributions and any Qualified Nonelective Contributions on behalf of Eligible Employees for a Plan Year as Employer Matching Contributions for purposes of calculating the Contribution Percentages of Eligible Employees for the Plan Year. Any such Employee Pre-Tax Contributions, Employee Roth Contributions or Qualified

Nonelective Contributions for a Plan for a Plan Year must be made no later than the end of the 12- month period immediately following the close of the Plan Year. Notwithstanding the preceding, the Employer may elect to treat Employee Pre-Tax Contributions and Employee Roth Contributions as Employer Matching Contributions for purposes of calculating Contribution Percentages only if one of the Average Actual Deferral Percentage tests of Article 5.2 is satisfied before the Employee Pre-Tax Contributions and Employee Roth Contributions are treated as Employer Matching Contributions for the Plan Year, and one of the Average Actual Deferral Percentage tests of Article 5.2 continues to be satisfied for the Plan year excluding the Employee Pre-Tax Contributions and Employee Roth Contributions treated as Employer Matching Contributions for the Plan Year.

5.7 Adjustment to Actual Contribution Percentage Tests.

(a) General Rule. If the Plan does not satisfy one of the Average Contribution Percentage tests of Article 5.5 as of the end of a Plan Year, the Excess Aggregate Contributions for the Plan Year shall be corrected (i) if the Employer makes Qualified Nonelective Contributions to the Plan on behalf of Non Highly Compensated Employees in accordance with Article 4.6 in an amount sufficient to enable the Plan to satisfy one of the Average Contribution Percentage tests of Article 5.5 for the Plan Year, or (ii) if the Excess Aggregate Contributions for the Plan year are forfeited or timely distributed to Highly Compensated Employees in accordance with subsection (c) below.

(b) Allocation of Excess Aggregate Contributions. In the event Excess Aggregate Contributions are made to the Plan for a Plan Year, the amount of Excess Aggregate Contributions for the Highly Compensated Employee with the highest portion of Excess Aggregate Contributions for the Plan Year shall be reduced to the minimum extent necessary either:

(1) to enable the Plan to satisfy one of the Average Contribution Percentage tests of Article 5.5 for the Plan Year, or;

(2) to cause the Highly Compensated Employee’s portion of Excess Aggregate Contributions to equal the second highest amount of Excess Aggregate Contributions of any Highly Compensated Employee for the Plan Year.

This process shall be repeated until the Excess Aggregate Contributions for the group of Eligible Employees who are Highly Compensated Employees for the Plan Year is sufficiently reduced to enable the Plan to satisfy one of the Average Contribution Percentage tests of Article 5.5 for the Plan Year.

(c) Forfeiture or Distribution of Excess Aggregate Contributions. If any Excess Aggregate Contributions allocated to Highly Compensated Employees for a Plan Year are not corrected by Qualified Nonelective Contributions under Article 4.6, such Excess Aggregate Contributions, plus any income or minus any loss allocable thereto for the taxable year, must be forfeited to the extent attributable under subsection (f) below to Employer Matching Contributions that are not vested under Article 7.2, and otherwise distributed to Highly Compensated Employees no later than 12 months following the close of the Plan Year. Such distributions shall be made to Highly Compensated Employees on the basis of the respective portions of the Excess Aggregate Contributions attributable to each such Highly Compensated Employee.

In the event that following the end of the Plan Year, it is determined that the Employer Matching Contributions for Highly Compensated Employees exceed the Average Contribution Percentage test limitations, then the amount in excess of such limitation ("Excess Aggregate Contributions") (and the income thereon) (with the amount of such Excess Aggregate Contributions calculated by reducing the contributions made on behalf of Highly Compensated Employees in the order of the actual contribution percentages beginning with the highest such percentage and continuing to reduce the Employer Matching Contributions of the Highly Compensated Employees with the next highest contribution percentages in a like manner in descending order based on rates of contribution percentages until such percentages satisfy the Average Contribution Percentage test) either shall be (a) distributed to the Highly Compensated Employees, or (b) forfeited, in accordance with the following rules:

The Excess Aggregate Contributions shall first be applied to reduce the dollar amount of all those Highly Compensated Employees who have received an allocation of the highest dollar amount of Employer Matching Contributions to the dollar amount allocated to all those Highly Compensated Employees (including those Employees whose dollar amount was previously reduced) whose contribution amount is at the next highest dollar amount of Employer Matching Contributions, and shall thereafter continue to be applied to the extent necessary in like manner in descending order on the basis of contribution amounts until the reductions equal the Excess Aggregate Contribution and enable the Employer Matching Contributions to conform to the limitations of the Average Contribution Percentage test.

A Highly Compensated Employee's Excess Aggregate Contributions shall be distributed, if vested, or forfeited, if nonvested, in proportion to the Participant's vested and nonvested interests in all Employer Matching Contributions. For purposes of the foregoing sentence, the Employee's Excess Aggregate Contributions attributable to the vested portion of the Highly Compensated Employee's Matching Contributions for any Plan Year shall be the product of (a) the amount of the Employee's Excess Aggregate Contributions (as adjusted for allocable income) multiplied by (b) his vested percentage, determined as of the last day of said Plan Year.

If the distribution of Excess Aggregate Contributions is made as provided above, the test provided in Section 401(m)(2) of the Code shall be deemed to be met regardless of whether the test provided in Article 5.5, if recalculated after distribution of the Excess Aggregate Contributions, would satisfy Section 401(m)(2) of the Code. For purposes of Section 401(m)(9) of the Code, if a corrective distribution of Excess Aggregate Contributions has been made, the Actual Contribution Percentage for Highly Compensated Employees is deemed to be the largest amount permitted under Section 401(m)(2) of the Code.

In addition, the Employer may designate all or part of the Elective Deferrals or Employer Matching Contributions, or both, that have not yet been contributed to the Trust and allocated to a Participant's account as elective contributions or Qualified Nonelective Contributions, respectively, which shall be so designated at the time of contribution to the Trust, and which shall be included in the Actual Contribution Percentage calculations to the extent necessary to insure that the limitations of the Actual Contribution Percentage test are met, provided such use complies with the requirements of Treasury Regulation Section 1.401(m)-2(a)(6) (or any successor thereto). Any Elective Deferrals or Employer Matching Contributions so designated shall not be included in the average deferral percentage calculations, shall be treated as Elective Deferrals, shall be allocated to such Participant's Elective Deferral account, shall be immediately fully vested and shall be subject to the distribution restrictions applicable to Elective Deferrals.

(d) Income or Loss Allocable to Excess Aggregate Contributions. Effective for Plan Years beginning on or after January 1, 2008, Excess Aggregate Contributions shall be adjusted for any income or loss through the end of the Plan Year to which the Excess Aggregate Contributions relates. The income or loss allocable to Excess Aggregate Contributions is the income or loss allocable to the Participant's Elective Deferral account and Employer Matching Contribution account (as applicable) for the Plan Year, multiplied by a fraction, the numerator of which is such Participant's Excess Aggregate Contributions for such year and the denominator of which is the Participant's account balance attributable to the Actual Contribution Percentage amounts without regarding to any income or loss occurring during such taxable year.

(e) Coordination with Excess Contributions. The determination of the amount of Excess Aggregate Contributions for a Plan Year shall be made after the determination of the amount of any Excess Contributions for the Plan Year.

(f) Accounting for Excess Aggregate Contributions.

(1) Non-Matched Employee After-Tax Contributions. At any time that the

Plan provides for Employee After-Tax Contributions which are not matched by Employer Matching Contributions under Article 4.5, the amount of Excess Aggregate Contributions allocated to a Highly Compensated Employee for a Plan Year shall be attributed first to the Employee After-Tax Contributions by the Participant for the Plan Year. To the extent such Excess Aggregate Contributions exceed the Participant's Employee After-Tax Contributions for the Plan Year, such Excess Aggregate Contributions shall be attributed to the Employer Matching Contributions and any amounts treated as Employer Matching Contributions under Article 5.6 in proportion to the amounts of such contributions on behalf of the Participant for the Plan Year.

(2) Other Situations. If subsection (i) above does not apply, the amount of Excess Aggregate Contributions allocated to a Highly Compensated Employee for a Plan Year shall be attributed to the Employee After-Tax Contributions, Employer Matching Contributions and any amounts treated as Employer Matching Contributions under Article 4.5 in proportion to the amounts of such contributions on behalf of the Participant for the Plan Year.

ARTICLE 6 - ALLOCATIONS AND INVESTMENTS

6.1 Receipt of Contributions by Trustee. All contributions to the Plan which are paid to the Trustee under Article 4.8 shall be held in trust and managed by the Trustee in accordance with the terms and conditions of the Trust Agreement.

6.2 Establishment of Separate Accounts by Recordkeeper.

(a) In accordance with the directions of the Plan Administrator, the Recordkeeper shall establish and maintain the following separate accounts in the name of each Participant:

(1) an Employee Pre-Tax Contribution Account to record the Employee Pre-Tax Contributions to the Plan on behalf of the Participant under Article 4.1, and the earnings, losses and expenses allocated thereto;

(2) an Employee After-Tax Contribution Account to record any Employee After-Tax Contributions to the Plan by the Participant under Article 4.4 and the earnings, losses and expenses allocated thereto;

(3) an Employer Fixed Matching Contribution Account and an Employer Discretionary Matching Contribution Account to record any Employer Matching Contributions to the Plan on behalf of the Participant under Article 4.5(a) or (b) and the earnings, losses and expenses allocated thereto;

(4) an Employer Discretionary Contribution Account to record any Employer Discretionary Contributions to the Plan on behalf of the Participant under Article 4.5(c) and the earnings, losses and expenses allocated thereto;

(5) an Employer Nonelective Contribution Account to record any Employer Nonelective Contributions to the Plan on behalf of the Participant under Article 4.6 and the earnings, losses and expenses allocated thereto;

(6) a Rollover Contribution Account to record any rollover contributions to the Plan on behalf of the Participant under Article 4.7 and the earnings, losses and expenses allocated thereto;

(7) an Employee Roth Contribution Account to record the amount of Employee Roth Contributions to the Plan on behalf of the Participant under Article 4.11 and the earnings, losses and expenses allocated thereto;

(8) a Roth In-Plan Conversion Account to record any contributions which are converted to Roth contributions pursuant to Article 8.12; and

(9) such other accounts as the Plan Administrator shall direct in accordance with the provisions of the Plan or the requirements of the Code, including an account that may be required by a Merged Plan or a transferor plan.

(b) The Plan Administrator shall certify to the Recordkeeper the name, address and social security number of each Participant for whom a separate account is to be established under the Plan. The Plan Administrator shall furnish the Recordkeeper with instructions in accordance with Article 4.8 allocating all contributions to the Plan to Participants' separate accounts.

(c) The maintenance of separate accounts under subsection (a) above shall be for accounting purposes only. Any amount distributed to a Participant or Beneficiary under Article 8, or any amount withdrawn by a Participant under Article 9, shall be charged to the appropriate separate accounts of the Participant as of the applicable Valuation Date for such distribution or withdrawal under Article 8.4 or Article 9.5.

6.3 Forfeitures. Any Forfeitures which have become available under Article 4.5, Article 5.7(c) or Article 8.5 during a Plan Year shall be used to reduce the amount of contributions thereafter required to be made to the Plan by the Employer or to pay Plan expenses.

6.4 Investment of Plan Assets. All amounts which are allocated to the separate accounts of a Participant under the Plan shall be invested and reinvested in investments authorized under the Trust Agreement in accordance with the Participant investment directions except that the Employer Discretionary Matching Contribution shall be automatically invested in the Flowserve Corporation Stock Fund (as described in Article 6.5), subject to subsequent divestiture at the election of the Participant. All such investment directions or any change in investment directions by a participant shall be made in accordance with rules and procedures prescribed by the Plan Administrator. A Participant shall be permitted to transfer accounts under the Plan and future contributions by or on behalf of the Participant under the Plan, including Employer Discretionary Matching Contributions that are first invested in the Flowserve Corporation Stock Fund.

6.5 The Flowserve Corporation Stock Fund. The term “Flowserve Stock” means a class of common voting shares issued by Flowserve Corporation which are readily tradable on a national securities exchange that is registered under the provisions of Section 6 of the Securities Exchange Act of 1934. Notwithstanding any other provision of the Plan, the Plan shall at all times be administered in a manner that will minimize or eliminate a Participant’s liability to Flowserve Corporation under Section 16(b) of the Securities Exchange Act of 1934, and the rules, regulations and interpretations thereunder.

6.5A Diversification Requirements for the Flowserve Corporation Stock Fund.

(a) The provisions of this Section 6.5A apply only with respect to the Flowserve Corporation Stock Fund.

(b) Notwithstanding any other provision in the Plan, with respect to a Participant (including for purposes of this Section 6.5A, an alternate payee who has an account under the Plan with respect to such Participant or a deceased Participant’s Beneficiary), if a portion of the Participant’s account attributable to Employee Pre-Tax Contributions, Employee After-Tax Contributions, Employer Non-Elective Contributions, or Rollover Contributions is invested in the Flowserve Corporation Stock Fund, then the Participant must be offered the opportunity to elect to divest amounts invested in the Flowserve Corporation Stock Fund and reinvest an equivalent amount in other investment options as described in Section 6.5A(d).

(c) Notwithstanding any other provision in the Plan, with respect to a Participant (including for purposes of this Section 6.5A, an alternate payee who has an account under the Plan with respect to such Participant or a deceased Participant's Beneficiary) who has completed at least three (3) Years of Service for vesting purposes, if a portion of the Participant's account attributable to Employer Matching Contributions is invested in the Flowserve Corporation Stock Fund, then the Participant must be offered the opportunity to elect to divest amounts invested in the Flowserve Corporation Stock Fund and reinvest an equivalent amount in other investment options as described in Section 6.5A(d).

(d) At least three investment options (other than Flowserve Stock) must be offered to Participants described in Sections 6.5A(b) and 6.5A(c). Each investment option must be diversified and have materially different risk and return characteristics. Periodic reasonable divestment and reinvestment opportunities must be provided at least quarterly. Except as provided in sections 1.401(a)(35)- 1(e)(2) and (3) of the Treasury Regulations, restrictions (either direct or indirect) or conditions will not be imposed on the investment of Flowserve Stock if such restrictions or conditions are not imposed on the investment of other assets of the Plan.

6.6 Allocation of Earnings and Losses.

(a) The dividends, capital gains distributions, and other earnings received on any shares or units of a fund or on any other Plan investments which are specifically credited or earmarked to a Participant's separate account under the Plan shall be allocated to such separate account as of the end of each Valuation Date to the extent administratively practicable and immediately reinvested, to the extent practicable, in additional shares or units of such funds or other earmarked Plan investments.

(b) Any Plan earnings or losses attributable to the investment of a Participant's separate account under the Plan in a loan to the Participant under this Article 10 shall be allocated to the Participant's separate account in accordance with the provisions of Article 10.8.

6.7 No Rights Created by Allocation. Any allocation of contributions or earnings to the separate account of a Participant under this Article 6 shall not cause the Participant to have any right, title or interest in any assets of the Plan except at the time and under the terms and conditions expressly provided for in the Plan.

6.8 ERISA Account. Notwithstanding anything herein to the contrary, any amounts held in the ERISA Account not used to pay the reasonable and proper expenses incurred in the administration of the Plan shall be allocated on a pro rata basis to the accounts of all Participants in the Plan (determined as of the allocation date) no later than the last day of the Plan Year to which the amounts held in said ERISA Account relate. Amounts held in the ERISA Account may not be used to reduce any Employer Matching Contributions, Employer Discretionary Contributions or Employer Nonelective Contributions. The limitations set forth in Section 5.5 of the Plan shall not apply to contributions made to the ERISA Account. Moreover, contributions made to the ERISA Account shall not be considered Annual Additions.

ARTICLE 7 - VESTING

7.1 Full Vesting in Employee Contributions, Rollover Contributions, Qualified Nonelective Contributions and ERISA Account Allocations. A Participant shall be fully vested at all times in all Employee Pre-Tax Contributions, Employee After-Tax Contributions, Employee Roth Contributions, Rollover Contributions and Qualified Nonelective Contributions made to the Plan on the Participant's behalf and all earnings on such contributions. Furthermore, a Participant shall be fully vested at all times in any allocation made to the Participant's account from the Plan's ERISA Account in accordance with Section 6.8, hereof, and all earnings on such allocations.

7.2 Vesting in Employer Contributions.

General Rule. Except as otherwise provided below, the vested amounts in a Participant's Employer Matching Contribution Accounts and Employer Discretionary Contribution Account shall be determined by the number of Years of Service completed by the Participant for vesting purposes (as determined under Article 7.3) and:

(a) For Participants (i) hired on or before December 31, 2023 or (ii) rehired on or after January 1, 2024 and before January 1, 2025, the following vesting schedule, which remains in effect until December 31, 2024:

YYears of Service	VVested Percentage
1	20%
2	40%
3	60%
4	80%
5	100%

(b) For Participants first hired on or after January 1, 2024, and effective as of January 1, 2025 for all other Participants, the following vesting schedule:

Years of Service	Vested Percentage
1	33%
2	67%
3	100%

Notwithstanding the above vesting schedules, all amounts allocated to a Participant's Employer Matching Contribution Account and Employer Discretionary Contribution Account shall automatically become fully vested if the Participant incurs a Disability, dies while employed by the Employer, retires upon attaining Normal Retirement Age, or if a Durco Bargaining Unit Employee reaches the retirement date as set forth in the bargaining agreement. The vested percentage of a former Participant in the CAP Plan on June 30, 1999 is 100% and such vested amount shall not be subject to the above vesting schedules. For any Participant who terminated employment prior to July 1, 1999, vesting shall be determined by the schedule in effect under the Merged Plan on the Participant's employment termination date. Notwithstanding any provision herein to the contrary, Limitorque Bargaining Unit Employees shall be 0% vested until completion of three years of service and then shall be fully (100%) vested.

7.3 Year of Service for Vesting Purposes. For vesting purposes, a Participant shall be credited with one Year of Service for each 12-consecutive month period beginning with the Employee's employment commencement date (or if applicable reemployment commencement date) and the succeeding 12-consecutive month periods beginning on the anniversaries of that commencement date. Service is required to be taken into account for the period of time from the date the Employee first performs an Hour of Service until he or she severs from service with the Employer. The date the Employee severs from service is the earlier of the date the Employee quits, is discharged, retires, or dies. An Employee on an approved leave of absence will not be considered to have experienced a severance from service until the date the Employee quits, is discharged, retires or dies. The period of time during which an Employee who has severed from service by reason of voluntary termination, discharge or retirement may return to service and receive vesting credit ends on the first anniversary of the severance date due to voluntary termination, discharge or retirement. If an Employee is absent from service for any other reason and then quits, is discharged or retires, the period of time during which the Employee may return and receive credit begins on the first date of absence and ends one year after the severance date due to the employee's voluntary termination, discharge, or retirement.

For periods prior to the Effective Date of the Plan, a Participant shall be credited with one Year of Service for each Plan Year during which the Participant completed 1,000 or more Hours of Service under the Valtek Plan, the Automax Plan and the C. C. Hall Plan, with one year of service for each Plan Year during which the Participant completed 500 or more Hours of Service under the Springboro Plan and with one year of service for each 12- consecutive month period measured from the date the Participant performed an Hour of Service under the Savings and Thrift Plan and the Foundry Plan. All Years of Service completed by the Participant, including Years of Service completed prior to the Effective Date of the Plan or prior to the Participant's commencement of participation in the Plan, shall be counted for vesting purposes except as otherwise provided in Article 7.4. A Participant's Years of Service shall automatically include years of service with any predecessor employer of the Employer.

Notwithstanding any provisions of this Plan to the contrary, benefits and years of Service with respect to qualified military service shall be provided in accordance with Section 414(u) of the Code.

Employees of Administaff, Inc. ("Administaff") who, on December 31, 2000, were performing services, pursuant to a leasing agreement, for Innovative Valve Technologies, Inc. ("Invatec"), which became a wholly owned subsidiary of Flowserve Corporation on January 1, 2001, and who continued employment with Flowserve Corporation after December 31, 2000 shall be credited with Years of Service with Administaff while performing services for Invatec for purposes of determining vesting under Section 7.2 of the Plan.

7.4 Years of Service Upon Reemployment. If a Participant incurs five or more consecutive one-year Breaks in Service, any years of Service completed by the Participant after the Breaks in Service shall be disregarded for purposes of determining the Participant's vested amounts in his or her Employer Matching Contribution Account and Employer Discretionary Contribution Account prior to the date the Participant incurred the Breaks in Service (although both pre-Break and post-Break Years of Service shall count for purposes of determining the Participant's vested percentage in his or her Employer Matching Contribution Account and Employer Discretionary Contribution Account after the date the Participant incurred the Breaks in Service.) To the extent necessary, separate sub- accounts shall be established by the Recordkeeper within the Participant's Employer Matching Contribution Account and Employer Discretionary Contribution Account to reflect the Participant's pre-Break and post-Break amounts derived from Employer Matching Contributions and Employer Discretionary Contributions, which sub-accounts shall share in the allocation of earnings and losses under Article 6.6. In the case of any Participant who incurs a Break in Service of less than five consecutive one-year Breaks in Service, all pre-Break Years of Service and any post-Break Years of Service completed by the Participant shall count for purposes of determining the Participant's vested percentage in his or her Employer Matching Contribution Account and Employer Discretionary Contribution Account both before and after the date the Participant incurred the Break in Service.

ARTICLE 8 - DISTRIBUTION OF BENEFITS

8.1 Distribution Upon Separation from Service. A Participant shall be entitled to receive the vested amounts (as determined under Articles 7.1 and 7.2) credited to the Participant's separate accounts under the Plan when the Participant separates from service with the Employer. If a Participant dies while performing qualified military service (as defined in Code Section 414(u)), the Participant's Beneficiary shall be entitled to receive any additional benefits (other than benefit accruals relating to the period of qualified military service) provided under the Plan had the Participant resumed and then terminated employment on account of death.

8.2 Distribution Upon Death. In the event of a Participant's death, the Participant's Beneficiary under Article 8.8 shall be entitled to receive the vested amounts (as determined under Articles 7.1 and 7.2) credited to the Participant's separate accounts under the Plan.

8.3 Optional Forms of Distribution; Participant Consent.

(a) Amounts not Greater than $1,000. The total vested amount the Participant is entitled to receive under Article 8.1 shall be immediately distributable to the Participant as a single lump-sum payment without the Participant's consent as soon as practicable following the Trustee's receipt of authorized distribution directions from the Plan Administrator if:

(i) such amount does not exceed $1,000; and

(ii) the Participant does not otherwise elect to have such amount rolled over into an eligible retirement plan, as defined in section 402(c)(8)(B) of the Code, specified by the Participant.

(b) Amounts Greater than $1,000 but Not Greater than $5,000. If the total vested amount which a Participant is entitled to receive under Article 8.1 exceeds $1,000 but is not greater than $5,000, such amount will be automatically rolled over into an Individual Retirement Account, unless the Participant timely elects, in the form and manner prescribed by the Plan Administrator, to have such distribution paid directly to an eligible retirement plan, as defined by section 402(c)(8)(B) of the Code, specified by the Participant in a direct rollover or to receive the distribution directly in the form of a single lump-sum payment.

(c) Amounts Greater than $5,000. If the total vested amount which a Participant is entitled to receive under Article 8.1 exceeds $5,000, such amount shall not be distributed to the Participant prior to his or her required beginning date under Article 8.6(b) unless the Participant consents to such distribution within 90 days before the date of distribution. Such amount shall be distributed in a single- sum payment.

(d) Explanation to Participants. No more than 90 days and no less than 30 days prior to the date of any distribution to a Participant under (b) above, the Plan Administrator shall furnish the Participant with a notice of the material features and relative values of the optional forms of distribution available under the Plan and the Participant's right to defer such distribution to the Participant's required beginning date. However, distribution to the Participant may commence less than 30 days after the notice in the preceding sentence is given to the Participant, provided that the following conditions are satisfied:

(1) the distribution is one to which Sections 401(a)(11) and 417 of the Internal Revenue Code do not apply;

(2) the Plan Administrator clearly informs the Participant that the Participant has a right to a period of at least 30 days after receiving the notice to consider the decision of whether or not to elect a distribution (and, if applicable, a particular distribution option); and

(3) the Participant, after receiving the notice, affirmatively elects to receive a distribution from the Plan (or to make a direct rollover under Article 8.10).

(e) Payments to Death Beneficiaries. Any amount which a Participant's Beneficiary is entitled to receive under Article 8.2 upon the death of the Participant shall be distributed in a lump-sum payment or in quarterly, semi-annual or annual installment payments over a specified period as selected by the Beneficiary in accordance with the minimum distribution requirements of Article 8.6(c). The method and timing of distribution shall be selected by the Beneficiary in the manner prescribed by the Plan Administrator. If the Beneficiary does not select a method of distribution, the entire amount which the Beneficiary is entitled to receive under Article 8.2 shall be distributed to the Beneficiary in a lump-sum payment no later than the December 31st of the calendar year containing the fifth anniversary of the Participant's death. If the Beneficiary dies before receiving a complete distribution of any amount which the Beneficiary is entitled to receive under Article 8.2, such remaining amount shall be distributed as soon as practicable on or after the Valuation Date that authorized distribution directions are received by the Trustee in a lump-sum payment to the Beneficiary's estate.

8.4 Distribution upon Written Instructions; Valuation of Distributions. All distributions from the Plan shall be made by the Trustee as soon as practicable on or after the Valuation Date that authorized distribution directions are received by the Trustee. In the case of a single-sum payment, the amount of the distribution shall be determined by the value of the amounts credited to the Participant's separate accounts under the Plan as of the Valuation Date which is within a reasonable time following the Trustee's receipt of instructions in good order to make the distribution. In the case of installment payments, the amount of each distribution shall be determined by the value of the amounts credited to the Participant's separate accounts under the Plan as of the Valuation Date on which the installment payment is to be made.

8.5 Forfeitures upon Separation from Service.

(a) If a Participant separates from service with the Employer prior to becoming fully vested in the Participant's Employer Matching Contribution Account and Employer Discretionary Contribution Account under Article 7.2 and the Participant elects or is otherwise required to receive a distribution of the entire vested amounts credited to the Participant's Employer Matching Contribution Account and Employer Discretionary Contribution Account, the total non-vested amount of the Participant's Employer Matching Contribution Account and Employer Discretionary Contribution Account shall be treated as a Forfeiture. For these purposes, a Participant who separates from service at a time when the vested amount credited to the Participant's Employer Contribution Account is zero shall be deemed to have received a distribution of the vested amount credited to the Participant's Employer Contribution Account and the entire non-vested amount shall be treated as a Forfeiture. All Forfeitures by Participants under this Article 8.5 shall be used in accordance with the provisions of Article 6.3.

(b) If a Participant who separates from service with the Employer prior to becoming fully vested in the Participant's Employer Matching Contribution Account and Employer Discretionary Contribution Account under Article 7.2 elects at any time under Article 8.4 to receive less than the entire vested amount credited to the Participant's Employer Matching Contribution Account, the non-vested amount of the Participant's Employer Contribution Accounts which shall be treated as a Forfeiture upon such distribution shall equal the total non-vested amount credited to the Participant's Employer Matching Contribution Account and Employer Discretionary Contribution Account prior to the distribution multiplied by a fraction, the numerator of which is the amount of the Participant's distribution from the Employer Contribution Accounts, and the denominator of which is the total vested amount credited to the Employer Matching Contribution Account and Employer Discretionary Contribution Account immediately prior to the distribution.

(c) Any amount forfeited by a Participant under (a) or (b) above (unadjusted for gains or losses) shall be restored to the Participant's Employer Contribution Accounts if the Participant returns to the service of the Employer and repays the amount of any distribution the Participant received from the Participant's Employer Contribution Account upon the Participant's prior separation from service before the earlier of:

(1) five years after the first date the Participant is subsequently reemployed by the Employer; or

(2) the date the Participant incurs five consecutive one-year Breaks in Service for vesting purposes following the date of the Participant's distribution.

The amount of any such Forfeiture shall be restored to the Participant's Employer Contribution Accounts from other Forfeiture amounts by Participants and the Plan earnings attributable thereto, or by additional Employer contributions to the Plan on behalf of the Participant. If a Participant is deemed to have received a distribution under (a) above because the Participant separated from service at a time when the vested amount credited to the Participant's Employer Contribution Accounts was zero and the Participant resumes employment covered under the Plan before the date the Participant incurs five consecutive one-year Breaks in Service, the amount forfeited by the Participant under (a) above shall be restored in the Participant's Employer Contribution Accounts upon the Participant's reemployment by the Employer.

8.6 Minimum Distribution Requirements.

(a) Application. All minimum distributions required to be made to Participants and Beneficiaries under this Article 8.6 shall be determined in accordance with the U.S. Department of Treasury proposed regulations under section 401(a)(9) of the Code, including the minimum distribution incidental benefit requirement of Treasury Regulation § 1.401(a)(9)-2.

(b) Required Beginning Date. All amounts which a Participant is entitled to receive under Article 8.1 shall be distributed or begin to be distributed to the Participant no later than the Participant's required beginning date. For purposes of this requirement, the required beginning date of a Participant who is not a five percent (5%) owner is April 1 of the calendar year following the later of: (i) the calendar year in which the Participant attains age 70½, or (ii) the calendar year in which the Participant retires. The required beginning date for a Participant who is a five percent owner is April 1 of the calendar year following the calendar year in which the Participant attains age 70½. Notwithstanding the foregoing, a Participant who is not a five percent owner and who attains age seventy and one-half (70½) prior to calendar year 1999 shall have the right to elect the commencement of his benefits on April 1 of the calendar year following the calendar year in which he attains such age and each subsequent year. A Participant who is not a five percent owner and who is receiving benefit payments solely because of the attainment of age seventy and one-half (70½) prior to calendar year 1997 shall have the right to elect the suspension of such benefit payments until the date specified in the first sentence of this paragraph. Notwithstanding anything in this Section 8.6 to the contrary, unless the Participant subject to the required minimum distribution rules of this Section 8.6 elects to receive such distributions, effective as of January 1, 2020, the Code Section 401(a)(9) requirements of Section 8.6 will not apply for the 2020 calendar year, and furthermore, the five-year period described in Code Section 401(a)(9)(B)(ii) will be determined without regard to calendar year 2020.

(c) Limits on Distribution Periods. The method of distribution selected by a Participant under Article 8.3 shall satisfy the minimum distribution requirements of this Article 8.6 for each calendar year beginning with the calendar year immediately preceding the calendar year which contains the Participant's required beginning date (the "first distribution calendar year"). As of the first distribution calendar year, distributions, if not made in a single-sum, shall be made over one of the following periods (or combination thereof):

(1) the life of the Participant;

(2) the life of the Participant and his or her designated Beneficiary;

or

(3) a period certain of 10 years or more.

(d) Minimum Distribution Amounts. The minimum distribution amount for the first distribution calendar year shall be made on or before the Participant's required beginning date. The minimum distribution amount for each distribution calendar year thereafter, including the calendar year in which the Participant's required beginning date occurs, shall be made on or before December 31 calendar year.

All distributions required under this Article 8.6 shall be determined and made in accordance with the Income Tax Regulations issued under Section 401(a)(9) of the Code (including proposed regulations, until the adoption of final regulations), including the minimum distribution incidental benefit requirement of Section 1.401(a)(9)-2 of the proposed regulations.

For purposes of these minimum distribution requirements, a Participant's account balance under the Plan for any distribution calendar year shall mean the total vested amount credited to the Participant's separate accounts under the Plan as of the last Valuation Date of the preceding calendar year (the "valuation calendar year"), increased by the amount of any contributions to the Participant's accounts in the valuation calendar year after such Valuation Date, and decreased by any distributions made from the Participant's accounts in the valuation calendar year after such Valuation Date. If any minimum distribution for the Participant's first distribution calendar year is made in the following calendar year, but on or before the Participant's required beginning date, the amount of such minimum distribution shall be treated as if it had been made in the Participant's first distribution calendar year.

With respect to distributions under the Plan made for calendar years beginning after January 1, 2002, the Plan will apply the minimum distribution requirements of Section 401(a)(9) of the Internal Revenue Code in accordance with the regulations under Section 401(a)(9) that were proposed on January 17, 2001, notwithstanding any provision of the Plan to the contrary. This provision shall continue in effect until the end of the last calendar year beginning before the effective date of final regulations under Section 401(a)(9) or such other date as may be specified in guidance published by the Internal Revenue Service.

(e) Death Distribution Provisions. Any amount which a Participant's designated Beneficiary shall be entitled to receive under Article 8.2 upon the death of the Participant shall be distributed in accordance with the following rules:

(1) Where Distribution Had Already Commenced. If the Participant died after minimum distributions had already commenced, all amounts payable to the Participant's designated Beneficiary shall be distributed at least as rapidly as under the method of distribution in effect prior to the Participant's death. For these purposes, a Participant's minimum distributions shall be considered to have commenced no earlier than the Participant's required beginning date.

(2) Five-Year Rule. If the Participant died before minimum distributions had already commenced in accordance with (a) above, all amounts payable to the Participant's designated Beneficiary shall be distributed by December 31st of the calendar year which contains the fifth anniversary of the date of the Participant's death. Notwithstanding the foregoing and effective for any Participant who dies on or after January 1, 2020, if the Participant dies before distribution of the Participant's entire account balance, all amounts payable to the Participant's designated Beneficiary who is not an Eligible Designated Beneficiary (as defined below) shall be distributed within ten years after the date of the Participant's death. As used herein in this Section 8.6(e), "Eligible Designated Beneficiary" means with respect to any Participant, any designated Beneficiary who is (i) the surviving spouse of the Participant; (ii) subject to clause (iii), a child of the Participant who has not reached the age of majority (with any remaining distributions made within ten (10) years after the date such eligible designated beneficiary reaches the age of majority); (iii) disabled (within the meaning of Code Section 72(m)(7)); (iv) a chronically ill individual (within the meaning of Code Section 7702B(c)(2), except that the requirements of subparagraph (A)(i) thereof shall only be treated as met if there is a certification that, as of such date, the period of inability described in such subparagraph with respect to the individual is an indefinite one which is reasonably expected to be lengthy in nature); or (v) an individual not described in any of the preceding subclauses who is not more than ten (10) years younger than the Participant. Whether an individual is an Eligible Designated Beneficiary shall be determined as of the date of the Participant's death.

(3) Exception to Five-Year Rule. Notwithstanding subsection (ii) above and effective for any Participant who dies on or after January 1, 2020, all amounts payable to the Participant's Eligible Designated Beneficiary shall (if subsection (a) does not apply) be distributed in installment payments over a period not extending beyond the Eligible Designated Beneficiary's life expectancy, provided such distribution commences by December 31st of the calendar year following the calendar year of the Participant's death. If the Eligible Designated Beneficiary is the surviving spouse of the Participant, the date that distributions are required to commence in accordance with the preceding sentence shall be the later of: (1) December 31st of the calendar year following the calendar year of the Participant's death, or (2) December 31st of the calendar year in which the Participant would have attained age 72. If an Eligible Designated Beneficiary dies before the Participant's account balance is distributed, the Participant's remaining account balance shall be distributed to the beneficiary of such Eligible Designated Beneficiary within ten years after the death of the Eligible Designated Beneficiary.

(4) Calculation of Minimum Installment Payments. In the case of installment payments over the Beneficiary's life expectancy under (iii) above, the minimum distribution amount for each calendar year shall be determined by dividing the Beneficiary's account balance under the Plan for the calendar year by the Beneficiary's life expectancy for the calendar year. For these purposes, a Beneficiary's account balance under the Plan for any calendar year shall mean the total vested amount credited to the deceased Participant's separate accounts under the Plan which the Beneficiary is entitled to receive under Article 8.2 as of the last Valuation Date of the preceding calendar year (the "valuation calendar year"), increased by the amount of any contributions or Forfeitures allocated to the deceased Participant's accounts in the valuation calendar year after Valuation Date, and decreased by any distributions made from the deceased Participant's accounts in the valuation calendar year after such Valuation Date.

(5) In the event that at the time a Beneficiary of a former Participant in the CAP Plan becomes entitled to receive a distribution, any portion of the distribution amount is invested in any group annuity contract issued by Executive Life Insurance Company ("Executive Life Investment"), the Beneficiary may elect to defer the distribution in such manner prescribed by the Committee until such date as the Committee determines, in its sole discretion, that all amounts held in the Executive Life Investment are currently distributable or that all amounts of the Executive Life Fund which were allocable to the Participant's Account have been transferred out of the Executive Life Investment. The deferral election described in this Section shall be made available to Beneficiaries with amounts invested in the Executive Life Investment at the time benefits are to commence without regard to the amount of the distribution. Notwithstanding any provision to the contrary, no Beneficiary other than the Participant's surviving spouse may elect to defer distribution under this Section 8.6(e)(v) to any date later than the day before the fifth anniversary of the Participant's death.

(f) Applicable Life Expectancy. For purposes of this Article 8.6, the life expectancy of the Participant or his or her designated Beneficiary, or the joint life and last survivor's expectancy of the Participant and his or her designated Beneficiary, shall be determined by the following rules:

(1) life expectancy or joint life and last survivor expectancy shall be computed by using the expected return multiples contained in Tables V and VI of

Treasury Regulation § 1.72-9. The life expectancies of the Participant and his or her spouse (if the spouse is designated Beneficiary) shall be recalculated annually unless otherwise elected by the Participant or by the spouse in the case of distributions referred to in (e)(iii) above on or before the date minimum distributions are required to begin. Any such election by the Participant or spouse shall be irrevocable and shall apply to all subsequent years. The life expectancy of a non-spouse Beneficiary shall not be recalculated;

(2) for purposes of determining the minimum distribution amounts to be paid to the Participant for each distribution calendar year under (c)(i) or (ii) above, the life expectancy of the Participant, or the joint life and last survivor expectancy of the Participant and his or her designated Beneficiary, shall be calculated based on the attained age of the Participant or Beneficiary as of the Participant's or Beneficiary's birthday in the first distribution calendar year. If life expectancy is being recalculated, the life expectancy of the Participant, or the joint life and last survivor expectancy of the Participant and his or her spouse (if the spouse is the designated Beneficiary), shall be calculated based on the attained age of the Participant and spouse as of the Participant's and spouse's birthday in each succeeding distribution calendar year; and

(3) for purposes of determining the minimum distribution amounts to be paid to the Beneficiary for each calendar year under (e)(iv) above, the life expectancy of the designated Beneficiary shall be calculated based on the attained age of the Beneficiary as of the Beneficiary's birthday in the calendar year in which distributions are required to commence under (e)(iii). If life expectancy is being recalculated, the life expectancy of the Participant's surviving spouse (if the spouse is designated Beneficiary) shall be calculated based on the attained age of the spouse as of the spouse's birthday in each succeeding calendar year.

(g) Notwithstanding the foregoing, effective as of:

(i) January 1, 2020, and solely with respect to Participants who had not attained age 70½ as of December 31, 2019 and attained age 72 prior to January 1, 2023, each of the references to "age 70½" in this Section 8.6 of the Plan shall refer to "age 72";

(ii) January 1, 2023, and solely with respect to Participants who had not attained age 72 as of December 31, 2022 and attain age 73 prior to January 1, 2033, each of the references to "age 70½" in this Section 8.6 of the Plan shall refer to "age 73"; and

(iii) January 1, 2033, and solely with respect to Participants who had not attained age 74 as of December 31, 2032, each of the references to "age 70½" in this Section 8.6 of the Plan shall refer to "age 75".

8.7 Commencement of Benefits. Unless a Participant elects otherwise, distribution of the Participant's benefits under the Plan shall commence no later than 60 days after the close of the Plan Year in which the latest of the following events occurs: (i) the Participant attains Normal Retirement Age; (ii) the 5th anniversary of the Plan Year in which the Participant commenced participation in the Plan; or (iii) the Participant's termination of employment with the Employer. Notwithstanding the foregoing, the failure of any Participant to consent to a distribution of benefits under Article 8.3(b) shall be deemed to be an election by the Participant to defer the distribution of his or her benefits for purposes of this Article 8.7.

8.8 Designation of Beneficiary. A Participant may designate from time to time any person or persons, who may be designated contingently or successively and who may be an entity other than a natural person, as the Participant's Beneficiary who shall be entitled to receive any undistributed vested amounts credited to the Participant's separate accounts under the Plan at the time of the Participant's death. Any Beneficiary designation by a Participant shall be made on a form prescribed by the Plan Administrator and shall be effective only when filed with the Plan Administrator during the Participant's lifetime. A married Participant may designate a Beneficiary other than the Participant's spouse only if the spouse consents in writing to the designation, and the spouse's consent acknowledges the effect of the consent, names the designated Beneficiary and the form of payment and is witnessed by a notary public or a representative of the Plan. If the designated Beneficiary predeceases the Participant, the Participant's Beneficiary designation shall be ineffective. If no Beneficiary designation is in effect at the time of the Participant's death, the Participant's Beneficiary shall be the Participant's estate.

8.9 Distributions Pursuant to Qualified Domestic Relations Orders. Notwithstanding any provision of the Plan to the contrary, the Plan Administrator may direct the Trustee to distribute all or any portion of a Participant's benefits under the Plan to an alternate payee in accordance with the terms and conditions of a qualified domestic relations order as defined in Section 414(p) of the Code (a "QDRO"). The Plan hereby specifically permits and authorizes distribution of a Participant's benefits under the Plan to an alternate payee in accordance with a QDRO prior to the date the Participant separates from service with the Employer or attains the Participant's earliest retirement age as defined in Section 414(p)(4)(B) of the Code. The Plan Administrator is responsible for establishing written procedures for determining whether any domestic relations order qualifies as a QDRO and for administering distributions in accordance with the terms and conditions of a QDRO and whether the order qualifies as a QDRO.

8.10 Direct Rollovers. Notwithstanding any other provision of the Plan to the contrary, a "qualified distributee" may elect in writing, in accordance with rules prescribed by the Plan Administrator, to have a portion or all of any "eligible rollover distribution" paid directly by the Plan to the "eligible retirement plan" designated by the "qualified distributee". Any such payment by the Plan to another "eligible retirement plan" shall be considered a direct rollover.

Effective December 31, 2001, notwithstanding any other provision of the Plan to the contrary, for purposes of the direct rollover provisions in this Section 5.6 of the Plan, a portion of a distribution shall not fail to be an eligible rollover distribution merely because the portion consists of after-tax employee contributions which are not includible in gross income. However, such portion may be paid only to an individual retirement account or annuity described in Code §408(a) or (b) of the Code, or to a qualified defined contribution plan described in Code §401(a) or 403(a) that agrees to separately account for amounts so transferred, including separately accounting for the portion of such distribution which is includible in gross income and the portion of such distribution which is not so includible.

Notwithstanding the foregoing, a "qualified distributee" may not elect a direct rollover with respect to art "eligible rollover distribution" if the total value of such distribution is less than $200 or with respect to a portion of an "eligible rollover distribution" if the value of such portion is less than $500. For purposes of this Section, the following terms have the following meanings:

(a) An "eligible retirement plan" means an individual retirement account described in Code Section 408(a), an individual retirement annuity described in Code Section 408(b), an annuity plan described in Code Section 403(a), or a qualified trust described in Code Section 401(a) that accepts rollovers; provided, however, that, in the case of a direct rollover by a surviving spouse, an eligible retirement plan does not include a qualified trust described in Code Section 401(a). An "eligible retirement plan" shall also mean an annuity contract described in Code Section 403(b) and an eligible plan under Code Section 457(b) which is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or political subdivision of a state and which agrees to separately account for amounts transferred into such plan from this Plan. The definition of "eligible retirement plan" shall also apply in the case of a distribution to a surviving spouse, or to a spouse or former spouse who is the alternate payee under a qualified domestic relation order, as defined in Code Section 414(p). In the case of a rollover distribution to a "non-spousal beneficiary", however, "eligible retirement plan" is limited to an individual retirement plan described in Section 408(a) of the Code or to an individual retirement annuity described in Section 408(b) of the Code (other than an endowment contract).

(b) A “qualified distributee” means a Participant, his or her surviving spouse, his or her spouse or former spouse who is an alternate payee under a qualified domestic relations order, as defined in Section 414(p) of the Code, or a “non-spousal beneficiary” designated by a deceased Participant.

(c) A “direct rollover” is a payment by the Plan to the “eligible retirement plan” specified by the “qualified distributee.”

(d) A “non-spousal beneficiary” means a Beneficiary other than a Participant’s spouse.

8.11 Beneficiary Deferral Under Merged Plans. Notwithstanding any other provision herein to the contrary, Section 8.5A of the CAP Plan which is incorporated herein by reference shall apply to a distribution to a Beneficiary with any portion of such Beneficiary’s account held under the Executive Life Fund on June 30, 1999.

8.12 Roth In-Plan Conversions. . The provisions of this Section 8.12 are effective as of January 1, 2022.

(a) Eligibility. Effective January 1, 2022, a Participant may elect a Roth In- Plan Conversion pursuant to this section. A Participant’s surviving spouse, spouse or former spouse (by reason of being an alternate payee under a QDRO), or nonspouse Beneficiary may not elect a Roth In-Plan Conversion.

(b) Definition. A Roth In-Plan Conversion is a rollover within the Plan of vested pre-tax or after-tax amounts to a Participant’s Roth In-Plan Conversion Account. A Roth In-Plan Conversion may be made only with respect to pre-tax amounts held in an Employee Pre-Tax Contribution Account, after-tax amounts held in an Employee After-Tax Contribution Account, rollover contributions held in a Rollover Contribution Account, vested Employer Matching Contributions held in an Employer Matching Contribution Account and vested Employer Discretionary Contributions held in an Employer Discretionary Contribution Account; provided, however that amounts invested in the Flowserve Corporation Stock Fund are not eligible for Roth In-Plan Conversion.

(c) Implementation. A Roth In-Plan Conversion may be made through a direct rollover, as described in section 8.10, to the individual's Roth In-Plan Conversion Account, or with respect to otherwise distributable amounts only, by a distribution of funds to the individual who then rolls over all or a portion of the funds into his or her Roth In-Plan Conversion Account.

(d) Tax Treatment. In general, an amount subject to a Roth In-Plan Conversion is treated as includable in income in the year of conversion for the individual who elects the Roth In-Plan Conversion, but only to the extent the amount would have been includable in income if the amount had been rolled over into a Roth IRA (i.e., the fair market value of the amount subject to the conversion reduced by the electing individual's basis in that amount).

(e) Manner of Electing a Roth In-Plan Conversion. An individual electing a Roth In-Plan Conversion shall designate, in the time and manner prescribed by the Plan Administrator, the portion of his or her Employee Pre-Tax Contribution Account, Employee After-Tax Contribution Account, Rollover Contribution Account, vested Employer Matching Contribution Account and/or Employer Discretionary Contribution Account to which the Roth In-Plan Conversion is to apply and shall provide all other information reasonably requested by the Plan Administrator to complete the transfer. The Plan Administrator shall establish rules regarding the eligibility of a Participant to elect a Roth In-Plan Conversion in accordance with the requirements of Code section 402A.

(f) Distributions. Amounts held in the Roth In-Plan Conversion Account (including any earnings thereon) shall remain subject to any distribution restrictions that were applicable to the amount before the Roth In-Plan Conversion.

ARTICLE 9 - WITHDRAWALS

9.1 Withdrawals of Employee After-Tax Contributions. A Participant shall be permitted to withdraw at any time all or any portion of the total amount credited to the Participant's Employee After-Tax Contribution Account. The Plan Administrator may prescribe uniform and nondiscriminatory rules and procedures limiting the number of times that any Participant may make withdrawals under this Article 9.1 during any Plan Year and the minimum amount that a Participant may withdraw on any single occasion. No forfeitures or penalties shall apply under the Plan solely as a result of a Participant's withdrawals of Employee After-Tax Contributions.

9.2 Withdrawals of Rollover Contributions. A Participant shall be permitted to withdraw at any time all or any portion of the total amount credited to the Participant's Rollover Contribution Account. The Plan Administrator may prescribe uniform and nondiscriminatory rules and procedures limiting the number of times that any Participant may make withdrawals under this Article 9.2 during any Plan Year and the minimum amount that a Participant may withdraw on any single occasion. No forfeitures or penalties shall apply under the Plan as a result of a Participant's withdrawal of Rollover Contributions.

9.3 Withdrawals on or after Age 59½. A Participant who has attained age 59½ entitled to withdraw all or any portion of the total vested amount (as determined under Article 7) credited to the Participant's separate accounts under the Plan. The Plan Administrator may prescribe uniform and nondiscriminatory rules and procedures limiting the number of times that a Participant may make withdrawals under this Article 9.3 during any Plan Year and the minimum amount that a Participant may withdraw on any single occasion.

9.4 Hardship Withdrawals.

(a) Immediate and Heavy Financial Need. A Participant shall be permitted to make a hardship withdrawal from the Plan if the Participant certifies that he or she has incurred an immediate and heavy financial need for funds. For these purposes, an immediate and heavy financial need shall include a need on account of:

(1) Expenses for (or necessary to obtain) medical care that would be deductible under Code section 213(d) (determined without regard to limitations in section 213(a) (relating to the applicable percentage of adjusted gross income and the recipients of the medical care)) provided that, if the recipient of the medical care is not listed in section 213(a), the recipient is a primary beneficiary under the Plan;

(2) Costs directly related to the purchase, excluding mortgage payments, of a principal residence for the Participant;

(3) Payment of tuition, related educational fees, and room and board expenses, for up to the next 12 months of post-secondary education for the Participant, the Participant's spouse, children or dependents (as defined in Code section 152, without regard to Code section 152(b)(1), (b)(2) and (d)(1)(B)), or for a primary beneficiary under the Plan;

(4) Payments necessary to prevent the eviction of the Participant from the Participant's principal residence or the foreclosure on the mortgage of that residence;

(5) Payments for burial or funeral expenses for the Participant's deceased parent, spouse, children or dependents (as defined in Code section 152, without regard to Code section 152(d)(1)(B)) or for a deceased primary beneficiary under the Plan;

(6) Payment of expenses for the repair of damage to the Participant's principal residence that would qualify for the casualty deduction under Code section 165 (determined without regard to section 165(h)(5) and whether the loss exceeds 10% of gross income); or

(7) Expenses and losses (including loss of income) incurred by the Participant on account of a disaster declared by the Federal Emergency Management Agency (FEMA) under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 100-707, provided that the Participant's principal residence or principal place of employment at the time of the disaster was located in an area designated by FEMA for individual assistance with respect to the disaster.

(b) Necessary to Satisfy Financial Need. The amount of any hardship withdrawal by a Participant under subsection (a) above shall not exceed the amount which is necessary to satisfy the Participant's immediate and heavy financial need and which is not reasonably available from other resources of the Participant. For these purposes, a hardship withdrawal will be treated as necessary to satisfy an immediate and heavy financial need under subsection (a) above if:

(1) The distribution is not in excess of the amount of the immediate and heavy financial need of the Participant, but this amount may include amounts necessary to pay any federal, state or local income taxes or penalties reasonably anticipated to result from the distribution; and

(2) The Participant has obtained all other currently available in- service withdrawals and distributions, other than hardship distributions, under the Plan and all other deferred compensation plans maintained by the Company and Affiliates. The Plan Administrator may, without further investigation, accept the written statement of the Participant as to the amount necessary to meet the immediate and heavy financial need of the Participant and as to the lack of other cash or other liquid assets available to meet this need unless the Committee has reason to believe that the statement is in error.

(c) Limitations on Hardship Withdrawals. Any hardship withdrawal by a Participant under subsection (a) above shall be made from the Participant's Employee Pre-Tax Contributions or Employee Roth Contributions to the Plan, including any earnings attributable thereto.

(d) Prior Withdrawal of Employee After-Tax and Rollover Contributions Required. A Participant shall not be permitted to make a hardship withdrawal under subsection (a) above unless the Participant has already withdrawn, in accordance with Articles 9.1 and 9.2, all available amounts credited to the Participant's Employee After-Tax Contribution Account and Rollover Contribution Account.

9.5 Manner of Making Withdrawals. Any withdrawal by a Participant under the Plan shall be made only after the Participant files a written request in the manner prescribed by the Plan Administrator specifying the nature of the withdrawal (and the reasons therefor, if a hardship withdrawal), the amount of funds requested to be withdrawn, and the separate accounts from which withdrawals should be made. Upon receipt of the withdrawal request and approval of the Plan Administrator, if required, the Trustee shall make the withdrawal from the Participant's separate accounts under the Plan in a lump-sum payment to the Participant. If the Participant does not specify the separate accounts from which withdrawals should be made, the withdrawal shall be made, pro rata, from the separate accounts of the Participant. The amount of any withdrawal shall be determined by the value of the amounts credited to the Participant's separate accounts under the Plan as soon as practicable on or after the Valuation Date on which the Trustee receives instructions in good order from the Plan Administrator to make the withdrawal payment.

9.6 In-Service Withdrawals under Merged Plans and Springboro Plan. Notwithstanding any other provision herein, the following in-service withdrawals are permitted for Participants to the extent such withdrawals were available immediately prior to the Effective Date of this Plan:

(1) in-service withdrawal of the vested employer matching account in accordance with Section 7.2(c) of the Savings and Thrift Plan;

(2) in-service withdrawal of the vested employer matching account in accordance with Section 12.1(d) of the Foundry Plan;

(3) in-service withdrawal by Employees of The Duriron Company, Inc. (now Flowserve Corporation) of the vested employer matching account in accordance with Section 12.1 of the Valtek Plan;.

(4) in-service withdrawal by Employees of Valtek, Incorporated of the deductible employee contribution account (amounts contributed by the employee on a tax-deductible basis before 1987) in accordance with Section 12.2 of the Valtek Plan;

(5) in-service withdrawals of the employer contributions attributable to periods prior to January 1, 1992, and “Matching Contributions” (as such term was defined under the Borg-Warner Investment Plan on May 20, 1987) in accordance with Section 7.1(a) of the CAP Plan;

(6) in-service withdrawals of vested employer matching account in accordance with Item W of the Springboro Plan; and

(7) in-service withdrawals of amounts in the Ingersoll-Rand Company Transfer Amount Account and the Non-Dresser Industries or Ingersoll-Rand Company Transfer Account in accordance with Section 8.1(a) of the Ingersoll-Dresser Pump Company Savings and Investment Plan.

9.7 In-Service Withdrawals from the C. C. Hall Plan. Between June 20, 2006 and November 5, 2008, a Participant shall be permitted to withdraw all or any portion of his account attributable to the profit sharing contribution account under the C.C. Hall Plan which was merged into this Plan, provided that such amounts have been held in the Plan for at least two years.

9.8 Active Duty Distribution. During any period that a Participant is performing service in the uniformed services (as defined in chapter 43 of title 38 of the Code) while on active duty for a period of more than 30 days, such Participant shall be entitled to elect to receive a distribution of all or a part of the portion of his account attributable to Employee Pre-Tax Contributions and Employee Roth Contributions. If a participant elects to receive a distribution pursuant to this Section 9.8, he shall not be permitted to make any Employee Pre-Tax Contributions or Employee Roth Contributions pursuant to Section 4.1 during the six month period beginning on the date of such distribution.

9.9 Coronavirus-Related Distributions. Notwithstanding anything herein to the contrary, subject to the following provisions of this Section 9.9 and in accordance with the rules and procedures approved or adopted by the Plan Administrator, a Participant may elect to withdraw on or after March 27, 2020 and before December 31, 2020 up to one hundred thousand dollars ($100,000) of his or her vested Account (such $100,000 limit applied on a combined basis with any other coronavirus-related distribution taken by such Participant from any other qualified plan maintained by the Company or any Affiliate) if the

Participant is an Eligible Individual as defined in Section 10.4(d)(2). Any Participant who receives a coronavirus-related distribution under this Section 9.9 may, at any time during the three-year period beginning on the day after the date on which such distribution was received, make one or more repayments to this Plan in an aggregate amount not to exceed the amount of such distribution under procedures established by the Plan Administrator.

ARTICLE 10 - LOANS

10.1 Amount of Loan. The Plan Administrator may direct the Trustee to make a loan to a Participant from the vested amounts (as determined under Article 7) credited to the Participant's separate accounts under the Plan. The total amount of any such loan, when added to the outstanding balance of all other loans to the Participant from the Plan, shall not exceed the lesser of:

(a) 50 percent of the total vested accrued benefits of the Participant under the Plan as of the date of the Loan; or

(b) $50,000 reduced by the excess (if any) of the highest outstanding balance of all loans to the Participant from the Plan during the one-year period ending on the day before the loan was made over the outstanding balance of all loans to the Participant from the Plan on the date on which the loan was made.

For purposes of the above limitation, all loans to the Participant from all qualified plans maintained by the Employer and other members of a group of employers described in Sections 414(b), 414(c) or 414(m) of the Code which includes the Employer shall be aggregated.

10.2 Security for Loan. Any loan to a Participant under the Plan shall be adequately secured within the meaning of Section 4975(d) of the Code. Such security shall include the pledge of all the Participant's right, title and interest in the Plan, which pledge shall be evidenced by the execution of a legally binding promissory note by the Participant. The Participant shall further authorize the Employer to deduct specified amounts from the wages or salary thereafter payable to the Participant by the Employer and to transmit such amounts to the Trustee as the periodic repayments of the Participant's loan.

10.3 Interest Rate Charged and Loan Fees. Any loan to a Participant under the Plan shall bear a reasonable rate of interest which is commensurate with the prevailing interest rate charged by professional lenders for similarly secured personal loans, as determined by the Plan Administrator. The Plan Administrator shall not discriminate among Participants in the matter of interest rates, but loans granted at different times may bear different interest rates if, in the opinion of the Plan Administrator, the difference in rates reflects prevailing interest rates. The Plan Administrator may charge a Participant, or deduct from the amount of a loan otherwise payable to Participant, reasonable loan origination fees and annual loan administration fees.

10.4 Repayment of Loans.

(a) Any loan to a Participant under the Plan shall by its terms be required to be repaid within five years of the date on which the loan is made, with the exception that a loan which is used to acquire a dwelling unit which within a reasonable period of time (determined at the time the loan is made) will be used as the principal residence of the Participant may be repaid over a term in excess of five years, but not in excess of fifteen. Repayments on any loan shall be made in regular periodic installments on a schedule prescribed by the Plan Administrator with payments not less frequently than quarterly (except that alternative arrangements for repayment may apply in the event that the borrower is on unpaid leave of absence for a period not to exceed one year), and shall be applied on a substantially level amortization basis to reduce the principal as well as the accrued interest of the loan.

(b) The Plan Administrator shall have the sole responsibility for assuring that a Participant timely makes all loan repayments and notifying the Trustee in the event of any default by a Participant on a loan repayment. Loan repayments shall be paid to the Trustee and shall be accompanied by instructions from the Plan Administrator which identify each Participant on whose behalf a loan repayment is being made and the amount thereof.

(c) Beginning on or after May 1, 2020, Participants who have terminated employment may elect to continue making loan repayments to the Plan. Any loan repayment elected by a Participant whose employment has been terminated shall make such repayments in accordance with procedures adopted by the Plan Administrator.

(d) A Participant who is an eligible individual (as defined below) may elect to delay any loan repayment due during the period beginning on or after March 27, 2020 and ending December 31, 2020, to no later than December 31, 2020, at which time (i) such Participant may elect to recommence making loan repayments (as permitted in paragraph (c) above), or (ii) in the event a Participant does not recommence making repayments, such loan will be considered to be in default.

(1) Election to Delay Loan Repayments. Notwithstanding paragraph (a) of this Article 10.4 regarding the term of a loan, the outstanding balance of any loan of a Participant who has made an election to delay repayments shall be re-amortized in a manner and calculated to take into account the period of delay.

(2) An "Eligible Individual" is a person (i) who is diagnosed with the virus SARS-CoV-2 or with coronavirus disease 2019 (COVID-19) by a test approved by the Centers for Disease Control and Prevention, (ii) whose spouse or dependent (as defined in section 152 of the Internal Revenue Code of 1986) is diagnosed with such virus or disease by such a test, (iii) who experiences adverse financial consequences as a result of (A) being quarantined, being furloughed or laid off or having work hours reduced due to such virus or disease, (B) being unable to work due to lack of child care due to such virus or disease, (C) closing or reducing hours of a business owned or operated by the individual due to such virus or disease, (D) having a reduction in pay (or self-employment income) due to such virus or disease or having a job offer rescinded or start date for a job delayed due to such virus or disease, (E) the Participant's spouse or a member of the Participant's household being quarantined, being furloughed or laid off or having work hours reduced due to such virus or disease, being unable to work due to lack of child care due to such virus or disease, having a reduction in pay (or self- employment income) due to such virus or disease, or having a job offer rescinded or start date for a job delayed due to such virus or disease, or (F) closing or reducing hours of a business owned or operated by the Participant's spouse or a member of the Participant's household due to such virus or disease, or (iv) such other factors as determined by the Secretary of the Treasury (or the Secretary's delegate). For purposes of applying this Section 10.4(d)(2), a member of the Participant's household is someone who shares the Participant's principal residence.

(3) Certification. The Participant must provide a certification to the Plan Administrator that one or more of the conditions (described in (2) above) are satisfied. The Plan Administrator may rely on a Participant's certification.

10.5 Default on Loan. Subject to Article 10.4, in the event of a default by a Participant on any loan repayment, all remaining payments on the loan shall be immediately due and payable; provided, however, that a Participant who elects to delay loan repayments as permitted under paragraph (c) of Article 10.4 will not be considered to be in default during the period of delay. The Plan Administrator shall take any and all actions necessary and appropriate to enforce collection of the unpaid loan, although foreclosure on the Participant's promissory note and attachment of the Plan's security shall not occur until a distributable event occurs under the Plan.

10.6 Setoff of Loan upon Distributions. Prior to making any distribution of benefits from a Participant's separate accounts under Article 8 upon the Participant's separation from service or death, the Plan Administrator shall direct the Trustee to deduct the total amount of any outstanding Plan loans to the Participant from the Participant's separate accounts under the Plan, in order to satisfy the amounts due on the Participant's loans.

10.7 Manner of Making Loans. A request by a Participant for a loan shall be made in accordance with loan application procedures and limitations established by the Plan Administrator. Such procedures may be revised from time to time by the Plan Administrator without an amendment to the Plan, to the extent such procedures do not conflict with any provision of the Plan. The terms and conditions on which the Plan Administrator shall approve loans under the Plan shall be applied on a uniform and reasonably equivalent basis as to all Participants. Loans shall not be made available to Participants who are highly compensated employees (within the meaning of Section 414(q) of the Code) in an amount greater than the amount made available to other employees.

10.8 Accounting for Loans. A loan to a Participant from the Plan shall be considered an investment of the separate accounts of the Participant from which the loan is made, and all loan repayments by the Participant shall be credited to such separate accounts and reinvested in the investments authorized under the Trust Agreement in accordance with the investment provisions of Article 6.4.

ARTICLE 11 - LIMITATIONS ON CONTRIBUTIONS AND BENEFITS

11.1 Definitions. For purposes of this Article 11 only, the following terms shall be defined as follows:

(a) Annual Additions. The sum of the following amounts that are allocated to a Participant's separate accounts under the Plan for any Limitation Year:

(1) Employer contributions including Employee Pre-Tax Contributions, Employee Roth Contributions, Employer Matching Contributions, Employer Discretionary Contributions and Employer Nonelective Contributions (regardless of whether any amounts attributed to such contributions are distributed to the Participant, recharacterized or forfeited as Excess Elective Deferrals, Excess Contributions or Excess Aggregate Contributions);

(2) Employee After-Tax Contributions;

(3) Forfeitures;

(4) any amounts allocated to an individual medical account (as defined in Section 415(1)(2) of the Code) which is part of a pension or annuity plan maintained by the Employer shall be treated as Annual Additions; and

(5) any amounts derived from contributions which are attributable to post-retirement medical benefits allocated to the separate account of a key employee (as defined in Section 419A(d)(3) of the Code) under a welfare benefit fund (as defined in Section 419(e) of the Code) maintained by the Employer.

For purposes of this definition, any Excess Amount, plus any investment gains or other income or less any investment losses attributable thereto, that is applied under Articles 11.2(c) or 11.3(e) to reduce the Employer contributions on behalf of a Participant for a Limitation Year shall be considered Annual Additions for such Limitation Year.

Notwithstanding the foregoing, for Limitation Years (as defined in Section 11.1(i) of the Plan) beginning on and after July 1, 2007, restorative payments allocated to a Participant's account, which include payments to restore losses to the Plan resulting from actions (or a failure to act) by a fiduciary of the Plan for which there is a reasonable risk of liability under Title I of ERISA or under any other applicable federal or state law, where similarly situated Participants are treated similarly do not give rise to an "Annual Addition."

(b) Compensation. For Limitation Years (as defined in Section 11.1(i) of the Plan) beginning on and after July 1, 2007, a Participant's Compensation paid during the Limitation Year, provided, however, that Compensation shall not include the following:

(1) Contributions to a plan of deferred compensation to the extent that, before the application of the limitations of Section 415 of the Code to the Plan, the contributions are not included in the gross income of the Employee for the taxable year in which contributed, or contributions under a simplified employee pension plan to the extent the contributions are deductible by the Employee, and any distributions from a plan of deferred compensation other than an unfunded nonqualified plan of deferred compensation;

(2) Amounts realized from the exercise of a nonqualified stock option, or amounts realized under Section 83 of the Code with respect to restricted property held by an Employee that becomes freely transferable or is no longer subject to a substantial risk of forfeiture;

(3) Amounts realized from the sale, exchange or other disposition of stock acquired under a qualified stock option within the meaning of Section 422A of the Code;

(4) Other amounts that receive special tax benefits, such as premiums for group term life insurance (but only to the extent that premiums are not includable in the gross income of the Employee), or contributions made by the Employer (whether or not under a salary reduction agreement) towards the purchase of an annuity contract covered by Section 403(b) of the Code (whether or not the contributions are excludable from the gross income of the Employee).

Compensation is treated as paid on a date if it is actually paid on that date or if it would have been paid but for an election under Code Section 125, 132(f)(4), 401(k), 403(b), 408(k), 408(p)(2)(A)(i) or 457(b).

(c) Defined Benefit Plan Fraction. A fraction, the numerator of which is the sum of a Participant's Projected Annual Benefits under all defined benefit plans (whether or not terminated) maintained by the Employer, and the denominator of which is the lesser of 125 percent of the dollar limitation determined for the Limitation Year under Sections 415(b) and (d) of the Code or 140 percent of the Participant's Highest Average. Compensation, including any adjustments under Section 415(b) of the Code.

Notwithstanding the above, if the Participant was a participant as of the first day of the first Limitation Year beginning after December 31, 1986, in one or more defined benefit plans maintained by the Employer which were in existence on May 6, 1986, the denominator of the Defined Benefit Plan Fraction shall not be less than 125 percent of the sum of the annual benefits under all such plans which the Participant had accrued as of the close of the last Limitation Year beginning before January 1, 1987, disregarding any changes in the terms and conditions of the plan after May 5, 1986. The preceding sentence shall apply only if the Employer's defined benefit plans individually and in the aggregate satisfied the requirements of Section 415 of the Code for all Limitation Years beginning before January 1, 1987.

(d) Defined Contribution Dollar Limitation. For Limitation Years (as defined in Section 11.1(i) of the Plan) beginning on and after July 1, 2007, $40,000, as such amount is adjusted as provided in Code Section 415(d).

(e) Defined Contribution Plan Fraction. A fraction, the numerator of which is the sum of the Annual Additions credited to a Participant's accounts under all defined contribution plans (whether or not terminated) maintained by the Employer for the current and all prior Limitation Years (including any

Annual Additions attributable to nondeductible employee contributions to any defined benefit plans, whether or not terminated, maintained by the Employer and any Annual Additions attributable to any welfare benefit funds and individual medical accounts maintained by the Employer) and the denominator of which is the sum of the maximum aggregate amounts for the current and all prior Limitation Years of service with the Employer (regardless of whether a defined contribution plan was maintained by the Employer). The maximum aggregate amount for any Limitation Year is the lesser of 125 percent of the dollar limitation determined under Sections 415(b) and (d) of the Code in effect under Section 415(c)(1)(A) of the Code or 35 percent of the Participant's Compensation for such year.

Notwithstanding the above, if the Participant was a participant as of the end of the first day of the first Limitation Year beginning after December 31, 1986, in one or more defined contribution plans maintained by the Employer which were in existence on May 6, 1986, the numerator of the Defined Contribution Plan Fraction shall be adjusted if the sum of such fraction and the Defined Benefit Plan Fraction would otherwise exceed 1.0 under the terms of this Plan. Under this adjustment, an amount equal to the product of (i) the excess of the sum of the Defined Benefit and Defined Contribution Plan Fractions over 1.0 times (ii) the denominator of the Defined Contribution Plan Fraction shall be permanently subtracted from the numerator of the Defined Contribution Plan Fraction. This adjustment shall be calculated using the Defined Benefit and Defined Contribution Plan Fractions as they would have been calculated as of the end of the last Limitation Year beginning before January 1, 1987, and disregarding any changes in the terms and conditions of the plan made after May 5, 1986, but using the Section 415 limitation applicable to the first Limitation Year beginning or after January 1, 1987. The Annual Additions for any Limitation Year beginning before January 1, 1987, shall not be recomputed to treat all employee contributions as Annual Additions.

(f) Employer. For purposes of this Article 11, the Employer shall mean the Employer and all Affiliates.

(g) Excess Amount. The excess of a Participant's Annual Additions for a Limitation Year over the Maximum Permissible Amount for the Limitation Year.

(h) Highest Average Compensation. A Participant's average annual Compensation for the three consecutive Years of Service (as defined in Article 7.3) that produces the highest average annual compensation.

(i) Limitation Year. The Plan Year.

(j) Maximum Permissible Amount. The maximum amount of Annual

Additions that may be contributed or allocated to any Participant's accounts under the Plan for any Limitation Year shall not exceed the lesser of:

(1) the Defined Contribution Dollar Limitation, or

(2) 100 percent of the Participant's Compensation for the Limitation Year.

The Compensation limitation referred to in (ii) above shall not apply to any contribution for medical benefits (within the meaning of Sections 401(h) or 419(A)(f)(2) of the Code) which is otherwise treated as Annual Additions under Sections 415(1)(2) or 419A(d)(2) of the Code.

(k) Projected Annual Benefit. The annual retirement benefit (adjusted to an actuarially-equivalent straight life annuity if such benefit is expressed in a form other than a straight life annuity or qualified joint and survivor annuity) to which a Participant would be entitled under the terms of the plan assuming:

(1) the Participant will continue employment until normal retirement age under the Plan (or current age, if later), and

(2) the Participant's Compensation for the current Limitation Year and all other relevant factors used to determine benefits under the Plan will remain constant for all future Limitation Years.

Effective for Limitation Years beginning on or after December 31, 2001, the Annual Addition that may be contributed or allocated to a Participant's Account under the Plan for any Limitation Year shall not exceed the lesser of: (i) $40,000, as adjusted for increases in the cost-of-living under Code Section 415(d), or (ii) 100 percent of the Participant's Section 415 Compensation for the Limitation Year; provided, however, that the limit in clause (i) shall be prorated for any short Limitation Year. Also, the compensation limit referred to in (ii) shall not apply to any contribution for medical benefits after separation from service (within the meaning of Code Section 401(h) or Code Section 419A(f)(2)) which is otherwise treated as an Annual Addition.

11.2 Employer Who Maintains Other Qualified Defined Contribution Plan.

(a) If a Participant is covered under any other qualified defined contribution plan (whether or not terminated), the Annual Additions which may be credited to the Participant's separate accounts under this Plan for any Limitation Year shall be limited in accordance with this Article 11.2. The Annual Additions which may be credited to the Participant's separate accounts under this Plan for any such

Limitation Year shall not exceed the Maximum Permissible Amount reduced by the total Annual Additions credited to the Participant's accounts under all such other defined contribution plans for the Limitation Year. If the Annual Additions with respect to the Participant under all other defined contributions plans maintained by the Employer are less than the Maximum Permissible Amount and the Employer Contributions that would otherwise be contributed or allocated to the Participant's separate accounts under this Plan would cause the Annual Additions for the Limitation Year to exceed the Maximum Permissible Amount, then the amount contributed or allocated under this Plan shall be reduced so that the Annual Additions under all such other defined contribution plans in the aggregate are equal to or greater than the Maximum Permissible Amount. If the Annual Additions with respect to the Participant under such other defined contribution plans in the aggregate are equal to or greater than the Maximum Permissible Amount, then no amount shall be contributed or allocated to the Participant's separate accounts under this Plan for the Limitation Year.

(b) Prior to determining a Participant's actual Compensation for any Limitation Year, the Plan Administrator may determine the Maximum Permissible Amount for the Participant for the Limitation Year on the basis of a reasonable estimation of the Participant's Compensation for the Limitation Year, uniformly determined for all Participant's similarly situated. As soon as administratively feasible after the end of the Limitation Year, the Maximum Permissible Amount for the Limitation Year shall be determined on the basis of the Participant's actual Compensation for the Limitation Year.

(c) If, pursuant to Article 11.6(b) or as a result of the allocation of forfeitures, a Participant's Annual Additions under this Plan and such other defined contribution plans maintained by the Employer would result in an Excess Amount for a Limitation Year, then the Excess Amount shall be deemed to consist of the Annual Additions last allocated, except that Annual Additions attributable to a welfare benefit and/or individual medical account shall be deemed to have been allocated first, regardless of actual allocation dates.

(d) If an Excess Amount was allocated to a Participant's account under this Plan on an allocation date which coincides with an allocation date of another plan, the Excess Amount attributed to this Plan shall be the product of:

(1) the total Excess Amount allocated as of such date, times

(2) the ratio of (1) the Annual Additions allocated to the Participant's separate accounts under this Plan for the Limitation Year as of such date to (2) the total Annual Additions allocated to the Participant's accounts for the Limitation Year as of such date under this Plan and all other qualified defined contribution plans maintained by the Employer.

(e) Any Excess Amount attributable to this Plan shall be disposed of as follows:

(1) any Employee After-Tax Contributions, Employee Pre-Tax Contributions or Employee Roth Contributions by the Participant, to the extent they would reduce the Excess Amount, shall be returned to the Participant;

(2) if, after the application of subparagraph (i) above, an Excess Amount still exists and the Participant is covered by the Plan at the end of the Limitation Year, then such Excess Amount, plus any investment gains or other income or less any investment losses attributable thereto, shall be used to reduce the Employer contributions on behalf of the Participant for the next Limitation Year and each succeeding Limitation Year, if necessary;

(3) if, after the application of subparagraph (i) above, an Excess Amount still exists and the Participant is not covered by the Plan at the end of a Limitation Year, then such Excess Amount shall be held unallocated in a suspense account and applied to reduce future Employer contributions to the Plan for all remaining Participants in the next Limitation Year and each succeeding Limitation Year, if necessary; and

(4) if a suspense account is in existence at any time during a Limitation Year pursuant to this Article 11.2, such account shall participate in the allocation of the Trust's investment gains and losses. If a suspense account is in existence at any time during a particular Limitation Year, all amounts in the suspense account must be allocated and reallocated to Participants' accounts before any Employer contributions may be made to the Plan for that Limitation Year. Except as otherwise provided in (i) above, Excess Amounts may not be distributed to Participants or former Participants.

(f) Notwithstanding anything to the contrary, in correcting Excess Amounts in a Limitation Year beginning on or after July 1, 2007, the Employer may use any appropriate correction under the Employee Plans Compliance Resolution System, or any successor thereto.

11.3 Employer Who Maintains Other Qualified Defined Benefit Plan. For Limitation Years beginning before 2000, if the Employer maintains, or has at any time maintained, a qualified defined benefit plan (whether or not terminated) covering any Participant in this Plan, then the sum of the Participant's Deferred Benefit Plan Fraction and Defined Contribution Plan Fraction shall not exceed 1.0 for any Limitation Year. The Employer will satisfy this 1.0 limitation by disposing of the excess under the Plan and any other defined contribution plan maintained by the Employer in the order and manner specified in Article 11.2(e).

ARTICLE 12 - TOP-HEAVY PROVISIONS

12.1 Application. The provisions of this Article 12 shall become effective in any Plan Year in which the Plan is determined to be a Top-Heavy Plan.

12.2 Definitions. For purposes of this Article 12, the following terms shall be defined as follows:

(a) Key Employee. An Employee or former Employee (including any deceased Employee) who at any time during the Plan year that includes the Determination Date was an officer of the Employer having annual compensation greater than $130,000 (as adjusted under Code Section 416(i)(1) for Plan years beginning after December 31, 2002), a 5-percent owner of the Employer, or a 1- percent owner of the Employer having annual compensation of more than $150,000. For this purpose, annual compensation means compensation within the meaning of Code Section 415(c)(3). The determination of who is a key employee will be made in accordance with Code Section 416(i)(1) and the applicable regulations and other guidance of general applicability issued thereunder.

(b) Top-Heavy Plan. The Plan is a Top-Heavy Plan if any of the following conditions exist:

(1) Top-Heavy Ratio for the Plan exceeds 60 percent and the Plan is not part of any Required Aggregation Group or Permissive Aggregation Group;

(2) the Plan is a part of a Required Aggregation Group but not part of a Permissive Aggregation Group and the Top-Heavy Ratio for the Required Aggregation Group exceeds 60 percent; or

(3) the Plan is a part of a Required Aggregation Group and a Permissive Aggregation Group and the Top-Heavy Ratio for both Groups exceeds 60 percent.

(c) Top-Heavy Ratio.

(1) If the Employer maintains one or more defined contribution plans and the Employer maintains one or more defined benefit plans which, during the five-year period ending on the Determination Date, have accrued any benefits for any Participant in this Plan, the Top-Heavy Ratio for any Required Aggregation Group or Permissive Aggregation Group is a fraction, the numerator of which is the sum of the account balances under the defined contribution plans for all Key Employees determined in accordance with (i) above and the Present Value of accrued benefits under the defined benefit plans for all Key Employees, and the denominator of which is the sum of the account balances under the defined contribution plans for all participants and the present value of accrued benefits under the defined benefit plans for all participants, with the present value of accrued benefits to be determined under the accrual method uniformly used under all plans maintained by the Employer or, if no such method exists, under the slowest accrual method permitted under the fractional accrual rate of Section 411(b)(1)(c) of the Code. Both the numerator and denominator of the Top-Heavy Ratio shall be increased for any distribution of an account balance or an accrued benefit made in the five-year period ending on the Determination Date and any contribution due, but unpaid as of the Determination Date; and

(2) For purposes of (i) above, the value of account balances and the present value of accrued benefits will be determined as of the most recent Valuation Date that falls within or ends with the 12-month period ending on the Determination Date, except as provided in Section 416 of the Code and the regulations thereunder for the first and second plan years of a defined benefit plan. The account balances and accrued benefits of a Participant (1) who is not a key Employee but who was a Key Employee in a prior year, or (2) who has not been credited with at least one hour of service with the Employer at any time during the five-year period ending on the Determination Date, will be disregarded. The calculation of the Top-Heavy Ratio, and the extent to which distributions, rollovers, and transfers are taken into account, shall be made in accordance with Section 416 of the Code and the regulations thereunder. Deductible Employee contributions shall not be taken into account for purposes of computing the Top-Heavy Ratio. When aggregating plans, the value of account balances and accrued benefits shall be calculated with reference to the Determination Dates that fall within the same calendar year. The accrued benefit of a participant other than a Key Employee shall be determined under: (1) the method, if any, that uniformly applies for accrual purposes under all defined benefit plans maintained by the Employer, or (2) if there is no such method, as if such benefit accrued not more rapidly than the slowest accrual rate permitted under the fractional rule of Section 411(b)(1)(C) of the Code.

Effective for Plan Years after December 31, 2001, the present value of accrued benefits and the value of an Employee's Account as of the Determination Date shall be increased by the distributions made with respect to the employee under the Plan and any plan aggregated with the Plan under Code Section 416(g)(2) during the 1-year period ending on the Determination Date. The preceding sentence shall also apply to distributions under a terminated plan which, had it not been terminated, would have been aggregated with the Plan under Code Section 416(g)(2)(A)(i). In the case of a distribution made for a reason other than severance from employment, death or disability, this provision shall be applied by substituting "5-year period" for "1-year period."

The accrued benefits and Accounts of any individual who has not performed services for the Employer during the 1-year period ending on the Determination Date shall not be taken into account.

(d) Permissive Aggregation Group. The Required Aggregation Group plus any other qualified plans of the Employer or an Affiliated Employer which, when considered as a group with the Required Aggregation Group, would continue to satisfy the requirements of Sections 401(a)(4) and 410 of the Code.

(e) Required Aggregation Group.

(1) Each qualified plan of the Employer or an Affiliated Employer in which at least one Key Employee participates or has participated at any time during the determination period (regardless of whether the plan has terminated); and

(2) any other qualified plan of the Employer or an Affiliated Employer which enables a plan described in (i) above to meet the requirements of Sections 401(a)(4) or 410 of the Code.

(f) Determination Date. For any Plan Year of the Plan subsequent to the first Plan Year, the last day of the preceding Plan Year. For the first Plan Year of the Plan, the last day of that Plan Year.

(g) Valuation Date. The Determination Date as of which account balances or accrued benefits shall be Valued for purposes of calculating the Top-Heavy Ratio.

12.3 Minimum Allocation.

(a) Except as otherwise provided in (c) and (d) below, the Employer contributions on behalf of any Participant who is not a Key Employee shall not be less than the lesser of three percent of such Participant's Compensation or, in the case where the Employer has no defined benefit plan which designates this Plan to satisfy Section 401 of the Code, the largest percentage of Employer contributions and forfeitures, as a percentage of a Key Employee's Compensation, allocated on behalf of any Key Employee for that year. The minimum allocation under this Article 12.3 shall be determined without regard to any Social Security contribution, and shall be made even though, under other Plan provisions, the Participant would not otherwise be entitled to receive an allocation, or would have received a lesser allocation for the year, because: (1) the Participant failed to complete one year of Service; (2) the Participant failed to make mandatory employee contributions to the Plan; or (3) the Participant's Compensation was less than a stated amount. Employee Pre-Tax Contributions, Employee Roth Contributions and Employer Matching Contributions to the Plan shall not be taken into account for purposes of satisfying the minimum allocation required under this Article 12.3.

(b) For purposes of computing the minimum allocation required under (a) above, Compensation shall mean Compensation as defined in Article 2.5.

(c) The provisions of (a) above shall not apply to any Participant who was not employed by the Employer on the last day of the Plan Year.

(d) The provisions of (a) above shall not apply to any Participant to the extent the Participant is covered under any other qualified plan or plans of the Employer and the minimum benefit requirements of Section 416(c) of the Code shall be satisfied through one or more other qualified plans maintained by the Employer.

(e) The minimum allocation required under (a) above (to the extent required to be nonforfeitable under Section 416(b) of the Code) may not be forfeited under Sections 411(a)(3)(B) or 411(a)(3)(D) of the Code.

12.4 Adjustment of Fractions. If the Company maintains both a defined contribution plan and a defined benefit plan with a Participant who participates, or could participate in both plans, for purposes of computing the defined contribution fraction and defined benefit fraction described in Section 11.1, the dollar limitation of Section 415(b)(1)(A) and Section 415(c)(1)(A) of the Code shall be multiplied by 1.0 in lieu of 1.25.

ARTICLE 13 - ADMINISTRATION

13.1 Powers and Responsibilities of the Plan Administrator.

(a) Powers and Responsibilities of the Plan Administrator. The Plan Administrator shall have all the powers necessary to carry out its purpose and discharge its responsibilities. In general, and except to the extent that the Company's Board of Directors or the OCC shall otherwise provide, the Plan Administrator shall control and manage the operation and administration of the Plan and to carry out the administrative responsibilities of the Company. In addition to any implied powers and duties that may be necessary or appropriate to the conduct of its affairs, and without limitation by reason of enumeration, the Plan Administrator shall have the power, the duty, and the complete and exclusive discretion:

(1) To construe and interpret the terms of each of the plan documents;

(2) To direct how the terms of each of the Plan will be communicated to Participants and their dependents, including establishing guidelines on the method and frequency of communications;

(3) To decide all questions relating to an individual's eligibility to participate in the Plan;

(4) To designate those entities whose employees may participate in any of the Plan or that will be treated as members of the same affiliated group of corporations, where appropriate;

(5) To appoint individuals to handle the processing of claims for benefits under the Plan, and, in the case of a contested denial of a benefit claim, adjudicate the appeal of the denied benefit claim in accordance with Article 13.5, applicable law, and any rules and procedures adopted by the Plan Administrator with respect to the review of claims under the Plan;

(6) To determine the amount, form and timing of any distribution of benefits or withdrawal under the Plan;

(7) To approve and enforce the repayment of any loan to a Participant under the Plan; and

(8) To engage and remove such consultants, accountants, actuaries, and attorneys as the Plan Administrator deems necessary, appropriate or desirable in connection with the administration of the Plan.

Any power or duty referenced above may be delegated by the Plan Administrator to the Company's Vice President of Compensation and Benefits and his or her staff. In the event of such delegation, the Vice President of Compensation and Benefits and/or his or her staff members, in undertaking the power or duty so delegated, shall act as an agent of the Plan Administrator and not in his or her capacity as an individual. Any construction, interpretation, or application of the Plan by the Plan Administrator, or its delegates, shall be taken pursuant to uniform standards consistently applied to all persons similarly situated.

(b) Furnishing Recordkeeper with Information. The Plan Administrator shall be responsible for furnishing the Recordkeeper with sufficient information to enable the Recordkeeper to establish and maintain separate accounts on behalf of Participants in accordance with Article 6, including information with respect to the allocation of Plan contributions to Participants, disposition of Plan Forfeitures, payment of Plan distributions and withdrawals, and accounting for Plan loans and loan repayments.

(c) Rules and Decisions. The Plan Administrator may adopt such rules as the Plan Administrator deems necessary, desirable, or appropriate in the administration of the Plan. All rules and decisions of the Plan Administrator shall be applied uniformly and consistently to all Participants in similar circumstances. When making a determination or calculation, the Plan Administrator shall be entitled to rely upon information furnished by a Participant or Beneficiary, the Employer, legal counsel of the Employer, the Recordkeeper, or the Trustee.

(d) Application and Forms for Benefits. The Plan Administrator may require a Participant, former Participant or Beneficiary to complete and file with it an application for a benefit, and to furnish all pertinent information requested by the Plan Administrator. The Plan Administrator may rely upon all such information so furnished, including the Participant's, former Participant's or Beneficiary's current mailing address.

(e) Facility of Payment. Whenever, in the Plan Administrator's opinion, a person entitled to receive any payment of a benefit or installment thereof is under a legal disability or is incapacitated in any way so as to be unable to manage his or her financial affairs, the Plan Administrator may direct the Trustee to apply the payment for the benefit of such person in such manner as the Plan Administrator considers advisable.

(f) Lost or Missing Participants. In the event a Participant or Beneficiary cannot be located by the Plan Administrator, or its designee, after reasonable efforts to locate such Participant or Beneficiary, as established by the Recordkeeper and agreed to by the Plan Administrator, have been undertaken, any benefits payable to such Participant or Beneficiary shall be allocated to the forfeiture account established under the Plan. Such benefits shall be reinstated if a claim is made by the Participant or Beneficiary for the forfeited benefits. In the event that forfeitures in the Plan are insufficient to pay such a claim, an additional payment to the Plan will be made by the Employer.

(g) Plan Compliance Resolution. The Plan Administrator may take voluntary corrective action required to "self-correct" failures to follow the Plan in accordance with the Employee Plans Compliance Resolution System to preserve the Plan's tax qualified status.

(h) Recovery of Erroneous Benefit Payments. In the event any Participant or Beneficiary shall have received any benefit payments or distributions which are more than such Participant or Beneficiary was entitled to receive, or are paid earlier than the date otherwise payable to such Participant or Beneficiary under the terms of the Plan or any predecessor to the Plan (an "Excess Benefit"), the Plan Administrator shall be entitled to recover such Excess Benefit plus interest from such Participant or any Beneficiary. Recovery shall occur in any manner as determined by the Plan Administrator, in its sole discretion, which is consistent with the principles set forth in Section 6.06(4) of Internal Revenue Service Revenue Procedure 2013-12, or any successor provision thereto addressing recovery of erroneous payments.

13.2 Allocation of Duties and Responsibilities. The Plan Administrator may, by written instrument, designate other persons to carry out any of the Plan Administrator's duties and responsibilities under the Plan. Any such duties or responsibilities thus allocated must be described in the written instrument.

13.3 Expenses. The Employer shall pay all expenses authorized and incurred in the administration of the Plan except to the extent such expenses are paid from the Trust. Notwithstanding anything herein to the contrary, amounts held in the ERISA Account may, at the sole discretion of the Plan Administrator, be used to pay any reasonable and proper expenses incurred in the administration of the Plan.

13.4 Liabilities. The Plan Administrator and each person to whom duties and responsibilities have been allocated pursuant to Article 13.2 may be indemnified and held harmless by the Employer to an extent determined by the Board of Directors with respect to any alleged breach of responsibilities performed or to be performed hereunder.

13.5 Claims Denial and Appeal Procedure. In accordance with ERISA and regulations there under, notice in writing shall be provided to any person whose claim for benefits under the Plan has been denied as follows:

(a) Written notification of denial will be provided to the Participant or Beneficiary ("claimant") within 90 days from the date the claim is filed. An extension of up to 90 days is permitted if necessary due to matters beyond the Plan's control provided the claimant is notified, prior to expiration of the initial 90- day period, of the circumstances requiring the extension of time and the date by which the claimant should expect a decision. If the reason for taking the extension is the failure of the claimant to submit information necessary to decide a claim, the time period for making a benefit determination shall be tolled from the date on which the notification of the extension is sent to the claimant until the date on which the claimant responds to the request for additional information, without regard to whether the claimant's response supplies all of the information necessary to decide the claim.

(b) The written notification shall include the reasons for the denial based on specific Plan provisions, additional information required to perfect the claim, if possible, for an appeal, and an explanation of the claim appeal procedure. The notification shall also include: (i) a description of the Plan's review procedures and the time limits applicable to such procedures, including a statement of the claimant's right to bring civil action under Section 502(a) of ERISA following an adverse benefit determination on appeal; (ii) notice of the claimant's right to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant to the claimant's claim for benefits; and (iii) if an internal rule, guideline, protocol, or other similar criterion was relied upon in making the determination, either the specific rule, guideline, protocol or other similar criterion or a statement that such rule, guideline, protocol, or other similar criterion was relied upon in making the adverse determination and that a copy will be provided free of charge to the claimant upon request.

(c) Within 60 days of receipt of the denial, if the claimant disagrees with such denial, the claimant must submit a written request for appeal of the denied claim to the Plan Administrator. The written appeal must be accompanied by any additional documents or records which support the claim.

(d) On appeal, the review shall not afford deference to the initial adverse benefit determination and shall be conducted by the Plan Administrator (which is neither the individual who made the adverse benefit determination that is the subject of appeal nor the subordinate of such individual).

(e) The Plan Administrator will provide the claimant, within 60 days after receipt of the appeal, a written response to the appeal. The Plan Administrator may take an additional 60 days to decide the appeal if circumstances so warrant. If the reason for taking the extension is the failure of the claimant to submit information necessary to decide a claim, the time period for making a benefit determination shall be tolled from the date on which the notification of the extension is sent to the claimant until the date on which the claimant responds to the request for additional information, without regard to whether the claimant's response supplies all of the information necessary to decide the claim.

(f) The written notification shall include the reasons for the Plan Administrator's decision, based on specific Plan provisions. The notification shall also include: (i) a statement of the claimant's right to bring civil action under Section 502(a) of ERISA; (ii) notice of the claimant's right to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant to the claimant's claim for benefits; (iii) if an internal rule, guideline, protocol, or other similar criterion was relied upon in making an adverse determination, either the specific rule, guideline, protocol or other similar criterion or a statement that such rule, guideline, protocol, or other similar criterion was relied upon in making the adverse determination and that a copy will be provided free of charge to the claimant upon request; and (iv) a statement regarding possible voluntary alternative dispute resolution options, such as mediation.

13.6 Limitations on Actions and Venue. A person who has a claim for Plan benefits as described in Section 13.5 must file any complaint in the Federal District Court for the Northern District of Texas, Dallas division, to dispute the Plan's determination with respect to such claim within three (3) years from the date of the occurrence of the event giving rise to such claim, or if later, within one (1) year from the date of the final claim denial. By participating in the Plan, a Participant consents that venue as described herein is proper and convenient, as venue is established where the Plan is administered.

ARTICLE 14 - AMENDMENT, TERMINATION AND MERGER

14.1 Amendment of Plan.

(a) Amendment. The Company Organization and Compensation Committee ("OCC") may at any time or times amend or modify any provision of the Plan to any extent and in any manner that it may deem advisable. If the OCC so desires, it may delegate this authority to the Pension and Investment Committee, the appropriate Company officer, or one of their delegates.

(b) Limitations on Amendment.

(1) No amendment shall be effective to cause or permit any part of the assets of the Plan to be used for, or diverted to, purposes other than for the exclusive benefit of Participants or their Beneficiaries, or so as to cause or permit any part of the assets of the Plan to revert to or become the property of the Employer; and

(2) No amendment to the Plan shall be effective to the extent that it has the effect of decreasing a Participant's accrued benefit. For purposes of this Article 14.1(b)(ii), a Plan amendment which has the effect of decreasing a Participant's account balance or eliminating an optional form of benefit, with respect to benefits attributable to service before the amendment,

shall be treated as reducing an accrued benefit. Furthermore, if the vesting schedule of the Plan is amended, in the case of an Employee who is a Participant as of the later of the date such amendment is adopted or the date it becomes effective, the vested percentage (determined as of such date) of such Employee in his or her Employer Matching Contribution Account and his or her Employer Discretionary Contribution Account will not be less than the percentage computed under the Plan without regard to such amendment.

14.2 Termination of Plan; Suspension of Contributions.

(a) Plan Termination. The Employer, by duly adopted resolution, may terminate the Plan at any time. In the event of the dissolution, merger, consolidation or reorganization of the Employer, the Plan shall automatically terminate unless it is continued by a successor employer in accordance with Article 14.3. Upon the termination or partial termination of the Plan, the separate accounts of all Participants affected thereby shall immediately become fully vested and nonforfeitable.

(b) Suspension of Contributions. The Employer, by duly adopted resolution, may discontinue all further contributions to the Plan. Upon the complete suspension of contributions to the Plan by the Employer, the separate accounts of all Participants affected thereby shall immediately become fully vested and nonforfeitable. The Employer shall continue to maintain the Plan and Trust in accordance with the requirements of Sections 401(a) and 501(a) of the Code, and the Plan Administrator shall ensure that directions to the Trustee to distribute the separate accounts of Participants are as specifically provided in Article 8.

14.3 Successor Employer. In the event of the dissolution, merger, consolidation or reorganization of the Employer provision may be made by which the Plan and Trust shall be continued by the successor employer, in which case such successor employer shall be substituted for the Employer under the Plan. The substitution of the successor employer shall constitute an assumption of Plan liabilities by the successor employer, and the successor employer shall have all powers, duties and responsibilities of the Employer under the Plan.

14.4 Merger, Consolidation or Transfer. There shall be no merger or consolidation of the Plan with, or transfer of assets or liabilities of the Plan to, any other plan maintained or to be established for the benefit of all or some of the Participants in the Plan, unless each Participant would (if either this Plan or such other plan then terminated) receive a benefit immediately after the merger, consolidation or transfer which is equal to or greater than the benefit the Participant would have been entitled to receive immediately before the merger, consolidation or transfer (if this Plan had then terminated). Notwithstanding any Plan provision to the contrary, no assets of the Plan shall be transferred to any other plan or trust unless the Plan Administrator reasonably concludes, in accordance with the requirements of Treasury Regulation § 1.401(k)-1(d)(5), that such other plan or trust provides that the transferred assets may not be distributed before the occurrence of one or more of the events specified in Treasury Regulation § 1.401(k)-1(d).

14.5 Distribution upon Termination of Plan or Disposition of Assets or Subsidiary. If so directed by the Plan Administrator, the Trustee shall distribute to each Participant the amounts credited to the Participant's separate accounts under the Plan in a lump sum payment (unless such amount is required to be paid in the form of a qualified joint and survivor annuity or except as otherwise required under Article 8.3(b)), all as determined by the Plan Administrator, if:

(a) the Plan is terminated under Article 14.2 without the establishment or maintenance by the Employer of another defined contribution plan;

(b) the Employer is a corporation and the Employer disposes of substantially all the assets (within the meaning of Section 409(d)(2) of the Code) used in its trade or business to an unrelated corporation, provided that the Participant continues employment with the corporation acquiring such assets and the Employer continues to maintain the Plan after the disposition; and

(c) the Employer is a corporation and the Employer disposes of its interest in a subsidiary (within the meaning of Section 409(d)(3) of the Code), provided that the Participant continues employment with such subsidiary and the Employer continues to maintain the Plan after the disposition.

ARTICLE 15 - MISCELLANEOUS

15.1 Exclusive Benefit of Participants and Beneficiaries.

(a) The corpus or income of the Trust shall not be used for, or diverted to, purposes other than for the exclusive benefit of Participants, former Participants and their Beneficiaries. The assets of the Trust shall not revert to the benefit of the Employer, except as otherwise specifically provided in subsection (b) below.

(b) Employer Contributions to the Plan may be returned to the Employer under the following conditions:

(1) if the Employer Contribution was made by mistake of fact, such contribution may be returned to the Employer within one year of the payment of such contribution;

(2) Employer Contributions to the Plan are specifically conditioned upon their deductibility under the Code. To the extent a deduction is disallowed for any such contribution, it may be returned to the Employer within one year after the disallowance of the deduction; and

(3) Employer Contributions to the Plan are specifically conditioned on the initial qualification of the Plan under the Code. If the Plan is determined by the Internal Revenue Service to not be initially qualified, any Employer Contributions made incident to that initial qualification may be returned to the Employer within one year after the date the initial qualification is denied, but only if the application for qualification is made by the time prescribed by law for filing the Employer's return for the taxable year in which the Plan is adopted, or such later date as the Secretary of the Treasury may prescribe.

15.2 Leased Employees. For purposes of this Plan, any leased employee of the Employer shall be treated as an Employee of the Employer for all purposes of the Plan with respect to the provisions of Sections 401(a)(3), (4), (7) and (16) and 408(k), 410,415 and 416 but shall be otherwise ineligible for coverage and benefits under the Plan. Notwithstanding anything in this Plan to the contrary, an individual shall not be considered a leased employee during any Plan Year in which:

(1) the individual is covered by a money purchase pension plan providing (i) a non-integrated Employer Contribution of at least 10 percent of compensation (as defined in Section 415(c)(3) of the Code, but including amounts contributed pursuant to a salary reduction agreement which are excludable from the employee's gross income under Sections 125, 402(e)(3), 402(h)(1)(B) or 403(b) of the Code), (ii) immediate participation, and (iii) full and immediate vesting; and

(2) leased employees do not constitute more than 20 percent of the Employer's non-highly compensated workforce.

For purposes of this Article 15.2, the term "leased employee" means any person (other than an employee of the recipient) who, pursuant to an agreement between the recipient and any other person ("leasing organization"), has performed services for the recipient (or for the recipient and any related persons determined in accordance with Section 414(n)(6) of the Code) on a substantially full time basis for a period of at least one year and such services are of a type historically performed by employees in the business field of the recipient employer. Contributions or benefits provided to the leased employee by the leasing organization which are attributable to services performed for the recipient employer shall be treated as provided by the recipient employer.

15.3 Crediting Service with Predecessor Employer. If the Employer maintains this Plan as the plan of a predecessor employer, service with the predecessor employer shall be treated as service with the Employer under this Plan in accordance with Article 7.3.

15.4 Right to Trust Assets. No Employee, Participant, former Participant or Beneficiary shall have any right to, or interest in, any assets of the Trust upon termination of employment or otherwise, except as specifically provided under the Plan. All payments of benefits under the Plan shall be made solely out of the assets of the Trust.

15.5 Nonalienation of Benefits. Except as provided under Article 10 with respect to Plan loans, benefits payable under the Plan shall not be subject in any manner to anticipation, alienation, sale, transfer, assignment, pledge, encumbrance, charge, garnishment, execution, or levy of any kind, whether voluntary or involuntary; provided, however, that the Trustee, at the direction of the Plan Administrator, shall not be hereby precluded from complying with any qualified domestic relations order as defined in Section 414(p) of the Code or any domestic relations order entered before January 1, 1985. Any attempt by a Participant, former Participant or Beneficiary to anticipate, alienate, sell, transfer, assign, pledge, encumber, charge or otherwise dispose of any right to benefits payable hereunder shall be void. The Trustee shall not in any manner be liable for or subject to, the debts, contracts, liabilities, engagements or torts of any person entitled to benefits hereunder.

15.6 Applicable Law. The Plan shall be construed and enforced in accordance with and by the laws of the State of Texas to the extent permitted by ERISA.

***

IN WITNESS WHEREOF, Flowserve Corporation has caused this amended and restated Plan to be executed by its duly authorized officer.

FLOWSERVE CORPORATION

By: /s/ Susan C. Hudson
Susan Hudson
Senior Vice President & Chief Legal Officer
15-Dec-2023

Dated

SUPPLEMENT- A

Optional Forms of Benefits Available Under Merged Plans

1. Joint and Survivor Annuity Requirement.

(a) General Rule. If a Participant does not elect one of the forms of distribution available to a Participant pursuant to Article 8.3, the amount which a Participant is entitled to receive from the Valtek Plan, to the extent attributable to employment at Valtek Incorporated, from the Automax Plan or from the Springboro Plan immediately prior to the Effective Date of the Plan, may be distributed in the form of a qualified joint and survivor annuity unless otherwise provided in Article 8.3(a).

(b) Definition of Qualified Joint and Survivor Annuity. For purposes of this Supplement, the term “qualified joint and survivor annuity” means, in the case of a married participant, an immediate annuity payable for the life of the Participant with a survivor annuity payable for the life of the Participant’s surviving spouse which is not less than 50 percent nor more than 100 percent of the annuity payable for the life of the Participant, as designated by the Participant during his or her lifetime; provided that if no such designation is made by the Participant, the percentage shall be 50 percent. In the case of an unmarried participant, the term “qualified joint and survivor annuity” means an annuity payable for the life of the Participant. The qualified joint and survivor annuity shall be purchased with or provided from the total amount available for distribution as a joint and survivor annuity under a Merged Plan from the Participant’s separate accounts under the Plan at the time of distribution.

(c) Explanation of Joint and Survivor Annuity. The Plan Administrator shall provide each Participant with a written explanation at least 30 days, but no more than 90 days, prior to the Participant’s annuity starting date setting forth: (i) the terms and conditions of the qualified joint and survivor annuity; (ii) the Participant’s right to make, and the effect of, an election to waive the qualified joint and survivor annuity form of distribution; (iii) the rights of the Participant’s spouse; and (iv) the right to make, and the effect of, a revocation of a previous election to waive the qualified joint and survivor annuity method of distribution.

2. Waiver of Qualified Joint or Survivor Annuity.

(a) General Rule. A Participant may elect at any time during the applicable election period to waive the qualified joint and survivor annuity form of distribution, if eligible, to elect one of the optional forms of annuity distribution in Paragraph 5. A Participant may revoke any such election at any time during the applicable election period. Upon the death of the Participant, a Beneficiary, if eligible, may elect one of the optional forms of annuity distribution in Paragraph 5.

(b) Spousal Consent Required. Any election by a Participant to waive the qualified joint and survivor annuity form of distribution under (a) above for one of the optional forms of annuity distribution in Paragraph 5 shall not be effective unless:

(i) the Participant's spouse consents in writing to the Participant's election;

(ii) the Participant's election designates the specific non-spouse Beneficiary (including any class of Beneficiaries or contingent Beneficiaries) to receive the Participant's benefits under the Plan upon the Participant's death, which Beneficiary designation shall not be thereafter changed by the Participant without further spousal consent (unless the spouse expressly permits subsequent Beneficiary designations by the Participant without further spousal consent.);

(iii) the spouse's consent acknowledges the effect of the Participant's election; and

(iv) the spouse's consent is witnessed by a Plan representative or a notary public.

In addition, in the case of a waiver of the qualified joint and survivor annuity, the Participant's election shall specify the optional form of annuity distribution elected by the Participant under Paragraph 6 which may not be thereafter changed without further spousal consent (unless the spouse expressly permits subsequent changes by the Participant without further spousal consent.) Notwithstanding the preceding, if the Participant establishes to the satisfaction of the Plan Administrator that there is no spouse or the spouse cannot be located, the Participant's election to waive the qualified joint and survivor annuity form of distribution shall be deemed a qualified election for which no spousal consent is required.

Any consent by a spouse, or establishment that the consent of a spouse may not be obtained, shall not be effective with respect to any other spouse. Any spousal consent which permits subsequent changes by the Participant to the Beneficiary designation or optional form of distribution without the requirement of further spousal consent shall acknowledge that the spouse has the right to limit such consent to a specific Beneficiary or optional form of distribution, and that the spouse voluntarily elects to relinquish such right. A Participant may revoke any prior waiver of the qualified joint and survivor annuity or qualified preretirement survivor annuity at any time prior to the commencement of benefits without the consent of his or her spouse, and the number of such revocations shall not be limited. Any new waiver of the qualified joint and survivor annuity or qualified preretirement survivor annuity, or any change to an existing Beneficiary designation by a Participant which was in effect at the time of a waiver of the qualified joint and survivor annuity or qualified preretirement survivor annuity, shall require a new spousal consent. No consent obtained shall be valid unless the Participant has received the appropriate notice and written explanation.

(c) Applicable Election Period Defined. The term "applicable election period" means in the case of an election to waive the qualified joint and survivor annuity form of distribution, the 90-day period ending on the Participant's annuity starting date.

3. United Centrifugal Pumps Tax Savings Plan. Rights to receive benefits under Sections 7.02(e) and/or 7.02(f) of the United Centrifugal Pump Tax Savings Plan ("UCP Plan") by a Participant in the UCP Plan prior to its merger into the CAP Plan shall be preserved to the extent available to the Participant under the UCP Plan prior to the merger effective June 1, 1989.

4. S.R. Engineering, Inc. Profit Sharing Plan and Trust. Distribution criteria and forms of benefits contained in Article VI of the S.R. Engineering, Inc. Profit Sharing Plan and Trust ("SRE Plan") prior to its merger into the CAP Plan shall be preserved to the extent available to the Participant under the SRE Plan prior to the merger effective January 1, 1991.

5. Optional Forms of Annuity Distribution. Notwithstanding any other provision herein, the following optional forms of annuity distribution shall be available for Participants under Merged Plans to the extent a benefit was available in such form of distribution immediately prior to the Effective Date of this Plan:

(a) a straight life annuity, single life annuities with certain periods of 5, 10 or 15 years, a single life annuity with installment refund, survivorship life annuities with installment refund and survivor percentages of 50, 66-2/o or 100 or fixed period annuities not less than a period of 60 months and not to exceed the life expectancy of the Participant and a named beneficiary in accordance with Section 6.02 of the Springboro Plan;

(b) the 75% and 100% qualified joint and survivor annuity, life annuity for an unmarried Participant or the purchased annuity in accordance with section 6.5 of the Automax Plan; and

(c) a nontransferable annuity contract, purchased from a commercial provider in accordance with section 10.5(c) of the Valtek Plan to the extent such benefit is attributable to employment at Valtek Incorporated.

ADDENDUM A

MINIMUM REQUIRED DISTRIBUTIONS

Section 1. General Rules.

1.1. Effective Date. The provisions of this Addendum will apply for purposes of determining required minimum distributions for calendar years beginning with the 2003 calendar year.

1.2. Precedence. The requirements of this Addendum will take precedence over any inconsistent provisions of the Plan.

1.3. Requirements of Treasury Regulations Incorporated. All distributions required under this Addendum will be determined and made in accordance with the Treasury regulations under Section 401(a)(9) of the Code.

1.4. TEFRA Section 242(b)(2) Elections. Notwithstanding the other provisions of this Addendum, distributions may be made under a designation made before January 1, 1984, in accordance with Section 242(b)(2) of the Tax Equity and Fiscal Responsibility Act (TEFRA) and the provisions of the Plan that relate to Section 242(b)(2) of TEFRA.

Section 2. Time and Manner of Distribution.

2.1. Required Beginning Date. The Participant's entire interest will be distributed, or begin to be distributed, to the Participant no later than the Participant's "required beginning date".

2.2. Death of Participant Before Distributions Begin. If the Participant dies before distributions begin, the Participant's entire interest will be distributed, or begin to be distributed, no later than as follows:

(a) If the Participant's surviving spouse is the Participant's sole designated beneficiary, then distributions to the surviving spouse will begin by December 31 of the calendar year immediately following the calendar year in which the Participant died, or by December 31 of the calendar year in which the Participant would have attained age 70 1/2, if later.

(b) If the Participant's surviving spouse is not the Participant's sole designated beneficiary, then distributions to the designated beneficiary will begin by December 31 of the calendar year immediately following the calendar year in which the Participant died.

(c) If there is no designated beneficiary as of September 30 of the year following the year of the Participant's death, the Participant's entire interest will be distributed by December 31 of the calendar year containing the fifth anniversary of the Participant's death.

(d) If the Participant's surviving spouse is the Participant's sole designated beneficiary and the surviving spouse dies after the Participant but before distributions to the surviving spouse begin, this Section 2.2, other than subsection (a), will apply as if the surviving spouse were the Participant.

For purposes of this Section 2.2 and Section 4, unless Section 2.2(d) applies, distributions are considered to begin on the Participant's required beginning date. If Section 2.2(d) applies, distributions are considered to begin on the date distributions are required to begin to the surviving spouse under Section 2.2(a). If distributions under an annuity purchased from an insurance company irrevocably commence to the Participant before the Participant's required beginning date (or to the Participant's surviving spouse before the date distributions are required to begin to the surviving spouse under Section 2.2(a)), the date distributions are considered to begin is the date distributions actually commence.

Effective as of:

(i) January 1, 2020, and solely with respect to Participants who had not attained age age 70 ½ as of December 31, 2019, each of the references to "age age 70½" in this Section 2.2 shall refer to age "72",

(ii) January 1, 2023, and solely with respect to Participants who had not attained age 72 as of December 31, 2022 and attain age 73 prior to January 1, 2033, each of the references to "age 70½" in this Section 2.2 shall refer to "age 73"; and

(iii) January 1, 2033, and solely with respect to Participants who had not attained age 74 as of December 31, 2032, each of the references to "age 70½" in this Section 2.2 shall refer to "age 75".

2.3. Forms of Distribution. Unless the Participant's interest is distributed in the form of an annuity purchased from an insurance company or in a single sum on or before the required beginning date, as of the first distribution calendar year, distributions will be made in accordance with Sections 3 and 4 of this Addendum. If the Participant's interest is distributed in the form of an annuity purchased from an insurance company, distributions thereunder will be made in accordance with the requirements of Section 401(a)(9) of the Code and the Treasury regulations.

Section 3. Required Minimum Distributions During Participant's Lifetime.

3.1. Amount of Required Minimum Distribution For Each Distribution Calendar Year. During the Participant's lifetime, the minimum amount that will be distributed for each distribution calendar year is the lesser of:

(a) the quotient obtained by dividing the Participant's account balance by the distribution period in the Uniform Lifetime Table set forth in Section 1.401(a)(9)-9 of the Treasury regulations, using the Participant's age as of the Participant's birthday in the distribution calendar year; or

(b) if the Participant's sole designated beneficiary for the distribution calendar year is the Participant's spouse, the quotient obtained by dividing the Participant's account balance by the number in the Joint and Last Survivor Table set forth in Section 1.401(a)(9)-9 of the Treasury regulations, using the Participant's and spouse's attained ages as of the Participant's and spouse's birthdays in the distribution calendar year.

3.2. Lifetime Required Minimum Distributions Continue Through Year of Participant's Death. Required minimum distributions will be determined under this Section 3 beginning with the first distribution calendar year and up to and including the distribution calendar year that includes the Participant's date of death.

Section 4. Required Minimum Distributions After Participant's Death.

4.1. Death On or After Date Distributions Begin.

(a) Participant Survived by Designated Beneficiary. If the Participant dies on or after the date distributions begin and there is a designated beneficiary, the minimum amount that will be distributed for each distribution calendar year after the year of the Participant's death is the quotient obtained by dividing the Participant's account balance by the longer of the remaining life expectancy of the Participant or the remaining life expectancy of the Participant's designated beneficiary, determined as follows:

(1) The Participant's remaining life expectancy is calculated using the age of the Participant in the year of death, reduced by one for each subsequent year.

(2) If the Participant's surviving spouse is the Participant's sole designated beneficiary, the remaining life expectancy of the surviving spouse is calculated for each distribution calendar year after the year of the Participant's death using the surviving spouse's age as of the spouse's birthday in that year. For distribution calendar years after the year of the surviving spouse's death, the remaining life expectancy of the surviving spouse is calculated using the age of the surviving spouse as of the spouse's birthday in the calendar year of the spouse's death, reduced by one for each subsequent calendar year.

(3) If the Participant's surviving spouse is not the Participant's sole designated beneficiary, the designated beneficiary's remaining life expectancy is calculated using the age of the beneficiary in the year following the year of the Participant's death, reduced by one for each subsequent year.

(b) No Designated Beneficiary. If the Participant dies on or after the date distributions begin and there is no designated beneficiary as of September 30 of the year after the year of the Participant's death, the minimum amount that will be distributed for each distribution calendar year after the year of the Participant's death is the quotient obtained by dividing the Participant’s account balance by the Participant’s remaining life expectancy calculated using the age of the Participant in the year of death, reduced by one for each subsequent year.

4.2. Death Before Date Distributions Begin.

(a) Participant Survived by Designated Beneficiary. Except as provided in the adoption agreement, if the Participant dies before the date distributions begin and there is a designated beneficiary, the minimum amount that will be distributed for each distribution calendar year after the year of the Participant’s death is the quotient obtained by dividing the Participant’s account balance by the remaining life expectancy of the Participant’s designated beneficiary, determined as provided in Section 4.1.

(b) No Designated Beneficiary. If the Participant dies before the date distributions begin and there is no designated beneficiary as of September 30 of the year following the year of the Participant’s death, distribution of the Participant’s entire interest will be completed by December 31 of the calendar year containing the fifth anniversary of the Participant’s death.

(c) Death of Surviving Spouse Before Distributions to Surviving Spouse Are Required to Begin. If the Participant dies before the date distributions begin, the Participant’s surviving spouse is the Participant’s sole designated beneficiary, and the surviving spouse dies before distributions are required to begin to the surviving spouse under Section 2.2(a), this Section 4.2 will apply as if the surviving spouse were the Participant.

Section 5. Definitions.

5.1. Designated Beneficiary. The individual who is designated as the beneficiary under Section 1.4 of the Plan and is the designated beneficiary under Section 401(a)(9) of the Code and Section 1.401(a)(9)-1, Q&A-4, of the Treasury regulations.

5.2. Distribution Calendar Year. A calendar year for which a minimum distribution is required. For distributions beginning before the Participant’s death, the first distribution calendar year is the calendar year immediately preceding the calendar year which contains the Participant’s required beginning date. For distributions beginning after the Participant’s death, the first distribution calendar year is the calendar year in which distributions are required to begin under Section 2.2. The required minimum distribution for the Participant’s first distribution calendar year will be made on or before the Participant’s required beginning date. The required minimum distribution for other distribution calendar years, including the required minimum distribution for the distribution calendar year in which the Participant’s required beginning date occurs, will be made on or before December 31 of that distribution calendar year.

5.3. Life Expectancy. Life expectancy as computed by use of the Single Life Table in Section 1.401(a)(9)-9 of the Treasury regulations.

5.4. Participant's Account Balance. The account balance as of the last valuation date in the calendar year immediately preceding the distribution calendar year (valuation calendar year) increased by the amount of any contributions made and allocated or forfeitures allocated to the account balance as of dates in the valuation calendar year after the valuation date and decreased by distributions made in the valuation calendar year after the valuation date. The account balance for the valuation calendar year includes any amounts rolled over or transferred to the Plan either in the valuation calendar year or in the distribution calendar year if distributed or transferred in the valuation calendar year.

5.5. Required Beginning Date. A Participant's "required beginning date" means the following:

(a) for a Participant who is not a "five percent owner", April 1 of the calendar year following the calendar year in which occurs the later of the Participant's (i) attainment of age 70 ½ or (ii) the date on which the Participant actually retires.

(b) for a Participant who is a "five percent owner", April 1 of the calendar year following the calendar year in which the Participant attains age 70 ½.

A Participant is a "five percent owner" if he is a five percent owner, as defined in Code Section 416(i) and determined in accordance with Code Section 416, but without regard to whether the Plan is top-heavy, for the Plan Year ending with or within the calendar year in which the Participant attains age 70 ½. The Required Beginning Date of a Participant who is a "five percent owner" hereunder shall not be redetermined if the Participant ceases to be a five percent owner as defined in Code Section 416(i) with respect to any subsequent Plan Year.

Effective as of:

(i) January 1, 2020, and solely with respect to Participants who had not attained age 70 ½ as of December 31, 2019, each of the references to "age 70 %" in this Section .5 shall refer to "age 72";

(ii) January 1, 2023, and solely with respect to Participants who had not attained age 72 as of December 31, 2022 and attain age 73 prior to January 1, 2033, each of the references to "age 70½" in this Section 5.5 shall refer to "age 73"; and

(iii) January 1, 2033, and solely with respect to Participants who had not attained age 74 as of December 31, 2032, each of the references to "age 70½" in this Section 5.5 shall refer to "age 75".

Section 6. Elections.

6.1. Election to Allow Participants or Beneficiaries to Elect 5-Year Rule. Participants or beneficiaries may elect on an individual basis whether the 5-year rule or the life expectancy rule in Sections 2.2 and 4.2 of this Addendum A applies to distributions after the death of a Participant who has a designated beneficiary. The election must be made no later than the earlier of September 30 of the calendar year in which distribution would be required to begin under Section 2.2 of this Addendum A, or by September 30 of the calendar year which contains the fifth anniversary of the Participant's (or, if applicable, surviving spouse's) death. If neither the Participant nor beneficiary makes an election under this paragraph, distributions will be made in accordance with Sections 2.2 and 4.2 of this Addendum A. The 5-year rule provides that the Participant's entire interest will be distributed to the designated beneficiary by December 31 of the calendar year containing the fifth anniversary of the Participant's death.

6.2. Election to Allow Designated Beneficiary Receiving Distributions Under 5-Year Rule to Elect Life Expectancy Distributions. A designated beneficiary who is receiving payments under the 5-year rule may make a new election to receive payments under the life expectancy rule until December 31, 2003, provided that all amounts that would have been required to be distributed under the life expectancy rule for all distribution calendar years before 2004 are distributed by the earlier of December 31, 2003 or the end of the 5-year period.

EXHIBIT 10.13

AMENDMENT NUMBER ONE TO THE FLOWSERVE CORPORATION SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN AS AMENDED AND RESTATED NOVEMBER JANUARY 1, 2018

WHEREAS, Flowserve Corporation ("***Flowserve***") maintains the Flowserve Corporation Supplemental Executive Retirement Plan ("Plan"), as amended and restated November 2, 2018;

WHEREAS, pursuant to Section 9.1 of the Plan, the Board of Directors may amend the Plan;

WHEREAS, the Company now desires to amend the Plan to no longer permit any Eligible Executive Officer (as defined in the Plan) hired or promoted on or after September 1,
2023, who would otherwise be an Eligible Executive Officer, to participate in the Plan; provided, however, that terms of the Plan shall remain in effect for any Eligible Executive Officer participating in the Plan as of August 31, 2023; and

WHEREAS, the Board of Directors has previously delegated all settlor and administrative authority the power to amend the Plan to the Organization & Compensation Committee ("Committee");

NOW, THEREFORE, pursuant to the powers enumerated in Section 9.1 of the Plan, the Committee hereby amends the Plan in accordance with the foregoing as follows effective September 1, 2023:

1. Section 2.1(i) is deleted in its entirety and replaced with the following:

(i) "Eligible Executive Officer" means any person who is (i) a Participant in the Qualified Plan, (ii) an Executive Officer of the Company or an employee who is not an Executive Officer of the Company but who was a Participant in this Plan on November 1, 2018, and (iii) designated by the Committee to participate in the Plan; provided, however that any person hired or promoted on or after September 1, 2023, shall not become an Eligible Executive Officer to participate in the Plan. Any person who is an Eligible Executive Officer participating in the Plan as of September 1, 2023, will continue to be treated an Eligible Executive Officer for all purposes under the Plan.

2. Section 4.2(b) is deleted in its entirety and replaced with the following:

(b) Interest Credits. The Company adds interest credits based upon the Eligible Executive Officer's beginning of quarter cash balance account plus 50% of Company contribution credits (other than any discretionary company contribution credits made pursuant to Section 4.3) for the quarter at an interest rate not less than three and seventy-nine one hundredths percent (3.79%) on an annual basis.

IN ALL RESPECTS NOT AMENDED HEREIN, the Plan shall remain in full force and effect.

IN WITNESS WHEREOF, THIS AMENDMENT NUMBER ONE IS EXECUTED this 29th day of August, 2023.

FLOWSERVE CORPORATION

By: /s/ Susan C. Hudson

Susan Hudson
Senior Vice President, Chief Legal Officer and
Corporate Secretary

EXHIBIT 10.14

AMENDMENT NUMBER TWO TO THE FLOWSERVE CORPORATION SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN AS AMENDED AND RESTATED NOVEMBER 2, 2018

WHEREAS, Flowserve Corporation ("***Flowserve***") maintains the Flowserve Corporation Supplemental Executive Retirement Plan, as amended and restated November 2, 2018 (as amended, the"***Plan***");

WHEREAS, pursuant to Section 9.1 of the Plan, the Board of Directors may amend the Plan;

WHEREAS, in an effort to align the terms of the Company's non-qualified retirement plans and clarify certain provisions thereunder, the Company now desires to amend the Plan to revise (i) the definitions of the terms "Beneficiary" and "Change in Control" set forth in the Plan and (ii) the category of domestic relations orders pursuant to which benefits under the Plan can be transferred; and

WHEREAS, the Board of Directors has previously delegated all settlor and administrative authority, including the power to amend the Plan, to the Organization & Compensation Committee, which has in turn delegated the authority to amend the Plan to the Company's Pension and Investment Committee (the "***Committee***").

NOW, THEREFORE, pursuant to the powers enumerated in Section 9.1 of the Plan, the Committee hereby amends the Plan in accordance with the foregoing as follows, effective as of January 1, 2024:

1. Section 2.1(a) is hereby amended by adding the following new sentence to the end of such section:
"In the absence of a properly designated Beneficiary or if such Beneficiary has predeceased the Participant, the "Beneficiary" shall be the Participant's estate."

2. Section 2.1(c) is deleted in its entirety and replaced with the following:

"(c) "Change in Control" shall have the meaning ascribed to it under the Company's 2020 Long- Term Incentive Plan; provided that for purposes of this Plan, such Change in Control must also qualify as a "change in control" within the meaning of Code Section 409A(a)(2)(A)(v)."

3. Section 8.1 is hereby amended by replacing "except pursuant to a "Qualified Domestic Relations Order", as such term is defined under ERISA" with "except pursuant to a "Domestic Relations Order", as such term is defined in Code Section 414(p)(1)(B)".

IN ALL RESPECTS NOT AMENDED HEREIN, the Plan shall remain in full force and effect.

I**N WITNESS WHEREOF**, Flowserve Corporation has caused this amendment to be executed by its duly authorized officer.

FLOWSERVE CORPORATION

By: /s/ Susan C. Hudson
Susan Hudson
Senior Vice President & Chief Legal Officer

15-Dec-2023
____
Dated

EXHIBIT 10.15

FLOWSERVE CORPORATION
SUPPLEMENTAL RETIREMENT SAVINGS PLAN Effective as of January 1, 2024

The Flowserve Corporation Supplemental Retirement Savings Plan (the “Plan”) is set forth below. The Plan is sponsored by Flowserve Corporation for certain eligible highly compensated and management employees and is exempt from the participation, vesting, funding, and fiduciary requirements of Title I of the Employee Retirement Income Security Act of 1974, as amended (“ERISA”).

ARTICLE I
PURPOSE AND EFFECTIVE DATE

1.1 Purpose of the Plan. The primary purpose of this Plan is to provide deferred compensation for a select group of management or highly compensated employees by making up the benefits lost by Eligible Employees under the Savings Plan as a result of the maximum individual benefit limitations and restrictions imposed upon includable compensation in qualified plans under ERISA and the Code.

1.2 Effective Date. The Plan is effective January 1, 2024.

1.3 Definitions. Whenever used in the Plan, the following terms shall have the respective meanings set forth below:

(a) “Savings Plan” means the Flowserve Corporation Retirement Savings Plan, as it may be amended from time to time, and any other qualified defined contribution plan sponsored by the Company or any of its subsidiaries that may be designated by the Committee.

(b) “Account” means a bookkeeping account maintained by the Company to measure and determine the amounts to be credited to the Participant under the Plan as described in Article III. The Committee may maintain an Account to record the total obligation to a Participant and component Accounts to reflect amounts payable under the Plan. Reference to an Account means any such Account established by the Committee, as the context requires. Accounts are intended to constitute unfunded obligations within the meaning of Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA.

(c) “Beneficiary” means one or more persons, trusts, estates, or other entities, designated in accordance with the procedures established by the Committee, that are entitled to receive benefits under this Plan upon the death of a Participant. In the absence of a properly designated Beneficiary or if such Beneficiary has predeceased the Participant, the “Beneficiary” shall be the Participant’s estate.

(d) “Board” or “Board of Directors” means the Board of Directors of the Company.

(e) “Change in Control” shall have the meaning ascribed to it under the Company’s 2020 Long-Term Incentive Plan; provided that for purposes of this Plan, such Change in

Control must also qualify as a “change in control” within the meaning of Code Section 409A(a)(2)(A)(v).

(f) “Code” means the Internal Revenue Code of 1986, as amended, and any successor provision thereto.

(g) “Committee” means the Pension and Investment Committee of the Company.

(h) “Company” means Flowserve Corporation and any subsidiary participating in the Savings Plan.

(i) “Contribution” means a credit by the Company to a Participant’s Account(s) of Supplemental Non-Elective Company Contributions or Additional Company Contributions in accordance with the provisions of Article III of the Plan.

(j) “Effective Date” means January 1, 2024.

(k) “Eligible Employee” means any person who:

(i) for the Plan Year beginning January 1, 2024, (A) becomes newly eligible to participate in the Savings Plan on or after January 1, 2024; (B) is a highly compensated or management employee whose compensation exceeds the maximum individual benefit limitations and restrictions imposed upon includable compensation in qualified plans under ERISA and the Code; and (C) is either an Executive Officer, Officer, Vice President, or director level employee of the Company or is otherwise designated by the Committee to participate in the Plan; and

(ii) for Plan Years beginning on and after January 1, 2025, (A) is a participant in the Savings Plan; (B) is a highly compensated or management employee whose compensation exceeds the maximum individual benefit limitations and restrictions imposed upon includable compensation in qualified plans under ERISA and the Code; and (C) is either an Executive Officer, Officer, Vice President, or director level employee of the Company or is otherwise designated by the Committee to participate in the Plan.

(l) “Investment Fund” means any investment fund that serves as the measure of the notional investment return on all or any portion of each Account pursuant to the provisions of Section 3.2.

(m) “Investment Fund Share” means the share, unit, or other evidence of ownership in a designated Investment Fund.

(n) “Participant” means any current or former Eligible Employee who participates in this Plan as described in Section 2.1.

(o) “Plan Year” means each January 1 through December 31.

(p) “Separation from Service” means a Participant dies, retires, or otherwise suffers a termination of employment, as determined in accordance with the requirements of Section 409A of the Code and the Treasury Regulations issued thereunder. For purposes of the Plan, a Participant shall not be considered to have separated from service while the Participant is on military leave, sick leave or other bona fide leave of absence if the period of such leave of absence does not exceed six months, or, if longer, so long as the Participant retains the right to reemployment with the Company or its subsidiaries under an applicable statute or by contract. A leave of absence constitutes a bona fide leave of absence only if there is a reasonable expectation that the Participant will return to perform services for the Company or any of its subsidiaries. If the period of leave exceeds six months and the Participant does not retain a right to reemployment under an applicable statute or by contract, the employment relationship is deemed to terminate on the first date immediately following such six-month period. Notwithstanding the foregoing, where a leave of absence is due to any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than six months, where such impairment causes the Participant to be unable to perform the duties of his or her position of employment or any substantially similar position of employment, a 29-month period of absence shall be substituted for the six-month period in the immediately preceding sentence.

Any other term used in this Plan that is defined in the Savings Plan shall have the meaning set forth therein.

ARTICLE II
PARTICIPATION

2.1 Participation. An employee shall become a Participant as of the first day of the calendar month coincident with or next following the date he or she first becomes an Eligible Employee (the “Entry Date”), provided that he or she is still an Eligible Employee on his or her Entry Date. Once eligible for participation in the Plan, an Eligible Employee shall be entitled to receive Contributions for the remainder of such Plan Year and each following Plan Year, subject to the Participant’s continued status as an Eligible Employee as of the last day of each such Plan Year. The Committee may, in its sole discretion, amend on a prospective basis the classification of persons who are eligible to receive Contributions under this Plan.

ARTICLE III
CONTRIBUTIONS AND DISTRIBUTIONS

3.1 Contributions. Contributions may be made in the form of Supplemental Non-Elective Company Contributions and Additional Company Contributions, as described and set forth under Sections 3.1(a) and (b). Contributions shall be credited to a Participant’s Account for the Plan Year to which such Contribution relates. All Contributions shall be credited to Participant’s Accounts in the Plan Year following the Plan Year to which such Contributions relate.

(a) *Supplemental Non-Elective Company Contributions*. The Company shall make a Contribution (a "Supplemental Non-Elective Company Contribution") to the Participant's Account in an amount to be determined in the sole discretion of the Committee, which initially shall be established as 6.5% of the Participant's Compensation (as such term is defined in the Savings Plan, but determined without regard to the compensation limit set forth in Code Section 401(a)(17)) in excess of the compensation limit set forth in Code Section 401(a)(17). For the avoidance of doubt, the Committee may determine that Supplemental Non-Elective Company Contributions shall be 0% for a Plan Year.

(b) *Additional Supplemental Company Contributions*. In the sole discretion of the Committee, the Company may make Additional Contributions (an "Additional Supplemental Company Contribution") to a Participant's Account from time to time. The fact that an Additional Supplemental Company Contribution is credited in one year shall not obligate the Company to continue to make Additional Company Contributions in subsequent years.

3.2 <u>Deemed Investments.</u>

(a) *Bookkeeping Accounts*. The Company shall establish and maintain an Account for each Participant under the Plan that shall reflect the Contributions credited on behalf of the Participant and the gains and losses attributable to the deemed investment of that Account pursuant to this Section 3.2. The Company shall establish and maintain such other accounts and records as the Committee determines in its sole discretion to be reasonably required or appropriate in order to discharge its duties under the Plan.

(b) *Available Investment Funds*. The Committee shall have absolute discretion to select the available Investment Funds from which Participants may select as the measure(s) of the notional investment return on their individual Accounts in accordance with Section 3.2(c). Unless otherwise provided by the Committee, the Investment Funds shall mirror the same investment funds selected by the Committee as available investment choices for participants in the Savings Plan (other than any open brokerage window option).

(c) *Investment Directives*. The participant's Account shall accrue gains and losses as though invested in accordance with the Participant's directives, which shall be provided in the manner specified by the Company. All dividends, interest, gains, losses, and distributions of any nature earned with respect to Investment Fund Shares in which an Account is deemed invested shall be credited to that Account as though reinvested in additional Investment Fund Shares.

3.3 <u>Distributions.</u> Subject to the provisions of this Article III, a Participant is entitled to receive his or her vested Account in the form of a lump sum payment, as set forth in Sections 3.3(a)-(f).

(a) *Separation from Service*. Upon a Participant's Separation from Service other than as a result of death, the Participant shall receive his or her vested Account in a lump sum payment, payable within 30 days of the date of the Participant's Separation from Service. Notwithstanding the foregoing or any other provision of this Plan to the contrary, if a Participant is a "specified employee", as defined in Section 1.409A-1(i) of the Treasury Regulations issued under Section 409A of the Code, any payment under this Plan shall be made in a lump sum on the date which is six (6) months following the date of the Participant's Separation from Service, or if earlier, on the date of the Participant's death. All payments that are delayed for six (6) months as provided in this Section 3.3(a) shall continue to accrue earnings or losses under the terms of the Plan for the period from the Participant's Separation from Service until the date such payment is actually made.

(b) *Change in Control*. Upon a Change in Control, the Participant is entitled to receive his or her vested Account in a lump sum payment, which shall be paid within 30 days of the date of such Change in Control.

(c) *Unforeseeable Emergency*. A Participant who experiences an Unforeseeable Emergency (as defined in this Section 3.3(c)) may submit a written request to the Committee to receive payment of all or any portion of the Participant's vested Account. The Committee may approve an emergency distribution not to exceed the amount reasonably necessary to satisfy the need, including amounts necessary to pay any taxes or penalties that the Participant reasonably anticipates will result from the distribution. Emergency distributions shall be paid within the 30-day period following the date the payment is approved by the Committee. For purposes of this Section 3.3(c), "Unforeseeable Emergency" means a severe financial hardship to the Participant resulting from an illness or accident of the Participant, the Participant's spouse, the Participant's dependent (as defined in Code Section 152, without regard to Section 152(b)(1), (b)(2) and (d)(1)(B)), or a Beneficiary; loss of the Participant's property due to casualty; or another similar extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the Participant. The types of events that may qualify as an Unforeseeable Emergency may be limited by the Committee.

(d) *Death*. Upon the death of a Participant, all of the Participant's vested Account shall be paid to his or her Beneficiary by no later than December 31 of the calendar year following the date of the Participant's death.

(e) *Disability*. If a Participant becomes "disabled" within the meaning of Code Section 409A-3(i)(4), the Participant's vested Account shall be paid to the Participant no later than 30 days following the date that the Committee determines that the Participant has incurred such a disability.

(f) *Domestic Relations Order*. Notwithstanding any provision of the Plan to the contrary, all or any portion of a Participant's vested Contributions under the Plan shall be distributed to an alternate payee in accordance with the terms and conditions of a "Domestic Relations Order" (as such term is defined in Code Section 414(p)(1)(B)). The Plan hereby specifically permits and authorizes distribution of a Participant's vested Contributions under the Plan in the form of a single lump sum payment to an alternate payee in accordance with a Domestic Relations Order prior to the date of the Participant's Separation from Service.

ARTICLE IV VESTING

4.1 Vesting Schedule. A Participant shall vest in Contributions made under this Plan in the same manner and to the same extent as under the vesting provisions applicable to company contributions under the Savings Plan. Once a Participant is vested, all of such Participant's rights to receive his or her Account under this Plan shall be nonforfeitable but shall be subject to any rights of the Company's creditors.

4.2 Change in Control Vesting. In the event of a Change in Control, all Participants shall immediately be fully vested in their Account under the Plan.

ARTICLE V ADMINISTRATION

5.1 Administration. The Committee shall be responsible for the general administration of the Plan and the carrying out of the provisions thereof, and shall have all rights and powers required in connection therewith, including the right to establish rules for the administration of the Plan and the methods to be used in calculating Contributions. The Committee shall have the discretionary power and authority to interpret and administer the Plan according to its terms, including the power to construe and interpret the Plan, to supply any omissions therein, to reconcile and correct any errors or inconsistencies, to decide any questions in the administration and application of the Plan, and to make equitable adjustments for any mistakes or errors in the administration and application of the Plan. The Committee shall have such additional powers as may be necessary to discharge its duties and responsibilities hereunder. The decision of the Committee on any question concerning or involving the interpretation or administration of the Plan shall be final, binding and conclusive on all parties and be given the maximum possible deference allowed by law.

5.2 Payment of Benefits. The Committee shall determine a Participant's or Beneficiary's eligibility for benefit and benefits under the Plan. Each Participant or Beneficiary claiming a benefit under the Plan may be required to complete an application, in the form determined by the Committee, and file it with the Committee or an administrator designated by the Committee.

5.3 Claims Procedure. If a request for the payment of benefits under this Plan is denied or Contributions are forfeited, in whole or in part, the following claims procedure shall be applicable:

(a) The Committee will provide the claimant with a written notice of denial, setting forth (i) an explanation as to why the claim was denied or Contributions forfeited, (ii) the provisions of the Plan upon which the denial or forfeiture was based, and (iii) an explanation of the Plan's claims procedure. If the Committee does not deny a claim on its merits, but rejects the application for failure to furnish certain necessary material or information, the written notice to the claimant will explain what additional material is needed and why, and advise the claimant that he or she may refile a proper application.

(b) Within sixty (60) days after the receipt of the Committee's notice of denial or forfeiture, the claimant must file a written notice of appeal of the denial or forfeiture of Contributions with the Committee. In addition, within such appeal period, the claimant may review pertinent documents at such reasonable times and places as the Committee may specify and may submit any additional written material pertinent to the appeal.

(c) The Committee will make a written decision on the appeal not later than sixty (60) days after its receipt of the notice of appeal, unless special circumstances require an extension of time, in which case a decision will be given as soon as possible, but not later than one hundred-twenty (120) days after receipt of the notice of appeal. The decision on the appeal will be in writing and shall include specific reasons for the decision, making specific reference to the provisions of the Plan upon which the decision was based. The notice also will include a statement that the claimant will be provided, upon request and free of charge, reasonable access to, and copies of, all documents and other information relevant to the claim and a statement regarding the claimant's right to bring an action under Section 502(a) of ERISA.

In the event the Committee fails to take any action on the claimant's initial request for benefits within ninety (90) day after receipt, the request will be deemed denied, and the claimant's appeal rights under this Section 5.3 will be in effect as of the end of such period.

ARTICLE VI UNFUNDED PLAN

6.1 Financing of Benefits. This Plan shall be an unfunded plan and payments of benefits pursuant to this Plan shall be made from the general assets of the Company. No special or separate fund need be established, and no segregation of assets need be made to assure the payment of such benefits.

6.2 Unsecured General Creditor. Notwithstanding anything to the contrary contained herein, no Participant or Beneficiary (or any of their heirs, successors, or assigns) shall have any legal or equitable rights, interests or claims in any property or assets of the Company or its subsidiaries. For purposes of the payment of benefits under this Plan, any and all assets of the Company and its subsidiaries shall be, and shall remain, the general, unpledged, unrestricted assets of the Company and its subsidiaries, as applicable. The Company and its subsidiaries obligations under this Plan shall be merely that of an unfunded and unsecured promise to pay money in the future.

ARTICLE VII
GENERAL PROVISIONS

7.1 Non-Alienation of Benefits. No benefit which shall be payable under this Plan shall be subject in any manner to anticipation, alienation, sale, transfer, assignment, pledge, garnishment, encumbrance, or charge by a Participant, Beneficiary, or survivor or anyone claiming under any of them, except pursuant to a Domestic Relations Order as set forth on Section 3.3(f). If a Participant, Beneficiary or survivor or anyone claiming under any of them shall attempt to or shall subject in any manner any benefit which shall be payable under this Plan to anticipation, alienation, sale, transfer, assignment, pledge, garnishment, encumbrance, or charge, his or her interest in any such benefit shall terminate and the Committee shall hold or apply it to or for the benefit of such person, his or her spouse, children or other dependents, or any of them as the Committee may decide.

7.2 Incompetency. Every person receiving or claiming benefits under the Plan shall be conclusively presumed to be mentally competent and of age until the Committee receives written notice, in a form and manner acceptable to it, that such person is incompetent, and that a guardian, conservator, statutory committee, or other person legally vested with the care of his or her estate has been appointed. In the event that the Committee finds that any person to whom a benefit is payable under the Plan is unable to properly care for his or her affairs, then any payment due (unless a prior claim therefore shall have been made by a duly appointed legal representative) may be paid to the spouse, a child, a parent, or a brother or sister, or to any person deemed by the Committee to have incurred expense for such person otherwise entitled to payment. In the event a guardian or conservator or statutory committee of the estate of any person receiving or claiming benefits under the Plan shall be appointed by a court of competent jurisdiction, payment shall be made to such guardian or conservator or statutory committee, provided that proper proof of appointment is furnished in a form and manner suitable to the Committee. Any payment made under the provision of this Section 7.2 shall be a complete discharge of liability therefore under the Plan.

7.3 Employment Rights. The establishment of the Plan shall not be construed as conferring any legal rights upon any Eligible Employee or any other person for a continuation of employment, nor shall it interfere with the rights of the Company to discharge any person or to treat him or her without regard to the effect which such treatment might have upon him or her as a person covered by this Plan.

7.4 Notices. Any notice required or permitted to be given hereunder to an Eligible Employee, a Participant, or Beneficiary will be properly given if delivered or mailed, postage prepaid, to the Eligible Employee or Beneficiary at the last post office address as shown on the Company's records. Any notice to the Company shall be properly given or filed if delivered or mailed, postage prepaid, to the Corporate Secretary of the Company at its principal place of business.

7.5 Waiver of Notice. Any notice required hereunder may be waived by the person entitled thereto.

7.6 Action by Company. Any action required or permitted to be taken hereunder by the Company shall be taken by the Committee, or by any person or persons or committee otherwise authorized by the Company's Board of Directors.

7.7 Uniform Rules. In administrating the Plan, the Committee will apply uniform rules to all Eligible Employees similarly situated.

7.8 Notice of Address. Any payment to a Participant, or in case of his or her death to his or her Beneficiary or survivor, at the last known post office address of the distributee on file with the Company, shall constitute a complete acquittance and discharge to the Company with respect thereto unless the Company shall have received prior written notice of any change in the condition, status or location of the distributee. The Company shall have no duty or obligation to search for or ascertain the whereabouts of any Eligible Employee or Beneficiary.

7.9 Record. The records of the Company with respect to the Plan shall be conclusive on all Eligible Employees, beneficiaries and survivors, and all other persons whomsoever.

7.10 No Individual Liability. It is declared to be the express purpose and intention of the Plan that no liability whatever shall attach to or be incurred by the shareholders, officers, or directors of the Company, or any representatives appointed hereunder by the Company, under or by reason of any of the terms or conditions of the Plan.

7.11 Illegality of Particular Provision. If any particular provision of this Plan shall be found to be illegal or unenforceable, such provision shall not affect the other provisions thereof, but the Plan shall be construed in all respects as if such invalid provision were omitted.

7.12 Status of Plan. The Plan is intended to be a plan that is not qualified within the meaning of Section 401(a) of the Code and that "is unfunded and is maintained by an employer primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees" within the meaning of ERISA Sections 201(2), 301(a)(3) and 401(a)(1), and as such it is intended that the Plan be exempt from the participation, vesting, funding, and fiduciary responsibility requirements of Title I of ERISA. This Plan is also intended to qualify for simplified reporting under U.S. Department of Labor Regulation Section 2530.104- 23, which provides for an alternative method of compliance for plans described in such regulation. The Plan shall be administered and interpreted to the extent possible in a manner consistent with that intent.

7.13 Tax Withholding. The Company and its subsidiaries shall have the right to deduct from all amounts paid in cash or other form under this Plan any federal, state, local or other taxes required by law to be withheld.

ARTICLE VIII
AMENDMENT AND TERMINATION

8.1 Amendment and Termination. The Company expects the Plan to be permanent, but since future conditions affecting the Company cannot be anticipated or foreseen, the Company must necessarily and does hereby reserve the right to amend or terminate the Plan at any time by action of its Committee, provided, however, that no amendment or termination may (a) change the time and form of payment to be made under the provisions of the Plan as in effect before such amendment or termination, except as otherwise permitted under Section 409A of the Code and the regulations issued thereunder, or (b) reduce the value of Accounts accrued under the Plan prior to the date of such amendment or termination. Notwithstanding any of the foregoing provisions of this Section 8.1 or any other terms and conditions of the Plan to the contrary, the Committee reserves the right, in its sole discretion, to amend the Plan in any manner it deems necessary or desirable in order to comply with or otherwise address issues resulting from Section 409A of the Code.

8.2 Contingencies Affecting the Company. In the event of a merger or consolidation of the Company, or the transfer of substantially all of the assets of the Company to another corporation, such successor corporation shall be substituted for the Company under the terms and provisions of the Plan.

8.3 Reimbursement of Legal Fees and Expenses. In the event that a Participant brings a legal action after a Change in Control to enforce any of his or her rights hereunder, the Company shall reimburse the Eligible Employee for his or her actual documented legal fees and expenses in bringing such action, provided that (a) such action is based upon an actual bona fide claim for damages under applicable law, as determined by the Committee based on the facts and circumstances and in accordance with the requirements of Section 409A of the Code (and the regulations issued thereunder); (b) the Participant provides written documentation to the Company of such legal fees and expenses no later than one hundred eighty (180) days following the close of the taxable year in which such expenses were incurred; and (c) it is judicially determined that such action was not frivolous or brought in bad faith. Any reimbursement of legal fees and expenses made pursuant to the immediately preceding sentence in one taxable year shall not affect the legal fees and expenses eligible for reimbursement pursuant to this Section 8.3 in any other taxable year. Reimbursement of legal fees and expenses pursuant to this Section 8.3 shall be made by the Company no later than the last day of the Participant's taxable year following the taxable year in which the fees or expenses were incurred.

ARTICLE IX APPLICABLE LAW

9.1 Applicable Law. The Plan shall be governed by and construed according to the law of the State of Texas, except to the extent otherwise preempted by ERISA, or any other Federal law.

IN WITNESS WHEREOF, Flowserve Corporation has caused this Plan to be executed by its duly authorized officer.

FLOWSERVE CORPORATION

By: /s/ Susan C. Hudson
Susan Hudson
Senior Vice President & Chief Legal Officer

15-Dec-2023
____
Dated

EXHIBIT 21.1

SUBSIDIARIES
FLOWSERVE CORPORATION

NAME OF SUBSIDIARY	JURISDICTION OF INCORPORATION	PERCENTAGE OWNERSHIP
1474750 CANADA INC.	Canada	100%
ARABIAN SEALS COMPANY, LTD.	Saudi Arabia	40%
AUDCO ITALIANA S.R.L.	Italy	13%
AUDCO LIMITED	United Kingdom	100%
BW/IP NEW MEXICO, INC.	United States	100%
CALDER GMBH	Switzerland	100%
COOPERATIE FLOWSERVE W.A.	Netherlands	100%
FLOWCOM INSURANCE COMPANY, INC.	United States	100%
FLOWSERVE - AL MANSOORI SERVICES COMPANY LTD.	United Arab Emirates	49%
FLOWSERVE - AL RUSHAID COMPANY LTD	Saudi Arabia	51%
FLOWSERVE (AUSTRIA) GMBH	Austria	100%
FLOWSERVE (B) SDN. BND.	Brunei	100%
FLOWSERVE (MAURITIUS) CORPORATION	Mauritius	100%
FLOWSERVE (PHILIPPINES), INC.	Philippines	100%
FLOWSERVE (SHANGHAI) LIMITED	China	100%
FLOWSERVE (THAILAND) LIMITED	Thailand	100%
FLOWSERVE / ABAHSAIN FLOW CONTROL CO. LTD.	Saudi Arabia	60%
FLOWSERVE ABAHSAIN COMPANY LIMITED	Saudi Arabia	60%
FLOWSERVE AHAUS GMBH	Germany	100%
FLOWSERVE ALGERIA EURL	Algeria	100%
FLOWSERVE AUSTRALIA PTY. LTD.	Australia	100%
FLOWSERVE AUSTRALIA PTY. LTD. NZ BRANCH	New Zealand	100%
FLOWSERVE B.V.	Netherlands	100%
FLOWSERVE B.V. KENYA BRANCH	Kenya	100%
FLOWSERVE B.V. GHANA BRANCH	Ghana	100%
FLOWSERVE BELGIUM N.V.	Belgium	100%
FLOWSERVE BOLIVIA S.R.L.	Bolivia	100%
FLOWSERVE CA ULC	Canada	100%
FLOWSERVE CANADA CORP.	Canada	100%
FLOWSERVE CANADA HOLDCO ULC	Canada	100%
FLOWSERVE CHILE S.P.A.	Chile	100%
FLOWSERVE COLOMBIA S.A.S.	Colombia	100%
FLOWSERVE CONTROL VALVES GMBH	Austria	100%
FLOWSERVE CORPORATION	United States	100%
FLOWSERVE CZECH REPUBLIC, S.R.O.	Czech Republic	100%
FLOWSERVE DE VENEZUELA C.C.A.	Venezuela	100%
FLOWSERVE DE VENEZUELA LLC	United States	100%
FLOWSERVE DO BRASIL LTDA.	Brazil	100%
FLOWSERVE DORTMUND GMBH & CO. KG	Germany	100%

FLOWSERVE DORTMUND VERWALTUNGS GMBH	Germany	100%
FLOWSERVE ECUADOR CIA. LTDA.	Ecuador	100%
FLOWSERVE EMA HOLDINGS B.V.	Netherlands	100%
FLOWSERVE ESSEN GMBH	Germany	100%
FLOWSERVE FINLAND OY	Finland	100%
FLOWSERVE FLOW CONTROL GMBH	Germany	100%
FLOWSERVE FLUID MOTION AND CONTROL (SUZHOU) CO., LTD.	China	100%
FLOWSERVE FRANCE HOLDING S.A.S.	France	100%
FLOWSERVE FRANCE S.A.S.	France	100%
FLOWSERVE FSD S.A.S.	France	100%
FLOWSERVE FSD S.A.S. MADAGASCAR BRANCH	Madagascar	100%
FLOWSERVE GB LIMITED	United Kingdom	100%
FLOWSERVE GB LIMITED DENMARK BRANCH	Denmark	100%
FLOWSERVE GERMANY HOLDINGS BV	Netherlands	100%
FLOWSERVE GLOBAL HOLDINGS HUNGARY KFT	Hungary	100%
FLOWSERVE GLOBAL NETHERLANDS HOLDING B.V.	Netherlands	100%
FLOWSERVE GULF FZE	United Arab Emirates	100%
FLOWSERVE HOLDINGS COOPERATIEF W.A.	Netherlands	100%
FLOWSERVE HOLDINGS, INC.	United States	100%
FLOWSERVE HUNGARY SERVICES KFT	Hungary	100%
FLOWSERVE INDIA CONTROLS PVT. LTD.	India	100%
FLOWSERVE INTERNATIONAL B.V.	Netherlands	100%
FLOWSERVE INTERNATIONAL LIMITED	United Kingdom	100%
FLOWSERVE INTERNATIONAL MIDDLE EAST VALVES LLC	United States	100%
FLOWSERVE INTERNATIONAL, INC.	United States	100%
FLOWSERVE JAPAN CO. LTD.	Japan	100%
FLOWSERVE KAZAKHSTAN LLP	Kazakhstan	100%
FLOWSERVE KOREA LTD.	South Korea	100%
FLOWSERVE KSM CO. LTD.	South Korea	40%
FLOWSERVE LA HOLDINGS S. DE R.L. DE C.V.	Mexico	100%
FLOWSERVE MANAGEMENT COMPANY	United States	100%
FLOWSERVE MEXICO HOLDINGS LLC	United States	100%
FLOWSERVE MICROFINISH PUMPS PVT. LTD.	India	76%
FLOWSERVE MICROFINISH VALVES PVT. LTD.	India	76%
FLOWSERVE MOROCCO SARL AU	Morocco	100%
FLOWSERVE NETHERLANDS FINANCE B.V.	Netherlands	100%
FLOWSERVE NORWAY AS	Norway	100%
FLOWSERVE PERU S.A.C.	Peru	100%
FLOWSERVE POMPES S.A.S.	France	100%
FLOWSERVE PTE. LTD.	Singapore	100%
FLOWSERVE PTE. LTD. TAIWAN BRANCH	Taiwan	100%
FLOWSERVE S.A.	Spain	100%
FLOWSERVE S.R.L.	Argentina	100%
FLOWSERVE S.R.L.	Italy	100%

FLOWSERVE SALES INTERNATIONAL, S.A.S.	France	100%
FLOWSERVE SANMAR LIMITED	India	40%
FLOWSERVE SERVICES & TRADING LLC	Qatar	49%
FLOWSERVE SIHI (BELGIUM) BVBA	Belgium	100%
FLOWSERVE SIHI (FRANCE) SAS	France	100%
FLOWSERVE SIHI (SCHWEIZ) GMBH	Switzerland	100%
FLOWSERVE SIHI (SPAIN) S.L.	Spain	100%
FLOWSERVE SIHI AUSTRIA GMBH	Austria	100%
FLOWSERVE SIHI BULGARIA EOOD	Bulgaria	100%
FLOWSERVE SIHI CZ S.R.O.	Czech Republic	100%
FLOWSERVE SIHI GERMANY GMBH	Germany	100%
FLOWSERVE SIHI HOLDING GMBH	Germany	100%
FLOWSERVE SIHI HUNGARY KFT	Hungary	100%
FLOWSERVE SIHI POLAND SP. Z.O.O.	Poland	100%
FLOWSERVE SIHI ROMANIA SRL	Romania	100%
FLOWSERVE SIZDIRMAZLIK COZUMLERI TICARET LTD. STI.	Turkey	100%
FLOWSERVE SOLUTIONS (MALAYSIA) SDN. BHD.	Malaysia	100%
FLOWSERVE SOUTH AFRICA (PROPRIETARY) LIMITED	South Africa	100%
FLOWSERVE SPAIN S.L.	Spain	100%
FLOWSERVE SUPPLY SOLUTIONS PTE LTD.	Singapore	100%
FLOWSERVE TREASURY B.V.	Netherlands	100%
FLOWSERVE US HOLDINGS LLC	United States	100%
FLOWSERVE US INC.	United States	100%
FLOWSERVE, S. DE R.L. DE C.V.	Mexico	100%
FLS CANADA ULC	Canada	100%
INDUSTRIAS MEDINA S.A. DE C.V.	Mexico	37%
INGERSOLL-DRESSER PUMPS S.R.L.	Italy	100%
INMOBILIARIA INDUSTRIAL DE LEON S.A. DE C.V.	Mexico	37%
KSM CO. LTD	Republic of Korea	40%
LIMITORQUE INDIA LIMITED	India	24%
MAQUILADORA INDUSTRIAL DE LEON S.A. DE C.V.	Mexico	37%
NAF AB	Sweden	100%
OOO FLOWSERVE	Russian Federation	100%
PMV AUTOMATION AB	Sweden	100%
PT FLOWSERVE	Indonesia	100%
SIHI CHILE S.A.	Chile	50%
SIHI CILIE S.A. PERU BRANCH	Peru	100%
SIHI PUMPS (MALAYSIA) SDN. BHD.	Malaysia	100%
STERLING INDUSTRY CONSULT GMBH	Germany	100%
THOMPSONS, KELLY & LEWIS PTY. LIMITED	Australia	100%
WORTHINGTON S.R.L.	Italy	100%
YKV CORPORATION	Japan	15%

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-264072) and Form S-8 (Nos. 333-234407, 333-163251, and 333-82081) of Flowserve Corporation of our report dated February 20, 2024 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Dallas, Texas
February 20, 2024

EXHIBIT 31.1

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002**

I, R. Scott Rowe, certify that:

1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2023 of Flowserve Corporation;

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

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

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

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

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

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

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

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

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

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

/s/ R. Scott Rowe

R. Scott Rowe
President and Chief Executive Officer
(Principal Executive Officer)

Date: February 20, 2024

EXHIBIT 31.2

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002**

I, Amy B. Schwetz, certify that:

1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2023 of Flowserve Corporation;

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

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

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

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

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

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

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

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

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

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

/s/ Amy B. Schwetz
Amy B. Schwetz
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

Date: February 20, 2024

EXHIBIT 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, R. Scott Rowe, President and Chief Executive Officer of Flowserve Corporation (the “Company”), certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) the Annual Report on Form 10-K of the Company for the period ended December 31, 2023, as filed with the Securities and Exchange Commission on the date hereof (the “Annual Report”), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ R. Scott Rowe

R. Scott Rowe
President and Chief Executive Officer
(Principal Executive Officer)

Date: February 20, 2024

EXHIBIT 32.2

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Amy B. Schwetz, Senior Vice President and Chief Financial Officer of Flowserve Corporation (the "Company"), certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) the Annual Report on Form 10-K of the Company for the period ended December 31, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Annual Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Amy B. Schwetz

Amy B. Schwetz
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

Date: February 20, 2024

EXHIBIT 97.1

<table>
<tr><td colspan="2">FLOWSERVE</td><td>POLICY</td></tr>
<tr><td>Approver:</td><td>Board of Directors</td><td rowspan="6">DODD-FRANK CLAWBACK</td></tr>
<tr><td>Owner:</td><td>Organization and Compensation Committee of the Board of Directors</td></tr>
<tr><td>Manager:</td><td>Chief Human Resources Officer</td></tr>
<tr><td>Audience:</td><td>Current and Former Section 16 Executive Officers</td></tr>
<tr><td>Effective Date:</td><td>October 2, 2023</td></tr>
<tr><td>Most Recently Amended:</td><td>n/a</td></tr>
</table>

Recoupment of Incentive-Based Compensation

It is the policy of Flowserve Corporation, a New York corporation (together with any successor, the "Company") that, in the event the Company is required to prepare an accounting restatement of the Company's financial statements (including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period) due to material non- compliance with any financial reporting requirement under the federal securities laws, the Company will recover on a reasonably prompt basis the amount of any Incentive-Based Compensation Received by any current or former Covered Executive during the Recovery Period that exceeds the amount that otherwise would have been Received had it been determined based on the restated financial statements.

Policy Administration and Definitions

This Policy is administered by the Organization and Compensation Committee of the Company's Board of Directors (the "Committee") and is intended to comply with, and as applicable to be administered and interpreted consistent with, Listing Standard 303A.14 adopted by the New York Stock Exchange to implement Rule 10D-1 under the Securities Exchange Act of 1934, as amended (collectively, "Rule 10D-1").

For purposes of this Policy:

"Incentive-Based Compensation" means any compensation granted, earned or vested based in whole or in part on the Company's attainment of a financial reporting measure that was Received by a person (i) on or after October 2, 2023 and after the person began service as a Covered Executive, and (ii) who served as a Covered Executive at any time during the performance period for the Incentive-Based Compensation. A financial reporting measure is (i) any measure that is determined and presented in accordance with the accounting principles used in preparing the Company's financial statements and any measure derived wholly or in part from such a measure, and (ii) any measure based in whole or in part on the Company's stock price or total shareholder return.

Incentive-Based Compensation is deemed to be "Received" in the fiscal period during which the relevant financial reporting measure is attained, regardless of when the compensation is actually paid or awarded.

"Covered Executive" means any officer of the Company as defined under Rule 16a-1(f) under the Securities Exchange Act of 1934, as amended.

"Recovery Period" means the three completed fiscal years immediately preceding the date that the Company is required to prepare the accounting restatement described in this Policy and any "transition period" (the date the Company is required to prepare the restatement and any "transition period" shall be determined pursuant to Rule 10D-1).

If the Committee determines the amount of Incentive-Based Compensation Received by a Covered Executive during a Recovery Period exceeds the amount that would have been Received if determined or calculated based on the Company's restated financial results, such excess amount of Incentive-Based Compensation shall be subject to recoupment by the Company pursuant to this Policy. For Incentive-Based Compensation based on stock price or total shareholder return, the Committee will determine the amount based on a reasonable estimate of the effect of the accounting restatement on the relevant stock price or total shareholder return. In all cases, the calculation of the excess amount of Incentive-Based Compensation to be recovered will be determined on a pre-tax basis. Any determinations made by the Committee under this Policy shall be final and binding on all affected individuals.

The Company may affect any recovery pursuant to this Policy by requiring payment of such amount(s) to the Company, by set-off, by reducing future compensation, or by such other means or combination of means as the Committee determines to be appropriate. The Company need not recover the excess amount of Incentive-Based Compensation if and to the extent that the Committee determines that such recovery is impracticable, subject to and in accordance with any applicable exceptions under the New York Stock Exchange listing rules, and not required under Rule 10D-1, including if the Committee determines that the direct expense paid to a third party to assist in enforcing this Policy would exceed the amount to be recovered after making a reasonable attempt to recover such amounts. The Company is authorized to take appropriate steps to implement this Policy with respect to Incentive-Based Compensation arrangements with Covered Executives.

Any right of recoupment or recovery pursuant to this Policy is in addition to, and not in lieu of, any other remedies or rights of recoupment that may be available to the Company pursuant to the terms of any other policy, any employment agreement or plan or award terms, and any other legal remedies available to the Company. The Company shall not indemnify any Covered Executive against the loss of any Incentive-Based Compensation pursuant to this Policy.