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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2021

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 1-12981

AMETEK, Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)
1100 Cassatt Road
Berwyn, Pennsylvania
(Address of principal executive offices)
14-1682544
(I.R.S. Employer Identification No.)

19312-1177
(Zip Code)

Registrant's telephone number, including area code: (610) 647-2121

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

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common Stock, $0.01 Par Value (voting)	AME	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, 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. ☒

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

The aggregate market value of the voting stock held by non-affiliates of the registrant was approximately $30.9 billion as of June 30, 2021, the last business day of the registrant's most recently completed second fiscal quarter.

The number of shares of the registrant’s Common Stock outstanding as of January 31, 2022 was 231,700,893.

Documents Incorporated by Reference

Part III incorporates information by reference from the Proxy Statement for the Annual Meeting of Stockholders on May 5, 2022.

AMETEK, Inc.

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PART I

Item 1. Business

General Development of Business

AMETEK, Inc. ("AMETEK" or the "Company") is incorporated in Delaware. Its predecessor was originally incorporated in Delaware in 1930 under the name American Machine and Metals, Inc. AMETEK is a leading global manufacturer of electronic instruments and electromechanical devices with operations in North America, Europe, Asia and South America. AMETEK maintains its principal executive offices in suburban Philadelphia at 1100 Cassatt Road, Berwyn, Pennsylvania, 19312. Listed on the New York Stock Exchange (symbol: AME), the common stock of AMETEK is a component of the Standard and Poor's 500 and the Russell 1000 Indices.

Products and Services

AMETEK's products are marketed and sold worldwide through two operating groups: Electronic Instruments ("EIG") and Electromechanical ("EMG"). Electronic Instruments is a leader in the design and manufacture of advanced instruments for the process, power and industrial, and aerospace markets. Electromechanical is a differentiated supplier of precision motion control solutions, thermal management systems, specialty metals and electrical interconnects. Its end markets include aerospace and defense, medical, automation and other industrial markets.

Competitive Strengths

Management believes AMETEK has significant competitive advantages that help strengthen and sustain its market positions. Those advantages include:

Significant Market Share. AMETEK maintains significant market share in a number of targeted niche markets through its ability to produce and deliver high-quality, differentiated products at competitive prices. EIG has significant market positions in niche segments of the process, power and industrial, and aerospace markets. EMG holds significant positions in niche segments of the aerospace and defense, automation and medical markets.

Technological and Development Capabilities. AMETEK believes it has certain technological advantages over its competitors that allow it to maintain its leading market positions. Historically, it has demonstrated an ability to develop innovative new products and solutions that anticipate customer needs. It has consistently added to its investment in research, development and engineering, and improved its new product development efforts with the adoption of Design for Six Sigma and Value Analysis/Value Engineering methodologies. These have improved the pace and quality of product innovation and resulted in the introduction of a steady stream of new products across all of AMETEK's businesses.

Efficient and Flexible Manufacturing Operations. Through its Operational Excellence initiatives, AMETEK has established a lean and flexible manufacturing platform for its businesses. In its effort to achieve best-cost manufacturing, AMETEK had operating facilities, as of December 31, 2021, in Brazil, China, the Czech Republic, Malaysia, Mexico, and Serbia. These facilities offer proximity to customers and provide opportunities for increasing international sales. Acquisitions also have allowed AMETEK to achieve operating synergies by consolidating operations, product lines and distribution channels, benefiting both of AMETEK's operating groups.

Experienced Management Team. Another component of AMETEK's success is the strength of its management team and that team's commitment to improving Company performance. AMETEK senior management has extensive industry experience and an average of approximately 29 years of AMETEK service. The management team is focused on delivering strong, consistent and profitable growth, growing shareholder value, and creating a sustainable future for our stakeholders. Individual performance is tied to financial results through Company-established stock ownership guidelines and equity incentive programs.

Business Strategy

AMETEK is committed to achieving earnings growth through the successful implementation of the AMETEK Growth Model. The goal of that model is double-digit annual percentage growth in sales and earnings per share over the business cycle and a superior return on total capital. Other financial initiatives have been or may be undertaken, including public and private debt or equity issuance, bank debt refinancing, local financing in certain foreign countries and share repurchases.

AMETEK's Growth Model integrates the four growth strategies of Operational Excellence, Strategic Acquisitions, Global and Market Expansion, and New Product Development with a focus on cash generation and capital deployment.

Operational Excellence. Operational Excellence is AMETEK's cornerstone strategy for accelerating growth, improving profit margins and strengthening its competitive position across its businesses. Operational Excellence focuses on initiatives to drive increased organic sales growth, improvements in operating efficiencies and sustainable practices. It emphasizes team building and a participative management culture. AMETEK's Operational Excellence strategies include lean manufacturing, global sourcing, Design for Six Sigma, Value Engineering/Value Analysis and growth kaizens. Each plays an important role in improving efficiency, enhancing the pace and quality of innovation and driving profitable sales growth. Operational Excellence initiatives have yielded lower operating and administrative costs, shortened manufacturing cycle times, resulted in higher cash flow from operations and increased customer satisfaction. They also have played a key role in achieving synergies from newly acquired companies.

Strategic Acquisitions. Acquisitions are a key to achieving the goals of the AMETEK Growth Model. Since the beginning of 2017 through December 31, 2021, AMETEK has completed 18 acquisitions with annualized sales totaling approximately $1.4 billion, including six acquisitions in 2021. AMETEK targets companies that offer compelling strategic, technical and cultural fit. It seeks to acquire businesses in adjacent markets with complementary products and technologies. It also looks for businesses that provide attractive growth opportunities, often in new and emerging markets. Through these and prior acquisitions, AMETEK's management team has developed considerable skill in identifying, acquiring and integrating new businesses. As it has executed its acquisition strategy, AMETEK's mix of businesses has shifted toward those that are more highly differentiated and, therefore, offer better opportunities for growth and profitability.

Global & Market Expansion. AMETEK has historically experienced growth outside the United States, reflecting an expanding international customer base, investments in its global infrastructure and the attractive growth potential of its businesses in overseas markets. While Europe remains its largest overseas market, AMETEK has pursued growth opportunities worldwide, especially in key emerging markets. It has grown sales in Latin America and Asia by strategically building, acquiring and expanding manufacturing facilities. AMETEK also has expanded its sales, service, and engineering capabilities globally. Recently acquired businesses have further added to AMETEK's international presence.

New Products. New products are essential to AMETEK's long-term growth. As a result, AMETEK has maintained a consistent investment in new product development and engineering. AMETEK's businesses help solve our customers' most complex challenges with differentiated technology solutions. In 2021, AMETEK added to its highly differentiated product portfolio with a range of new products across many of its businesses.

AMETEK focuses on cash generation and capital deployment. AMETEK generates strong cash flow given its asset-light business model and strong operational execution. This cash flow supports AMETEK's capital deployment strategy with its primary focus on strategic, value-enhancing acquisitions. We are committed to paying a modest quarterly dividend.

Attracting, retaining, and developing talent is critical to the success and sustainability of the AMETEK Growth Model as our employees are responsible for successfully driving these strategies.

2021 Overview

Operating Performance

In 2021, the Company posted record sales, operating income, operating margins, net income, diluted earnings per share, backlog, and orders. The Company achieved these results from organic sales growth in both EIG and EMG, contributions from the 2021 acquisitions of Abaco Systems, Inc., Magnetrol International, NSI-MI Technologies, Crank Software, EGS Automation, and Alphasense as well as the Company's Operational Excellence Initiatives. See "Results of Operations" in Part II, Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations for further details.

In 2021, the Company achieved record sales of $5,546.5 million, an increase of 22.2% from 2020 due to 15% organic sales increase, a 7% increase from acquisitions, and a favorable 1% effect of foreign currency translation, partially offset by an unfavorable divestiture impact. Diluted earnings per share for 2021 were a record $4.25, an increase of $0.48 or 12.7%, compared with $3.77 per diluted share in 2020.

COVID-19 Pandemic

The COVID-19 pandemic resulted in significant global economic disruption and had an adverse impact on the Company's financial results throughout 2020. The Company has experienced sequential improvement in its financial results since the third quarter of 2020, and this trend has continued throughout 2021. The current economic environment in which the Company operates is characterized by increased material cost inflation, logistics challenges, labor availability issues, and component part shortages. The Company continues to monitor and closely manage through these conditions and has taken steps to mitigate the impacts of the challenging economic environment.

The Company's top priority during this pandemic is the health and safety of its employees. All global manufacturing facilities remained fully operational during 2021 and continue to operate with safety protocols in place to ensure the health and safety of its employees and communities. The Company will continue to evaluate the nature and extent of future impacts of the COVID-19 pandemic on its business. Please refer to "Risk Factors", Part I, Item 1A of this Form 10-K for more information.

Recent Acquisitions

The Company spent $1,959.2 million in cash, net of cash acquired, to purchase six businesses in 2021.

In February 2021, AMETEK acquired EGS Automation ("EGS"), a designer and manufacturer of highly engineered, customized robotic solutions used in critical applications for the medical, food and beverage, and general industrial markets.

In March 2021, AMETEK acquired Magnetrol International ("Magnetrol"), a leading provider of level and flow control solutions for challenging process applications across a diverse set of end markets including medical, pharmaceutical, oil and gas, food and beverage, and general industrial.

In March 2021, AMETEK acquired Crank Software, a leading provider of embedded graphical user interface software and services.

In April 2021, AMETEK acquired NSI-MI Technologies ("NSI-MI"), a leading provider of radio frequency and microwave test and measurement systems for niche applications across the aerospace, defense, automotive, wireless communications, and research markets.

In April 2021, AMETEK acquired Abaco Systems, Inc. ("Abaco"), specializing in open-architecture computing and electronic systems for aerospace, defense, and specialized industrial markets and is a leading provider of mission critical embedded computing systems.

In November 2021, AMETEK acquired Alphasense, a leading provider of gas and particulate sensors for use in environmental, health and safety, and air quality applications.

Financing

On April 26, 2021, the Company along with certain of its foreign subsidiaries amended its credit agreement dated as of September 22, 2011, as amended and restated as of March 10, 2016 and as further amended and restated as of October 30, 2018, with the lenders, JPMorgan Chase Bank, N.A., as Administrative Agent and Bank of America, N.A., PNC Bank, National Association, Trust Bank and Wells Fargo Bank, National Association, as Co-Syndication Agents. The credit agreement amends the Company’s existing revolving credit facility to add a new five-year, delayed draw, term loan for up to $800 million. The credit agreement places certain restrictions on allowable additional indebtedness. In November 2021, the Company further amended the Credit Agreement to address the cessation of LIBOR on certain currencies.

Description of Business

Described below are the products and markets of each reportable segment:

EIG

EIG is a leader in the design and manufacture of advanced analytical, test and measurement instruments for the process, aerospace, medical, research, power and industrial markets. Its growth is based on the strategies outlined in the AMETEK Growth Model. In many instances, its products differ from or are technologically superior to its competitors’ products. It has achieved competitive advantage through continued investment in research, development and engineering to develop market-leading products and solutions that serve niche markets. It also has expanded its sales and service capabilities globally to serve its customers.

EIG is a leader in many of the specialized markets it serves. Products supplied to these markets include process control instruments for the life sciences, pharmaceutical, semiconductor, automation, food and beverage, oil and gas, and petrochemical industries. It provides a growing range of instruments to the research and laboratory equipment, ultra-precision manufacturing, medical, and test and measurement markets. It is a leader in power quality monitoring and metering, uninterruptible power systems, programmable power equipment, electromagnetic compatibility (“EMC”) test equipment, sensors for gas turbines, dashboard instruments for heavy trucks, and instrumentation and controls for the food and beverage industries. It supplies the aerospace industry with aircraft and engine sensors, monitoring systems, power supplies, fuel and fluid measurement systems, and data acquisition systems.

In 2021, 49% of EIG’s net sales were to customers outside the United States. At December 31, 2021, EIG employed approximately 11,000 people, of whom approximately 600 were covered by collective bargaining agreements. At December 31, 2021, EIG had operating facilities in the United States, the United Kingdom, Germany, Canada, China, Denmark, Finland, France, Switzerland, Argentina, Austria and Mexico. EIG also shares operating facilities with EMG in Brazil, China and Mexico.

Process and Analytical Instrumentation Markets and Products

Process and analytical instrumentation sales represented 70% of EIG’s 2021 net sales. These businesses include process analyzers, emission monitors and spectrometers; elemental and surface analysis instruments; level, pressure and temperature sensors and transmitters; radiation measurement devices; level measurement devices; precision manufacturing systems; materials- and force-testing instruments; contact and non-contact metrology products; and clinical and educational communication solutions. Among the industries it serves are power generation; pharmaceutical manufacturing; medical and healthcare; water and waste treatment; renewable energy production, semiconductor manufacturing; natural gas distribution; emissions monitoring, and oil, gas, and petrochemical refining. Its instruments are used for precision measurement in a number of applications, including radiation detection, trace element and materials analysis, nanotechnology research, ultraprecise manufacturing, and test and measurement.

Acquired in November 2021, Alphasense is a leading provider of gas and particulate sensors for use in environmental, health and safety, and air quality applications. Alphasense complements the Company's existing sensor business expanding the Company's presence in the environmental health and safety market.

Acquired in March 2021, Magnetrol is a leading provider of level and flow control solutions for challenging process applications across a diverse set of end markets including medical, pharmaceutical, oil and gas, food and beverage, and general industrial. Magnetrol's solutions combined with the Company's existing Sensors, Test and Calibration business, becomes an industry leading differentiated sensor platform with a broad range of level and flow measurement solutions.

Aerospace and Power Instrumentation Markets and Products

Aerospace and Power Instrumentation sales represented 30% of EIG’s 2021 net sales. These businesses produce a wide array of instrumentation, systems and sensors for applications in the aerospace, power and industrial markets.

These businesses produce power monitoring and metering instruments, uninterruptible power supply systems and programmable power supplies used in a wide range of industrial settings. It is a leader in the design and manufacture of power measurement, quality monitoring and event recorders for use in power generation, transmission and distribution. It provides uninterruptible power supply systems, multifunction electric meters, annunciators, alarm monitoring systems and highly specialized communications equipment for smart grid applications. It also offers precision power supplies and power conditioning products, and electrical immunity and EMC test equipment, sensors for electric vehicle testing, gas turbines, dashboard instruments for heavy trucks and other vehicles, and instrumentation and controls for the food and beverage industries.

AMETEK’s aerospace products are designed to customer specifications and manufactured to stringent operational and reliability requirements. These products include airborne data systems, turbine engine temperature measurement products, vibration-monitoring systems, cockpit instruments and displays, fuel and fluid measurement products, embedded computing systems, and sensors and switches. AMETEK serves all segments of the commercial and military aerospace market, including commercial airliners, business jets, regional aircraft and helicopters.

AMETEK operates in highly specialized aerospace market segments in which it has proven technological or manufacturing advantages versus its competition. Among its more significant competitive advantages is its 70-year-plus reputation as an established aerospace supplier. It has long-standing relationships with the world’s leading commercial and military aircraft, jet engine and original equipment manufacturers and aerospace system integrators. AMETEK also is a leading provider of spare part sales, repairs and overhaul services to commercial aerospace.

Acquired in April 2021, Abaco Systems, Inc. specializes in open-architecture computing and electronic systems for aerospace, defense, and specialized industrial markets and is a leading provider of mission critical embedded computing systems. Abaco's solutions expand and complement the Company's existing aerospace and defense businesses.

Acquired in April 2021, NSI-MI is a leading provider of radio frequency and microwave test and measurement systems for niche applications across the aerospace, defense, automotive, wireless communications, and research markets. NSI-MI strengthens the Company's test and measurement platforms.

Acquired in March 2021, Crank Software is a leading provider of embedded graphical user interface software and services. Crank Software expands the Company's growing portfolio of software solutions.

Acquired in January 2020, IntelliPower is a leading provider of high-reliability, ruggedized uninterruptible power systems serving a wide range of defense and industrial applications.

Customers

EIG is not dependent on any single customer such that the loss of that customer would have a material adverse effect on EIG's operations. Approximately 5% of EIG's 2021 net sales were made to its five largest customers. No single customer comprises more than 5% of net sales.

EMG

EMG is a differentiated supplier of automation solutions, thermal management systems, specialty metals and electrical interconnects. EMG is a leader in many of the niche markets in which it competes. Products supplied to these markets include its advanced precision motion control solutions, which are used in a wide range of automation applications across the medical, semiconductor, aerospace, defense, and food and beverage industries, as well as its highly engineered electrical connectors and electronics packaging used in aerospace and defense, medical, and industrial applications.

EMG supplies high-purity powdered metals, strip and foil, specialty clad metals and metal matrix composites. Its blowers and heat exchangers provide electronic cooling and environmental control for the aerospace and defense industries. Its motors are widely used in commercial appliances, fitness equipment, food and beverage machines, hydraulic pumps and industrial blowers. Additionally, it operates a global network of aviation maintenance, repair and overhaul ("MRO") facilities.

EMG designs and manufactures products that, in many instances, are significantly different from or technologically superior to competitors' products. It has achieved competitive advantage through continued investment in research, development and engineering, efficiency improvements from operational excellence, acquisition synergies and improved supply chain management.

In 2021, 50% of EMG's net sales were to customers outside the United States. At December 31, 2021, EMG employed approximately 7,000 people, of whom approximately 1,900 were covered by collective bargaining agreements. At December 31, 2021, EMG had operating facilities in the United States, the United Kingdom, China, Germany, France, Italy, Mexico, Serbia, Brazil, the Czech Republic, Malaysia and Taiwan.

Automation and Engineered Solutions Markets and Products

Automation and Engineered Solution sales represented 72% of EMG's 2021 net sales. These businesses produce precision motion control solutions, brushless motors, blowers and pumps, heat exchangers and other electromechanical systems. These products are used in a wide variety of automation applications, semiconductor equipment, medical equipment and power industries among others. Additionally, these businesses produce specialty motors which are used in a wide range of products, such as household, commercial and personal care appliances, fitness equipment, food and beverage machines, hydraulic pumps and industrial blowers.

AMETEK is a leader in highly engineered electrical connectors and electronics packaging used to protect sensitive devices and mission-critical electronics. Its electrical connectors, terminals, headers and packaging are designed specifically for harsh environments and highly customized applications. In addition, AMETEK is an innovator and market leader in specialized metal powder, strip, wire and bonded products used in medical, aerospace and defense, telecommunications, automotive and general industrial applications.

Acquired in February 2021, EGS Automation designs and manufactures highly engineered, customized robotic solutions used in critical applications for the medical, food and beverage, and general industrial markets. EGS complements the Company's existing Dunkermotoren business providing highly customizable engineering design and automation capabilities.

Aerospace Markets and Products

Aerospace sales represented 28% of EMG’s 2021 net sales. These businesses produce motor-blower systems and heat exchangers used in thermal management and other applications on a variety of military and commercial aircraft and military ground vehicles. In addition, these businesses provide the commercial and military aerospace industry with third-party MRO services on a global basis with facilities in the United States, Europe and Asia.

Customers

EMG is not dependent on any single customer such that the loss of that customer would have a material adverse effect on EMG’s operations. Approximately 8% of EMG’s 2021 net sales were made to its five largest customers. No single customer comprises greater than 5% of net sales.

Marketing

AMETEK’s marketing efforts generally are organized and carried out at the business level. EIG makes use of distributors and sales representatives to market its products along with a direct sales force for its technically sophisticated products. Within aerospace, the specialized customer base of aircraft and jet engine manufacturers is served primarily by direct sales engineers. Given the technical nature of its many products, as well as its significant worldwide market share, EMG conducts much of its domestic and international marketing activities through a direct sales force and makes some use of sales representatives and distributors, both in the United States and in other countries.

Competition

In general, AMETEK’s markets are highly competitive with competition based on technology, performance, quality, service and price.

In EIG’s markets, AMETEK believes it ranks as a leader in certain analytical measurement and control instruments, and power and industrial markets. It also is a major instrument and sensor supplier to commercial aviation. In process and analytical instruments, numerous companies compete in each market on the basis of product quality, performance and innovation. In power and industrial and in aerospace, AMETEK competes with a number of companies depending on the specific market segment.

EMG’s businesses compete with a number of companies in each of its markets. Competition is generally based on product innovation, performance and price. There also is competition from alternative materials and processes.

Availability of Raw Materials

AMETEK’s reportable segments obtain raw materials and supplies from a variety of sources and generally from more than one supplier. For EMG, however, certain items, including various base metals and certain steel components, are available from only a limited number of suppliers. AMETEK believes its sources and supplies of raw materials are adequate for its needs.

Environmental and Other Governmental Regulation

AMETEK's operations and properties are subject to laws and regulations relating to environmental protection, including those governing air emissions, water discharges, waste management, and workplace safety. The Company uses, generates and disposes of hazardous substances and waste in its operations and could be subject to material liabilities relating to the investigation and clean-up of contaminated properties and related claims. The Company is required to conform our operations and properties to these laws and adapt to regulatory requirements in all countries as these requirements change. The Company has a robust Environmental Health and Safety program responsible for supporting its environmental monitoring and compliance efforts. In connection with acquisitions, the Company will assess potential material environmental liabilities, and determine regulatory and fiduciary obligations during the course of the due diligence process. In addition, new laws and regulations, the discovery of previously unknown contamination or the imposition of new requirements could increase our costs or subject us to new or increased liabilities.

Information with respect to environmental matters is set forth in Note 13 to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Patents, Licenses and Trademarks

AMETEK owns numerous unexpired U.S. and foreign patents, including counterparts of its more important U.S. patents, in the major industrial countries of the world. It is a licensor or licensee under patent agreements of various types, and its products are marketed under various registered and unregistered U.S. and foreign trademarks and trade names. AMETEK, however, does not consider any single patent or trademark, or any group of them, essential either to its business as a whole or to either one of its reportable segments. The annual royalties received or paid under license agreements are not significant to either of its reportable segments or to AMETEK's overall operations.

Environmental, Social, and Governance ("ESG") and Human Capital Management

Environmental, Social, and Governance

AMETEK is committed to providing a consistent and excellent return to our stakeholders, all while maintaining a strong commitment to environmental stewardship, social responsibility, diversity and inclusion, and sound corporate governance. We believe that effectively prioritizing and managing our ESG initiatives will help create long-term value and a better future for our stakeholders.

The Company's ESG highlights include the following:

Core Values. Our core values — Ethics and Integrity, Respect for the Individual, Diversity and Inclusion, Teamwork, and Social Responsibility — remain the most critical components of our sustainability efforts. Sustainability is an integral aspect of the core values that guide the way we do business.

Environmental Stewardship. Our ongoing commitment to serve as environmental stewards and protect the environment for future generations is reflected in our corporate governance and oversight of compliance and risk management. We are reducing our environmental impact and increasing operational efficiency across our global footprint, while also establishing greenhouse gas emission reduction targets. Across AMETEK, our businesses are committed to developing innovative products and solutions to help reduce carbon emission, increase the use and adoption of renewable energy, and address the impacts of climate change.

Commitment to Diversity and Inclusion. AMETEK is committed to developing a diverse and inclusive culture to help power innovation, growth, and greater opportunities for all employees. Our hiring practices are geared toward identifying the most diverse set of candidates for open positions. Our training and development programs are focused on providing meaningful opportunities for personal and professional development. And our charitable arm, the AMETEK Foundation, provides wide-ranging support to non-profit and educational organizations in the communities where we operate.

Our Solutions. AMETEK's portfolio of differentiated technology solutions has grown significantly. Many of AMETEK's products and solutions are creating a more sustainable future by supporting customers' environmentally focused applications across a diverse set of markets. AMETEK partners with customers to develop sustainable solutions with specialized technology that help in the effort to improve the quality of life and the environment.

To read the Company's 2021 Sustainability Report, go to www.ametek.com/aboutus/sustainability.

Human Capital Management

As a global organization, we have seen firsthand that the innovation needed to solve our customers' biggest challenges can only come from employees that are fully engaged and committed, and who have diverse perspectives and backgrounds. Our Board regularly receives updates and presentations on key topics, including ESG, compliance, diversity and inclusion, and employee development and succession.

Our executive management team reviews the key talent across our company annually and assesses the adequacy of talent to meet business challenges and future growth needs. A major area of focus is a review of diversity and inclusion improvement efforts. We have a Women's Business Council and an African American Business Council, both of which drive initiatives focused on mentorship, education and career guidance. Diverse candidate slates are required for external salaried openings, including executive management and Board appointments, where at least one diverse candidate is interviewed.

We have created a leadership development program for employees on track to become operational leaders in the Company. This focused and intensive program involves both internal and external training on leadership effectiveness as well as specific job-related skills. In addition, participants receive hands-on experience in key AMETEK business system processes such as growth kaizens and acquisition due diligence. We have a long-standing commitment to responsible corporate conduct. Each employee is provided with annual performance goals which are reviewed in a performance review with their manager. Employee feedback is actively encouraged through an open-door policy for all managers, regular town hall/all hands meetings, executive presentations with Q&A sessions, a regular CEO podcast for all employees, and a hotline that can be used to report complaints.

Giving back to our community is an important part of our culture. Established in 1960, the AMETEK Foundation is the charitable giving arm of AMETEK, Inc. The Foundation's mission is to empower AMETEK colleagues making a positive impact in their local communities, with a focus on health and welfare, civic and social service programs, and education.

As of December 31, 2021, we have approximately 18,500 employees, of which 42% are diverse (global female employees plus diverse U.S. male employees). Our compensation programs are designed to provide competitive salaries and benefit programs to attract, retain and motivate a world-class workforce. Selected employees participate in short and long-term incentive programs that align employee and shareholder interests and promote long-term retention. Additionally, we strive to protect health and safety in every aspect of our enterprise – from the way we design, manufacture and deliver our products to the way our customers use them. We continue to drive towards our goal of zero lost-time work incidents. 2021 was our second year in a row with our lost-time incident rate being the lowest ever. We continue to enhance our safety initiatives as each facility is tasked with identifying opportunities for additional safety measures. Businesses with zero incidents share best practices and ensure ongoing training to maintain their safety excellence. In addition to our EHS facility audits, our facilities' activities include safety committees, continual training, documented self-audits, and behavior-based safety observations and feedback. .

Our U.S. Federal Employment Information Report (EEO-1) for 2020 is available on ametek.com and offers a snapshot of U.S. diversity data as of December 31, 2020. The EEO-1 data captures only U.S. employees and does not reflect the broad diversity of our 10,000 international employees.

Available Information

AMETEK's annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all 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 on the Company's website at www.ametek.com in the "Investors – Financial Information" section as soon as reasonably practicable after such material is electronically filed with, or furnished to, the U.S. Securities and Exchange Commission. All reports filed with the Securities Exchange Commission can also be viewed on their website at www.sec.gov. AMETEK has posted in the "Investors – Governance" section of its website its corporate governance guidelines, Board committee charters, codes of ethics, and social and environmental policies. Those documents also are available free of charge in published form to any stockholder who requests them by writing to the Investor Relations Department at AMETEK, Inc., 1100 Cassatt Road, Berwyn, Pennsylvania, 19312.

Item 1A. Risk Factors

You should consider carefully the following risk factors and all other information contained in this Annual Report on Form 10-K and the documents we incorporate by reference in this Annual Report on Form 10-K. Any of the following risks could materially and adversely affect our business, financial condition, results of operations and cash flows.

Risks Related to Our Operations

The coronavirus global pandemic could have a material adverse effect on our ability to operate, results of operations, financial condition, liquidity and ability to consummate future acquisitions.

We continue to address the impact of the COVID-19 pandemic. The outbreak of COVID-19, and any other significant outbreak of epidemic, pandemic or contagious disease, could have a negative effect on our ability to operate, results of operations, financial condition, liquidity and ability to consummate future acquisitions. In addition, the outbreak of COVID-19 has resulted in a widespread health crisis that is adversely affecting the economies and financial markets of many countries and the end markets for many of our products, which could result in an economic downturn that may negatively affect demand for our products. The extent to which COVID-19 will impact our business, results of operations and financial condition is highly uncertain and will depend on future developments. Such developments may include the geographic spread and duration of the virus, the severity of the disease and the actions that may be taken by various governmental authorities and other third parties in response to the outbreak.

Our global manufacturing facilities remain open with a focus on safety protocols, though a range of external factors related to the pandemic that are not within our control have restricted our ability to keep our manufacturing facilities fully operational. Any decline or lower than expected demand in our served markets could diminish demand for our products and services, which would adversely affect our financial condition and results of operations. Moreover, the COVID-19 pandemic may adversely affect the financial condition of our customers and suppliers in the future or their ability to purchase Company products, may delay customers' purchasing decisions, result in a shift to lower-priced products or away from discretionary products, and may result in longer payment terms or inability to collect customer payments. These issues may also materially affect our future access to our sources of liquidity, particularly our cash flows from operations, financial condition and ability to consummate future acquisitions.

In compliance with stay-at-home orders issued in connection with the COVID-19 pandemic, a significant subset of our employees have transitioned to working from home. As a result, more of our employees are working from locations where our cybersecurity program may be less effective and IT security may be less robust. This change may create increased vulnerability to cybersecurity incidents, including breaches of information systems security, which could result in a disruption of our operations, customer dissatisfaction, damage to our reputation and a loss of customers or revenues.

If significant portions of our workforce are unable to work effectively, including because of illness, quarantines or absenteeism; government actions; facility closures; work slowdowns or stoppages; limited supplies or resources; or other circumstances related to COVID-19, our operations will be further impacted. We may be unable to perform fully on our customer obligations and we may incur liabilities and suffer losses as a result. The continued spread of COVID-19 may also affect our ability to hire, develop and retain our talented and diverse workforce, and our ability in short periods to fully maintain and support our corporate culture.

A scarcity of resources or other hardships caused by the COVID-19 pandemic may result in increased nationalism, protectionism and political tensions which may cause governments and/or other entities to take actions that may have significant negative impact on the Company, its suppliers, and its customers to conduct business in the future. Risks related to consumers and businesses lowering or changing spending, which impact domestic and cross-border spend, are described in our risk factor titled “Foreign and domestic economic, political, legal, compliance and business factors could negatively affect our international sales and operations”.

The duration and intensity of the impact of the COVID-19 pandemic and the resulting disruption to our operations is uncertain but could have a material impact on our operations, cash flows, financial condition and ability to consummate future acquisitions. We will continue to assess the financial impact of the pandemic on our business.

A downturn in the economy generally or in the markets we serve could adversely affect our business.

A number of the industries in which we operate are cyclical in nature and therefore are affected by factors beyond our control. A downturn in the U.S. or global economy, and, in particular, in the aerospace and defense, oil and gas, process instrumentation or power markets could have an adverse effect on our business, financial condition and results of operations.

Our growth could suffer if the markets into which we sell our products and services decline, do not grow as anticipated or experience cyclicality.

Our growth depends in part on the growth of the markets which we serve. Visibility into the future performance of certain of our markets is limited (particularly for markets into which we sell through distribution). Our quarterly sales and profits depend substantially on the volume and timing of orders received during the fiscal quarter, which are difficult to forecast. Any decline or lower than expected growth in our served markets could diminish demand for our products and services, which would adversely affect our financial statements. A number of our businesses operate in industries that may experience periodic, cyclical downturns. In addition, in certain of our businesses, demand depends on customers’ capital spending budgets, as well as government funding policies. Matters of public policy and government budget dynamics, as well as product and economic cycles, can affect the spending decisions of these customers. Demand for our products and services is also sensitive to changes in customer order patterns, which may be affected by announced price changes, changes in incentive programs, new product introductions and customer inventory levels. Any of these factors could adversely affect our growth and results of operations in any given period.

We may not properly execute, or realize anticipated cost savings or benefits from, our Operational Excellence initiatives.

Our success is partly dependent upon properly executing and realizing cost savings or other benefits from our ongoing production and procurement initiatives. These initiatives are primarily designed to make the Company more efficient, which is necessary in the Company’s highly competitive industries. These initiatives are often complex, and a failure to implement them properly may, in addition to not meeting projected cost savings or benefits, adversely affect our business and operations.

Foreign and domestic economic, political, legal, compliance and business factors could negatively affect our international sales and operations.

International sales for 2021 and 2020 represented 49.5% and 48.7% of our consolidated net sales, respectively. As a result of our growth strategy, we anticipate that the percentage of sales outside the United States will increase in the future. As of December 31, 2021, we have manufacturing operations in 17 countries outside the United States, with significant operations in China, the Czech Republic, Germany, Mexico, Serbia and the United Kingdom. A disruption of our ability to obtain a supply of goods from these countries or a change in the cost to purchase, manufacture, or distribute these products could have an adverse effect on our sales and operations. International sales and operations are subject to the customary risks of operating in an international environment, including:

- Imposition of trade or foreign exchange restrictions, including in the United States;
- Overlap of different tax structures;
- Unexpected changes in regulatory requirements, including in the United States;
- Trade protection measures, such as the imposition of or increase in tariffs and other trade barriers, including in the United States;
- The difficulty and/or costs of designing and implementing an effective control environment across diverse regions and employee bases;
- Restrictions on currency repatriation;
- General economic conditions;
- Unstable political situations and social unrest, both internationally and in the United States;
- Nationalization of assets; and
- Compliance with a wide variety of international and U.S. laws and regulatory requirements.

Furthermore, fluctuations in foreign currency exchange rates, including changes in the relative value of currencies in the countries where we operate, subject us to exchange rate exposure and may adversely affect our financial statements. For example, increased strength in the U.S. dollar will increase the effective price of our products sold overseas, which may adversely affect sales or require us to lower our prices. In addition, our consolidated financial statements are presented in U.S. dollars, and we must translate our assets, liabilities, sales and expenses into U.S. dollars for external reporting purposes. As a result, changes in the value of the U.S. dollar due to fluctuations in currency exchange rates or currency exchange controls may materially and negatively affect the value of these items in our consolidated financial statements, even if their value has not changed in their local currency.

Our international sales and operations may be adversely impacted by compliance with export laws.

We are required to comply with various import, export, export control and economic sanctions laws, which may affect our transactions with certain customers, business partners and other persons, including in certain cases dealings with or between our employees and subsidiaries. In certain circumstances, export control and economic sanctions regulations may prohibit the export of certain products, services and technologies and in other circumstances, we may be required to obtain an export license before exporting a controlled item. In addition, failure to comply with any of these regulations could result in civil and criminal, monetary and non-monetary penalties, disruptions to our business, limitations on our ability to import and export products and services and damage to our reputation.

Our reputation, ability to do business and financial statements may be impaired by improper conduct by any of our employees, agents or business partners.

We cannot provide assurance that our internal controls and compliance systems will always protect us from acts committed by employees, agents or business partners of ours (or of businesses we acquire or partner with) that would violate U.S. and/or non-U.S. laws, including the laws governing payments to government officials, bribery, fraud, kickbacks and false claims, pricing, sales and marketing practices, conflicts of interest, competition, export and import compliance, money laundering and data privacy. In particular, the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act and similar anti-bribery laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business, and we operate in many parts of the world that have experienced governmental corruption to some degree. Any such improper actions or allegations of such acts could damage our reputation and subject us to civil or criminal investigations in the U.S. and in other jurisdictions and related shareholder lawsuits could lead to substantial civil and criminal, monetary and non-monetary penalties and could cause us to incur significant legal and investigatory fees. In addition, we rely on our suppliers to adhere to our supplier standards of conduct and violations of such standards of conduct could occur that could have a material effect on our financial statements.

Any inability to hire, train and retain a sufficient number of skilled officers and other employees could impede our ability to compete successfully.

If we cannot hire, train and retain a sufficient number of qualified employees, we may not be able to effectively integrate acquired businesses and realize anticipated results from those businesses, manage our expanding international operations and otherwise profitably grow our business. Even if we do hire and retain a sufficient number of employees, the expense necessary to attract and motivate these officers and employees may adversely affect our results of operations.

If we are unable to develop new products on a timely basis, it could adversely affect our business and prospects.

We believe that our future success depends, in part, on our ability to develop, on a timely basis, technologically advanced products that meet or exceed appropriate industry standards. Maintaining our existing technological advantages will require us to continue investing in research and development and sales and marketing. There can be no assurance that we will have sufficient resources to make such investments, that we will be able to make the technological advances necessary to maintain such competitive advantages or that we can recover major research and development expenses. We are not currently aware of any emerging standards or new products which could render our existing products obsolete, although there can be no assurance that this will not occur or that we will be able to develop and successfully market new products.

Our technology is important to our success and our failure to protect this technology could put us at a competitive disadvantage.

Many of our products rely on proprietary technology; therefore, we endeavor to protect our intellectual property rights through patents, copyrights, trade secrets, trademarks, confidentiality agreements and other contractual provisions. Despite our efforts to protect proprietary rights, unauthorized parties or competitors may copy or otherwise obtain and use our products or technology. In addition, our ability to protect and enforce our intellectual property rights may be limited in certain countries outside the U.S. Actions to enforce our rights may result in substantial costs and diversion of resources and we make no assurances that any such actions will be successful.

A disruption in, shortage of, or price increases for, supply of our components and raw materials may adversely impact our operations.

While we manufacture certain parts and components used in our products, we require substantial amounts of raw materials and purchase some parts and components, including semiconductor chips and other electronic components, from suppliers. The availability and prices for raw materials, parts and components may be subject to curtailment or change due to, among other things, suppliers' allocation to other purchasers, interruptions in production by suppliers, changes in exchange rates and prevailing price levels. In addition, our facilities, supply chains, distribution systems, and products may be impacted by natural or man-made disruptions, including armed conflict, damaging weather or other acts of nature, pandemics or other public health crises. A shutdown of, or inability to utilize, one or more of our facilities, our supply chain, or our distribution system could significantly disrupt our operations, delay production and shipments, damage our relationships and reputation with customers, suppliers, employees, stockholders and others, result in lost sales, result in the misappropriation or corruption of data, or result in legal exposure and large remediation or other expenses. Furthermore, certain items, including base metals and certain steel components, are available only from a limited number of suppliers and are subject to commodity market fluctuations. Shortages in raw materials or price increases therefore could affect the prices we charge, our operating costs and our competitive position, which could adversely affect our business, financial condition, results of operations and cash flows.

We are subject to numerous governmental regulations, which may be burdensome or lead to significant costs.

Our operations are subject to numerous federal, state, local and foreign governmental laws and regulations. In addition, existing laws and regulations may be revised or reinterpreted and new laws and regulations, including with respect to privacy legislation and climate change, may be adopted or become applicable to us or customers for our products. For example, we are subject to federal, state and international privacy laws relating to the collection, use, retention, security and transfer of personally identifiable information. In many cases, these laws apply not only to third-party transactions, but also to transfers of information between the Company and its subsidiaries, and among the Company, its subsidiaries and other parties with which the Company has commercial relations. Several jurisdictions have passed laws in this area, and other jurisdictions are considering imposing additional restrictions. These laws continue to develop and may be inconsistent from jurisdiction to jurisdiction. Complying with emerging and changing international requirements may cause the Company to incur substantial costs or require the Company to change its business practices. We cannot predict the form any such new laws or regulations will take or the impact any of these laws and regulations will have on our business or operations.

We operate in highly competitive industries, which may adversely affect our results of operations or ability to expand our business.

Our markets are highly competitive. We compete, domestically and internationally, with individual producers, as well as with vertically integrated manufacturers, some of which have resources greater than we do. The principal elements of competition for our products are product technology, quality, service, distribution and price. Although we believe EIG is a market leader, competition is strong and could intensify in the markets served by EIG. In the aerospace markets served by EIG, a limited number of companies compete on the basis of product quality, performance and innovation. EMG’s competition in specialty metal products stems from alternative materials and processes. Our competitors may develop new or improve existing products that are superior to our products or may adapt more readily to new technologies or changing requirements of our customers. There can be no assurance that our business will not be adversely affected by increased competition in the markets in which it operates or that our products will be able to compete successfully with those of our competitors.

Our business and financial performance could be adversely impacted by a significant disruption in, or breach in security of, our information technology systems.

We rely on information technology systems, some of which are managed by third-parties, to process, transmit and store electronic information (including sensitive data such as confidential business information and personally identifiable data relating to employees, customers, other business partners and patients), and to manage or support a variety of critical business processes and activities (such as receiving and fulfilling orders, billing, collecting and making payments, shipping products, providing services and support to customers and fulfilling contractual obligations). These systems, products and services may be damaged, disrupted or shut down due to attacks by computer hackers, computer viruses, ransomware, human error or malfeasance, power outages, hardware failures, telecommunication or utility failures, catastrophes or other unforeseen events. In any such circumstances our system redundancy and other disaster recovery planning may be ineffective or inadequate. Further, given a significant subset of our employees have transitioned to working from home, disaster recovery may take longer to complete.

Attacks may also target hardware, software and information installed, stored or transmitted in our products after such products have been purchased and incorporated into third-party products, facilities or infrastructure. Like most multinational corporations, our information technology systems have been subject to computer viruses, malicious codes, unauthorized access and other cyber-attacks and we expect the sophistication and frequency of such attacks to continue to increase. Any of the attacks, breaches or other disruptions or damage described above could interrupt our operations or the operations of our customers and partners, delay production and shipments, result in theft of intellectual property and trade secrets, damage customer and business partner relationships and our reputation or result in defective products or services, legal claims and proceedings, liability and penalties under privacy laws and increased costs for security and remediation, each of which could adversely affect our business, reputation and financial statements. Although we maintain cyber risk insurance, damages and claims arising from such incidents may not be covered or may exceed the amount of any insurance available.

Risks Related to Our Acquisitions

Our growth strategy includes strategic acquisitions. We may not be able to consummate future acquisitions or successfully integrate recent and future acquisitions.

A portion of our growth has been attributed to acquisitions of strategic businesses. We plan to continue making strategic acquisitions to enhance our global market position and broaden our product offerings. Although we have been successful with our acquisition strategy in the past, our ability to successfully effectuate acquisitions will be dependent upon a number of factors, including:

- Our ability to identify acceptable acquisition candidates;
- The impact of increased competition for acquisitions, which may increase acquisition costs, affect our ability to consummate acquisitions on favorable terms, and result in us assuming a greater portion of the seller’s liabilities;
- Successfully integrating acquired businesses, including integrating the management, technological and operational processes, procedures and controls of the acquired businesses with those of our existing operations;
- Adequate financing for acquisitions being available on terms acceptable to us;
- Unexpected losses of key employees, customers and suppliers of acquired businesses;
- Mitigating assumed, contingent and unknown liabilities; and
- Challenges in managing the increased scope, geographic diversity and complexity of our operations.

The process of integrating acquired businesses into our existing operations may result in unforeseen operating difficulties and may require additional financial resources and attention from management that would otherwise be available for the ongoing development or expansion of our existing operations. Furthermore, even if successfully integrated, the acquired business may not achieve the results we expected or produce expected benefits in the time frame planned. Failure to continue with our acquisition strategy and the successful integration of acquired businesses could have an adverse effect on our business, financial condition, results of operations and cash flows.

The indemnification provisions of acquisition agreements by which we have acquired companies may not fully protect us and as a result we may face unexpected liabilities.

Certain of the acquisition agreements by which we have acquired companies require the former owners to indemnify us against certain liabilities related to the operation of the company before we acquired it. In most of these agreements, however, the liability of the former owners is limited, and certain former owners may be unable to meet their indemnification responsibilities. We cannot assure you that these indemnification provisions will protect us fully or at all, and as a result we may face unexpected liabilities that adversely affect our financial statements.

Risks Related to Our Financial Condition

Certain environmental risks may cause us to be liable for costs associated with hazardous or toxic substance clean-up which may adversely affect our financial condition.

Our businesses, operations and facilities are subject to a number of federal, state, local and foreign environmental and occupational health and safety laws and regulations concerning, among other things, air emissions, discharges to waters and the use, manufacturing, generation, handling, storage, transportation and disposal of hazardous substances and wastes. Environmental risks are inherent in many of our manufacturing operations. Certain laws provide that a current or previous owner or operator of property may be liable for the costs of investigating, removing and remediating hazardous materials at such property, regardless of whether the owner or operator knew of, or was responsible for, the presence of such hazardous materials. In addition, the Comprehensive Environmental Response, Compensation and Liability Act generally imposes joint and several liability for clean-up costs, without regard to fault, on parties contributing hazardous substances to sites designated for clean-up under the Act. We have been named a potentially responsible party at several sites, which are the subject of government-mandated clean-ups. As the result of our ownership and operation of facilities that use, manufacture, store, handle and dispose of various hazardous materials, we may incur substantial costs for investigation, removal, remediation and capital expenditures related to compliance with environmental laws. While it is not possible to precisely quantify the potential financial impact of pending environmental matters, based on our experience to date, we believe that the outcome of these matters is not likely to have a material adverse effect on our financial position or future results of operations. In addition, new laws and regulations, new classification of hazardous materials, stricter enforcement of existing laws and regulations, 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 that could have a material adverse effect on our business, financial condition and results of operations. There can be no assurance that future environmental liabilities will not occur or that environmental damages due to prior or present practices will not result in future liabilities.

We are subject to a variety of litigation and other legal and regulatory proceedings in the course of our business that could adversely affect our financial statements.

We are subject to a variety of litigation and other legal and regulatory proceedings incidental to our business (or the business operations of previously owned entities), including claims for damages arising out of the use of products or services and claims relating to intellectual property matters, employment matters, tax matters, commercial disputes, competition and sales and trading practices, environmental matters, personal injury, insurance coverage and acquisition-related matters, as well as regulatory investigations or enforcement. These lawsuits may include claims for compensatory damages, punitive and consequential damages and/or injunctive relief. The defense of these lawsuits may divert our management's attention, we may incur significant expenses in defending these lawsuits, and we may be required to pay damage awards or settlements or become subject to equitable remedies that could adversely affect our operations and financial statements. Moreover, any insurance or indemnification rights that we may have may be insufficient or unavailable to protect us against such losses. In addition, developments in proceedings in any given period may require us to adjust the loss contingency estimates that we have recorded in our financial statements, record estimates for liabilities or assets previously not susceptible of reasonable estimates or pay cash settlements or judgments. Any of these developments could adversely affect our financial statements in any particular period. We cannot assure you that our liabilities in connection with litigation and other legal and regulatory proceedings will not exceed our estimates or adversely affect our financial statements and reputation. However, based on our experience, current information and applicable law, we do not believe that any amounts we may be required to pay in connection with litigation and other legal and regulatory proceedings in excess of our reserves will have a material effect on our financial statements.

Restrictions contained in our revolving credit facility and other debt agreements may limit our ability to incur additional indebtedness.

Our existing revolving credit facility and other debt agreements (each a “Debt Facility” and collectively, “Debt Facilities”) contain restrictive covenants, including restrictions on our ability to incur indebtedness. These restrictions could limit our ability to effectuate future acquisitions, limit our ability to pay dividends, limit our ability to make capital expenditures or restrict our financial flexibility. Our Debt Facilities contain covenants requiring us to achieve certain financial and operating results and maintain compliance with specified financial ratios. Our ability to meet the financial covenants or requirements in our Debt Facilities may be affected by events beyond our control, and we may not be able to satisfy such covenants and requirements. A breach of these covenants or our inability to comply with the financial ratios, tests or other restrictions contained in a Debt Facility could result in an event of default under one or more of our other Debt Facilities. Upon the occurrence of an event of default under a Debt Facility, and the expiration of any grace periods, the lenders could elect to declare all amounts outstanding under one or more of our other Debt Facilities, together with accrued interest, to be immediately due and payable. If this were to occur, our assets may not be sufficient to fully repay the amounts due under our Debt Facilities or our other indebtedness.

Our goodwill and other intangible assets represent a substantial proportion of our total assets and the impairment of such substantial goodwill and intangible assets could have a negative impact on our financial condition and results of operations.

Our total assets include substantial amounts of intangible assets, primarily goodwill. At December 31, 2021, goodwill and other intangible assets, net of accumulated amortization, totaled $8,607.4 million or 72% of our total assets. The goodwill results from our acquisitions, representing the excess of cost over the estimated fair value of the net tangible and other identifiable intangible assets we have acquired. At a minimum, we assess annually whether there has been impairment in the value of our intangible assets. If future operating performance at one or more of our reporting units were to fall significantly below current levels, we could record, under current applicable accounting rules, a non-cash charge to operating income for goodwill or other intangible asset impairment. Any determination requiring the impairment of a significant portion of goodwill or other intangible assets would negatively affect our financial condition and results of operations.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

At December 31, 2021, the Company conducted business from office and operating facilities at owned and leased locations throughout the United States and select global markets. The Company’s leases a facility in Berwyn, Pennsylvania for its corporate headquarters.

The Company believes that all facilities have been adequately maintained, are in good operating condition, and are suitable for our current needs.

Item 3. Legal Proceedings

Please refer to Note 13 to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for information regarding certain litigation matters.

The Company is subject to a variety of litigation and other legal and regulatory proceedings incidental to its business (or the business operations of previously owned entities), including claims for damages arising out of the use of the Company's products or services and claims relating to intellectual property matters, employment matters, tax matters, commercial disputes, competition and sales and trading practices, environmental matters, personal injury, insurance coverage and acquisition-related matters, as well as regulatory investigations or enforcement. Based upon the Company's experience, the Company does not believe that these proceedings and claims will have a material adverse effect on its results of operations, financial position or cash flows.

Item 4. Mine Safety Disclosures

Not Applicable.

PART II

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

The principal market on which the Company's common stock is traded is the New York Stock Exchange and it is traded under the symbol "AME." On January 31, 2022, there were approximately 1,700 holders of record of the Company's common stock.

Market price and dividend information with respect to the Company's common stock is set forth below. Future dividend payments by the Company will be dependent on future earnings, financial requirements, contractual provisions of debt agreements and other relevant factors.

Under its share repurchase program, the Company repurchased approximately 113,000 shares of its common stock for $14.7 million in 2021 and approximately 55,000 shares of its common stock for $4.7 million in 2020.

Issuer Purchases of Equity Securities

The following table reflects purchases of AMETEK, Inc. common stock by the Company during the three months ended December 31, 2021:

Period	Total Number of Shares Purchased (1)(2)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plan (2)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plan
October 1, 2021 to October 31, 2021	—	$ —	—	$ 471,378,035
November 1, 2021 to November 30, 2021	11,625	140.85	11,625	469,740,610
December 1, 2021 to December 31, 2021	74	147.04	74	469,729,729
Total	11,699	$ 140.89	11,699	

(1) Represents shares surrendered to the Company to satisfy tax withholding obligations in connection with employees' share-based compensation awards.

(2) Consists of the number of shares purchased pursuant to the Company's Board of Directors $500 million authorization for the repurchase of its common stock announced in February 2019. Such purchases may be effected from time to time in the open market or in private transactions, subject to market conditions and at management's discretion.

Securities Authorized for Issuance Under Equity Compensation Plan Information

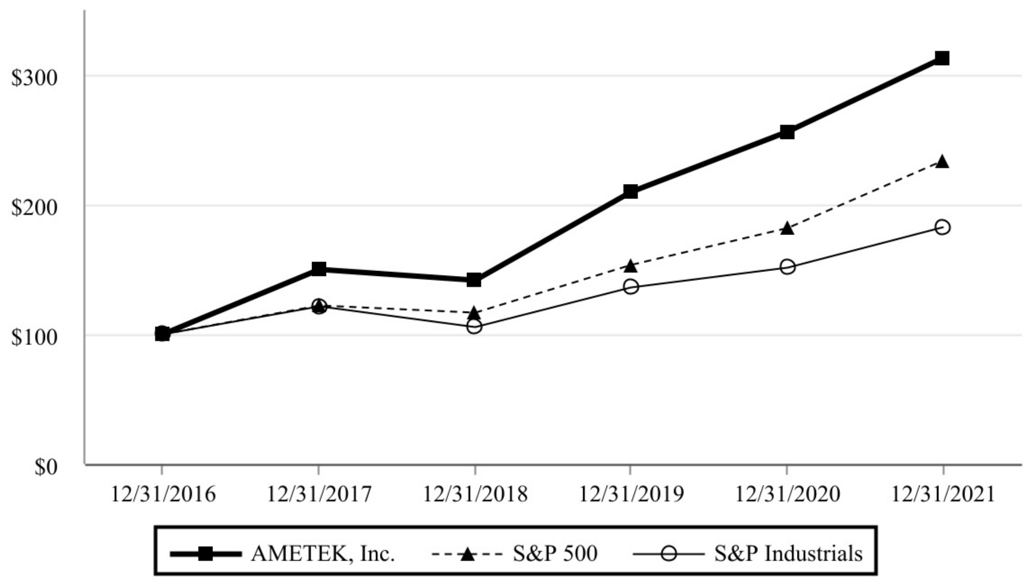
The following table sets forth information as of December 31, 2021 regarding all of the Company's existing compensation plans pursuant to which equity securities are authorized for issuance to employees and non-employee directors:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	3,352,346	$ 76.08	10,437,196
Equity compensation plans not approved by security holders	—	—	—
Total	3,352,346	$ 76.08	10,437,196

Stock Performance Graph

The following graph and accompanying table compare the cumulative total stockholder return for AMETEK over the last five years ended December 31, 2021 with total returns for the same period for the Standard and Poor's ("S&P") 500 Index and S&P Industrials. AMETEK's stock price is a component of both indices. The performance graph and table assume a $100 investment made on December 31, 2016 and reinvestment of all dividends. The stock performance shown on the graph below is based on historical data and is not necessarily indicative of future stock price performance.

COMPARISON OF FIVE-YEAR CUMULATIVE TOTAL RETURN



	December 31,					
	2016	**2017**	**2018**	**2019**	**2020**	**2021**
AMETEK, Inc.	$ 100.00	$ 149.98	$ 141.14	$ 209.26	$ 255.79	$ 312.88
S&P 500 Index	100.00	121.83	116.49	153.17	181.35	233.41
S&P Industrials	100.00	121.03	104.95	135.77	150.79	182.63

Item 6. Reserved

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

This report includes forward-looking statements based on the Company's current assumptions, expectations and projections about future events. When used in this report, the words "believes," "anticipates," "may," "expect," "intend," "estimate," "project" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain such words. In this report, the Company discloses important factors that could cause actual results to differ materially from management's expectations. For more information on these and other factors, see "Forward-Looking Information" herein.

The following Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with "Item 1A. Risk Factors," and the consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K.

Business Overview

AMETEK's operations are affected by global, regional and industry economic factors. However, the Company's strategic geographic and industry diversification, and its mix of products and services, have helped to mitigate the potential adverse impact of any unfavorable developments in any one industry or the economy of any single country on its consolidated operating results. In 2021, the Company posted record sales, operating income, operating margins, net income, diluted earnings per share, backlog, and orders. The Company's record backlog, contributions from recent acquisitions, and continued focus on and implementation of Operating Excellence initiatives, had a positive impact on 2021 results. The Company also benefited from its strategic initiatives under AMETEK's four key strategies: Operational Excellence, Strategic Acquisitions, Global & Market Expansion and New Products.

Highlights of 2021 were:

- Net sales for 2021 were a record $5,546.5 million, an increase of $1,006.5 million or 22.2%, compared with net sales of $4,540.0 million in 2020. The increase in net sales for 2021 was due to a 15% organic sales increase, a 7% increase from acquisitions, and a favorable 1% effect of foreign currency translation, partially offset by an unfavorable divestiture impact.

- Net income for 2021 was a record $990.1 million, an increase of $117.7 million or 13.5%, compared with $872.4 million in 2020.

- Diluted earnings per share for 2021 were a record $4.25, an increase of $0.48 or 12.7%, compared with $3.77 per diluted share in 2020.

- Orders for 2021 were a record $6,474.4 million, an increase of $1,850.0 million or 40.0%, compared with $4,624.4 million in 2020. The increase in orders was due to a 26% organic order increase, a favorable 15% from acquisitions, partially offset by an unfavorable 1% effect of foreign currency translation. As a result, the Company's backlog of unfilled orders at December 31, 2021 was a record $2,730.1 million.

- During 2021, the Company spent $1,959.2 million in cash, net of cash acquired, to purchase six businesses:

    - In February 2021, AMETEK acquired EGS Automation ("EGS"), a designer and manufacturer of highly engineered, customized robotic solutions used in critical applications for the medical, food and beverage, and general industrial markets.

    - In March 2021, AMETEK acquired Magnetrol International ("Magnetrol"), a leading provider of level and flow control solutions for challenging process applications across a diverse set of end markets including medical, pharmaceutical, oil and gas, food and beverage, and general industrial.

- In March 2021, AMETEK acquired Crank Software, a leading provider of embedded graphical user interface software and services.
- In April 2021, AMETEK acquired NSI-MI Technologies ("NSI-MI"), a leading provider of radio frequency and microwave test and measurement systems for niche applications across the aerospace, defense, automotive, wireless communications, and research markets.
- In April 2021, AMETEK acquired Abaco Systems, Inc. ("Abaco"), specializing in open-architecture computing and electronic systems for aerospace, defense, and specialized industrial markets and is a leading provider of mission critical embedded computing systems.
- In November 2021, AMETEK acquired Alphasense, a leading provider of gas and particulate sensors for use in environmental, health and safety, and air quality applications.

- Cash flow provided by operating activities for 2021 was $1,160.5 million. Free cash flow (cash flow provided by operating activities less capital expenditures) was $1,049.8 million in 2021.
- EBITDA (earnings before interest, income taxes, depreciation, and amortization) was a record $1,594.3 million in 2021, compared with $1,421.6 million in 2020.
- The Company continued its emphasis on investment in research, development and engineering, spending $299.6 million in 2021. Sales from products introduced in the past three years were $1,244.0 million.

Impact of COVID-19 Pandemic on our Business

The COVID-19 pandemic resulted in significant global economic disruption and had an adverse impact on our financial results throughout 2020. As the global economy has begun to recover, we eliminated certain of the temporary cost saving actions put in place in 2020, but continue to closely monitor fixed costs, capital expenditure plans, inventory, and capital resources to respond to changing conditions and to ensure we have the resources to meet our future needs. We have experienced sequential improvement in our financial results since the third quarter of 2020, and this trend has continued throughout 2021. The current economic environment in which we operate is characterized by increased material cost inflation, logistics challenges, labor availability issues, and component part shortages. As we move into 2022, we continue to monitor and closely manage through these conditions and have taken steps to mitigate the impacts of the challenging economic environment.

We are closely tracking developments regarding vaccine mandates. Until it was prohibited by a federal court order in December 2021, we had taken steps to comply with the federal contractor vaccine mandate, requiring employees in our U.S. workforce to be fully vaccinated against COVID-19 by January 18, 2022, except in limited circumstances. Although the federal contractor mandate has been temporarily suspended, pending the outcome of an appeal, we continue to encourage all employees to be vaccinated, including booster shots. If the mandate is reinstated, or new mandates implemented, it is uncertain to what extent compliance with such vaccine mandates may result in workforce attrition.

Our top priority during this pandemic is the health and safety of our employees. All global manufacturing facilities remained fully operational during 2021 and continue to operate with safety protocols in place to ensure the health and safety of our employees and communities. We will continue to evaluate the nature and extent of future impacts of the COVID-19 pandemic on its business. Please refer to "Risk Factors", Part I, Item 1A of this Form 10-K for more information.

Results of Operations

The following table sets forth net sales and income by reportable segment and on a consolidated basis:

	Year Ended December 31,		
	2021	**2020**	**2019**
	(In thousands)		
Net sales:			
Electronic Instruments	**$ 3,763,758**	$ 2,989,928	$ 3,322,881
Electromechanical	**1,782,756**	1,550,101	1,835,676
Consolidated net sales	**$ 5,546,514**	$ 4,540,029	$ 5,158,557
Operating income and income before income taxes:			
Segment operating income:			
Electronic Instruments	**$ 958,183**	$ 770,620	$ 865,307
Electromechanical	**437,378**	324,962	387,931
Total segment operating income	**1,395,561**	1,095,582	1,253,238
Corporate administrative expenses	**(86,891)**	(67,698)	(75,858)
Consolidated operating income	**1,308,670**	1,027,884	1,177,380
Interest expense	**(80,381)**	(86,062)	(88,481)
Other (expense) income, net	**(5,119)**	140,487	(19,151)
Consolidated income before income taxes	**$ 1,223,170**	$ 1,082,309	$ 1,069,748

The following “Results of Operations of the year ended December 31, 2021 compared with the year ended December 31, 2020” section presents an analysis of the Company’s consolidated operating results displayed in the Consolidated Statement of Income. A discussion regarding our financial condition and results of operations for the year ended December 31, 2020 compared to the year ended December 31, 2019 can be found under Item 7 in our Annual Report on Form 10-K for the fiscal year ended December 31, 2020, filed with the Securities and Exchange Commission on February 18, 2021.

Results of Operations for the year ended December 31, 2021 compared with the year ended December 31, 2020

Net sales for 2021 were a record $5,546.5 million, an increase of $1,006.5 million or 22.2%, compared with net sales of $4,540.0 million in 2020. The increase in net sales for 2021 was due to a 15% organic sales increase, a 7% increase from acquisitions, and a favorable 1% effect of foreign currency translation, partially offset by an unfavorable divestiture impact. EIG net sales were $3,763.8 million in 2021, an increase of 25.9%, compared with $2,989.9 million in 2020. EMG net sales were $1,782.8 million in 2021, an increase of 15.0%, compared with $1,550.1 million in 2020.

Total international sales for 2021 were a record $2,745.6 million or 49.5% of net sales, an increase of $535.7 million or 24.2%, compared with international sales of $2,209.9 million or 48.7% of net sales in 2020. The increase in international sales was primarily driven by strong demand in Europe and Asia as well as contributions from recent acquisitions. Export shipments from the United States, which are included in total international sales, were $1,475.6 million in 2021, an increase of $279.2 million or 23.3%, compared with $1,196.4 million in 2020.

Orders for 2021 were a record $6,474.4 million, an increase of $1,850.0 million or 40.0% compared with $4,624.4 million in 2020. The increase in orders was due to a 26% organic order increase, a favorable 15% from acquisitions, partially offset by an unfavorable 1% effect of foreign currency translation. The Company’s backlog of unfilled orders at December 31, 2021 was a record $2,730.1 million, an increase of $927.9 million or 51.5%, compared with $1,802.2 million at December 31, 2020.

Segment operating income for 2021 was $1,395.6 million, an increase of $300.0 million or 27.4%, compared with segment operating income of $1,095.6 million in 2020. Segment operating income, as a percentage of net sales, increased to 25.2% in 2021, compared with 24.1% in 2020. The Company recorded 2020 realignment costs of $43.7 million in response to the impact of a weak global economy as a result of the COVID-19 pandemic. The 2020 realignment costs were composed of $35.3 million in severance costs for a reduction of workforce and $8.4 million of asset write-downs, primarily inventory, which decreased margins by 100 basis points. Segment operating income and segment operating margins were positively impacted in 2021 by the increase in net sales discussed above as well as the Company's Operational Excellence initiatives, including ongoing savings from the 2020 realignment actions.

Cost of sales for 2021 was $3,633.9 million or 65.5% of net sales, an increase of $637.4 million or 21.3%, compared with $2,996.5 million or 66.0% of net sales for 2020. The cost of sales increase was primarily due to the net sales increase discussed above. The 2020 cost of sales included the realignment costs discussed above.

Selling, general and administrative expenses for 2021 were $603.9 million or 10.9% of net sales, an increase of $88.3 million or 17.1%, compared with $515.6 million or 11.4% of net sales in 2020. Selling, general and administrative expenses increased primarily due to the increase in net sales discussed above.

Consolidated operating income was a record $1,308.7 million or a record 23.6% of net sales for 2021, an increase of $280.8 million or 27.3%, compared with $1,027.9 million or 22.6% of net sales in 2020. The consolidated operating income and operating income margins were positively impacted in 2021 by the increase in net sales discussed above as well as the benefits of the Company's Operational Excellence initiatives. The 2021 acquisitions of Abaco, Magnetrol, NSI-MI, Crank Software, EGS, and Alphasense diluted operating margins by 110 basis points. Excluding the acquisitions, operating income margins would have been 24.7% for 2021. The consolidated operating income margins were negatively impacted by 100 basis points in 2020 due to the realignment costs discussed above.

Other expense, net was $5.1 million for 2021, compared with $140.5 million of other income in 2020, a change of $145.6 million. In March 2020, the Company completed the sale of its Reading Alloys business ("Reading") to Kymera International for net proceeds of $245.3 million in cash. The sale resulted in a pre-tax gain of $141.0 million.

The effective tax rate for 2021 was 19.1%, compared with 19.4% in 2020. See Note 9 to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for further details.

Net income for 2021 was a record $990.1 million, an increase of $117.7 million or 13.5%, compared with $872.4 million in 2020. The net of tax gain of $109.6 million on the sale of Reading and net of tax expense of $33.6 million on the 2020 realignment costs are included in net income in 2020.

Diluted earnings per share for 2021 were a record $4.25, an increase of $0.48 or 12.7%, compared with $3.77 per diluted share in 2020. The net of tax gain of $0.47 per diluted share on the sale of Reading and net of tax expense of $0.15 per diluted share on the 2020 realignment costs are included in diluted earnings per share in 2020.

Segment Results

EIG's net sales totaled $3,763.8 million for 2021, an increase of $773.9 million or 25.9%, compared with $2,989.9 million in 2020. The net sales increase was due to a 14% organic sales increase, an 11% increase from acquisitions, and a favorable 1% effect of foreign currency translation.

EIG's operating income was $958.2 million for 2021, an increase of $187.6 million or 24.3%, compared with $770.6 million in 2020. EIG's operating margins were 25.5% of net sales for 2021, compared with 25.8% of net sales in 2020. EIG's operating income and operating margins in 2021 were positively impacted by the sales increase discussed above as well as the Company's Operational Excellence initiatives. The 2021 acquisitions of Abaco, Magnetrol, NSI-MI, Crank Software, and Alphasense diluted operating margins by 180 basis points. Excluding the acquisitions, EIG operating margins would have been 27.3% for 2021. EIG's operating margins were negatively impacted in 2020 by 70 basis points due to the 2020 realignment costs discussed above.

EMG's net sales totaled $1,782.8 million for 2021, an increase of $232.7 million or 15.0%, compared with $1,550.1 million in 2020. The net sales increase was due to a 15% organic sales increase, a favorable 1% effect of foreign currency translations, partially offset by an unfavorable 1% impact from the Reading divestiture.

EMG's operating income was $437.4 million for 2021, an increase of $112.4 million or 34.6%, compared with $325.0 million in 2020. EMG's operating margins were 24.5% of net sales for 2021, compared with 21.0% of net sales in 2020. EMG's operating income and operating margins in 2021 were positively impacted by the sales increase discussed above as well as the Company's Operational Excellence initiatives. EMG's 2020 operating margins were negatively impacted by 130 basis points due to the 2020 realignment costs discussed above.

Liquidity and Capital Resources

Cash provided by operating activities totaled $1,160.5 million in 2021, a decrease of $120.5 million or 9.4%, compared with $1,281.0 million in 2020. The decrease in cash provided by operating activities for 2021 was primarily due to higher working capital requirements, partially offset by higher net income, net of the gain on the sale of the Reading business in 2020.

Free cash flow (cash flow provided by operating activities less capital expenditures) was $1,049.8 million in 2021, compared with $1,206.8 million in 2020. EBITDA (earnings before interest, income taxes, depreciation and amortization) was a record $1,594.3 million in 2021, compared with $1,421.6 million in 2020. Free cash flow and EBITDA are presented because the Company is aware that they are measures used by third parties in evaluating the Company. (See "Non-GAAP Financial Measures" for a reconciliation of U.S. GAAP measures to comparable non-GAAP measures).

Cash used by investing activities totaled $2,055.8 million in 2021, compared with cash provided by investing activities of $61.6 million in 2020. In 2021, the Company paid $1,959.2 million, net of cash acquired, to purchase Abaco Systems, Magnetrol International, NSI-MI Technologies, Crank Software, EGS Automation, and Alphasense compared to $116.5 million to acquire IntelliPower in 2020. In 2020, the Company received proceeds of $245.3 million from the sale of its Reading business. Additions to property, plant and equipment totaled $110.7 million in 2021, compared with $74.2 million in 2020.

Cash provided by financing activities totaled $39.3 million in 2021, compared with $539.4 million of cash used by financing activities in 2020. At December 31, 2021, total debt, net was $2,544.2 million, compared with $2,413.7 million at December 31, 2020. In 2021, total borrowings increased by $183.9 million, driven by the 2021 acquisitions, compared with a decrease of $430.9 million in 2020. At December 31, 2021, the Company had available borrowing capacity of $2,447.5 million under its revolving credit facility and term loan, including the $500 million accordion feature.

On April 26, 2021, the Company along with certain of its foreign subsidiaries amended its credit agreement dated as of September 22, 2011, as amended and restated as of March 10, 2016 and as further amended and restated as of October 30, 2018, with the lenders, JPMorgan Chase Bank, N.A., as Administrative Agent and Bank of America, N.A., PNC Bank, National Association, Trust Bank and Wells Fargo Bank, National Association, as Co-Syndication Agents. The credit agreement amends the Company's existing revolving credit facility to add a new five-year, delayed draw, term loan for up to $800 million. The credit agreement places certain restrictions on allowable additional indebtedness. In November 2021, the Company further amended the Credit Agreement to address the cessation of LIBOR on certain currencies. At December 31, 2021, the Company had $150.0 million outstanding on the term loan.

In the fourth quarter of 2021, 55 million Swiss franc ($59.7 million) 2.44% senior note matured and was paid. In the third quarter of 2020, an 80 million British pound ($102.9 million) 4.68% senior note matured and was paid. The debt-to-capital ratio was 27.0% at December 31, 2021, compared with 28.9% at December 31, 2020. The net debt-to-capital ratio (total debt, net less cash and cash equivalents divided by the sum of net debt and stockholders' equity) was 24.2% at December 31, 2021, compared with 16.8% at December 31, 2020. The net debt-to-capital ratio is presented because the Company is aware that this measure is used by third parties in evaluating the Company. (See "Non-GAAP Financial Measures" for a reconciliation of U.S. GAAP measures to comparable non-GAAP measures).

In 2021, the Company repurchased approximately 113,000 shares of its common stock for $14.7 million, compared with $4.7 million used for repurchases of approximately 55,000 shares in 2020. At December 31, 2021, $469.7 million was available under the Company's Board of Directors authorization for future share repurchases.

Additional financing activities for 2021 included cash dividends paid of $184.6 million, compared with $165.0 million in 2020. On February 11, 2021, the Company's Board of Directors approved an 11% increase in the quarterly cash dividend on the Company's common stock to $0.20 per common share from $0.18 per common share. Proceeds from the exercise of employee stock options were $60.3 million in 2021, compared with $64.9 million in 2020.

As a result of all of the Company's cash flow activities in 2021, cash and cash equivalents at December 31, 2021 totaled $346.8 million, compared with $1,212.8 million at December 31, 2020. At December 31, 2021, the Company had $334.0 million in cash outside the United States, compared with $344.0 million at December 31, 2020. The Company utilizes this cash to fund its international operations, as well as to acquire international businesses. The Company is in compliance with all covenants, including financial covenants, for all of its debt agreements. The Company believes it has sufficient cash-generating capabilities from domestic and unrestricted foreign sources, available credit facilities and access to long-term capital funds to enable it to meet its operating needs and contractual obligations for the foreseeable future.

Subsequent Event

Effective February 9, 2022, the Company's Board of Directors approved a 10% increase in the quarterly cash dividend on the Company's common stock to $0.22 per common share from $0.20 per common share.

Contractual Obligations and Other Commitments

Material contractual obligations arising in the normal course of business primarily consist of purchase obligations, long-term debt and related interest payments, and leases. See Note 10 to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for more information on the nature and timing of debt obligations.

Leases expire over a range of years from 2022 to 2032, except for a single land lease with 62 years remaining. Most of the leases contain renewal or purchase options, subject to various terms and conditions. See Note 14 to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for more information on the nature and timing of lease obligations.

Purchase obligations primarily consist of contractual commitments to purchase certain inventories at fixed prices. At December 31, 2021, the Company had $840.4 million of purchase obligations due within one year and $50.5 million of purchase obligations due in more than one year.

The Company has standby letters of credit and surety bonds of $56.2 million related to performance and payment guarantees at December 31, 2021. Based on experience with these arrangements, the Company believes that any obligations that may arise will not be material to its financial position.

Non-GAAP Financial Measures

EBITDA represents earnings before interest, income taxes, depreciation and amortization. EBITDA is presented because the Company is aware that it is used by rating agencies, securities analysts, investors and other parties in evaluating the Company. It should not be considered, however, as an alternative to operating income as an indicator of the Company's operating performance or as an alternative to cash flows as a measure of the Company's overall liquidity as presented in the Company's consolidated financial statements. Furthermore, EBITDA measures shown for the Company may not be comparable to similarly titled measures used by other companies. The following table presents the reconciliation of net income reported in accordance with U.S. generally accepted accounting principles ("GAAP") to EBITDA:

	Year Ended December 31,		
	2021	2020	2019
	(In millions)		
Net income	**$ 990.1**	$ 872.4	$ 861.3
Add (deduct):			
Interest expense	**80.4**	86.1	88.5
Interest income	**(1.4)**	(2.1)	(4.0)
Income taxes	**233.1**	209.9	208.5
Depreciation	**108.5**	101.3	101.4
Amortization	**183.6**	154.0	132.6
Total adjustments	**604.2**	549.2	527.0
EBITDA	**$ 1,594.3**	$ 1,421.6	$ 1,388.3

Free cash flow represents cash flow from operating activities less capital expenditures. Free cash flow is presented because the Company is aware that it is used by rating agencies, securities analysts, investors and other parties in evaluating the Company. The following table presents the reconciliation of cash flow from operating activities reported in accordance with U.S. GAAP to free cash flow:

	Year Ended December 31,		
	2021	2020	2019
	(In millions)		
Cash provided by operating activities	**$ 1,160.5**	$ 1,281.0	$ 1,114.4
Deduct: Capital expenditures	**(110.7)**	(74.2)	(102.3)
Free cash flow	**$ 1,049.8**	$ 1,206.8	$ 1,012.1

Net debt represents total debt, net minus cash and cash equivalents. Net debt is presented because the Company is aware that it is used by rating agencies, securities analysts, investors and other parties in evaluating the Company. The following table presents the reconciliation of total debt, net reported in accordance with U.S. GAAP to net debt:

	December 31,	
	2021	2020
	(In millions)	
Total debt, net	**$ 2,544.2**	$ 2,413.7
Less: Cash and cash equivalents	**(346.8)**	(1,212.8)
Net debt	**2,197.4**	1,200.9
Stockholders' equity	**6,871.9**	5,949.3
Capitalization (net debt plus stockholders' equity)	**$ 9,069.3**	$ 7,150.2
Net debt as a percentage of capitalization	**24.2 %**	16.8 %

Internal Reinvestment

Capital Expenditures

Capital expenditures were $110.7 million or 2.0% of net sales in 2021, compared with $74.2 million or 1.6% of net sales in 2020. In 2021, approximately 63% of capital expenditures were for improvements to existing equipment or additional equipment to increase productivity and expand capacity. Capital expenditures in 2022 are expected to be approximately 2% of net sales, with a continued emphasis on spending to improve productivity.

Research, Development and Engineering

The Company is committed to, and has consistently invested in, research, development and engineering activities to design and develop new and improved products and solutions. Research, development and engineering costs before customer reimbursement were $299.6 million in 2021, $246.2 million in 2020 and $260.3 million in 2019. These amounts included research and development expenses of $194.2 million, $158.9 million and $161.9 million in 2021, 2020, and 2019, respectively. All such expenditures were directed toward the development of new products and solutions and the improvement of existing products and solutions.

Environmental Matters

Information with respect to environmental matters is set forth in Note 13 to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Critical Accounting Policies and Estimates

Critical accounting policies are those policies that can have a significant impact on the presentation of the Company’s financial condition and results of operations and that require the use of complex and subjective estimates based on the Company’s historical experience and management’s judgment. Because of the uncertainty inherent in such estimates, actual results may differ materially from the estimates used. Below are the policies used in preparing the Company's financial statements that management believes are the most dependent upon the application of estimates and assumptions. A complete list of the Company’s significant accounting policies is in Note 1 to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

- *Business Combinations.* The Company allocates the purchase price of an acquired company, including when applicable, the acquisition date fair value of contingent consideration between tangible and intangible assets acquired and liabilities assumed from the acquired business based on their estimated fair values, with the residual of the purchase price recorded as goodwill. Third party appraisal firms and other consultants are engaged to assist management in determining the fair values of certain assets acquired and liabilities assumed. Estimating fair values requires significant judgments, estimates and assumptions, including but not limited to: discount rates, future cash flows and the economic lives of trade names, technology, and customer relationships. These estimates are based on historical experience and information obtained from the management of the acquired companies and are inherently uncertain.

- *Goodwill and Other Intangible Assets.* Goodwill and other intangible assets with indefinite lives, primarily trademarks and trade names, are not amortized; rather, they are tested for impairment at least annually. The Company can elect to perform a qualitative analysis to determine if it is more likely than not that the fair values of its reporting units are less than the respective carrying values of those reporting units. The Company elected to bypass performing the qualitative screen and performed the quantitative analysis of the goodwill impairment test in the current year. The Company may elect to perform the qualitative analysis in future periods.

  The Company principally relies on a discounted cash flow analysis to determine the fair value of each reporting unit, which considers forecasted cash flows discounted at an appropriate discount rate. The

Company believes that market participants would use a discounted cash flow analysis to estimate the fair value of its reporting units in a sale transaction. The annual goodwill impairment test requires the Company to make a number of assumptions and estimates concerning future levels of revenue growth, operating margins, depreciation, amortization and working capital requirements, which are based on the Company’s long-range plan and are considered level 3 inputs. The Company’s long-range plan is updated as part of its annual planning process and is reviewed and approved by management. The discount rate is an estimate of the overall after-tax rate of return required by a market participant whose weighted average cost of capital includes both equity and debt, including a risk premium. While the Company uses the best available information to prepare its cash flow and discount rate assumptions, actual future cash flows or market conditions could differ significantly resulting in future impairment charges related to recorded goodwill balances. While there are always changes in assumptions to reflect changing business and market conditions, the Company’s overall methodology and the population of assumptions used have remained unchanged. In order to evaluate the sensitivity of the goodwill impairment test to changes in the fair value calculations, the Company applied a hypothetical 10% decrease in fair values of each reporting unit. The 2021 results (expressed as a percentage of carrying value for the respective reporting unit) showed that, despite the hypothetical 10% decrease in fair value, the fair values of the Company’s reporting units still exceeded their respective carrying values by 118% to 534%.

The impairment test for indefinite-lived intangibles other than goodwill (primarily trademarks and trade names) consists of a comparison of the estimated fair value of the indefinite-lived intangible asset to the carrying value of the asset as of the impairment testing date. The Company can elect to perform a qualitative analysis to determine if it is more likely than not that the fair values of its indefinite-lived intangible assets are less than the respective carrying values of those assets. The Company elected to bypass performing the qualitative screen. The Company may elect to perform the qualitative analysis in future periods. The Company estimates the fair value of its indefinite-lived intangibles using the relief from royalty method using level 3 inputs, which is a widely used valuation technique for such assets. The fair value derived from the relief from royalty method is determined by applying a royalty rate to a projection of net revenues discounted using an appropriate discount rate. Each royalty rate is determined based on the profitability of the trade name to which it relates and observed market royalty rates. Certain impairment models have discount rates calculated based on a debt/equity cost of capital. While the Company uses the best available information to prepare its cash flow and discount rate assumptions, actual future cash flows or market conditions could differ significantly resulting in future impairment charges related to recorded intangible balances. While there are always changes in assumptions to reflect changing business and market conditions, the Company’s overall methodology and the population of assumptions used have remained unchanged.

The Company’s acquisitions have generally included a significant goodwill component and the Company expects to continue to make acquisitions. At December 31, 2021, goodwill and other indefinite-lived intangible assets totaled $6,113.1 million or 51.4% of the Company’s total assets. The Company completed its required annual impairment tests in the fourth quarter of 2021 and determined that the carrying values of the Company’s goodwill and indefinite-lived intangibles were not impaired. There can be no assurance that goodwill or indefinite-lived intangibles impairment will not occur in the future.

- *Pensions.* The Company has U.S. and foreign defined benefit and defined contribution pension plans. The most significant elements in determining the Company’s pension income or expense are the assumed pension liability discount rate and the expected return on plan assets. The pension discount rate reflects the current interest rate at which the pension liabilities could be settled at the valuation date. At the end of each year, the Company determines the assumed discount rate to be used to discount plan liabilities. In estimating this rate for 2021, the Company considered rates of return on high-quality, fixed-income investments that have maturities consistent with the anticipated funding requirements of the plan. In estimating the U.S. and foreign discount rates, the Company’s actuaries developed a customized discount rate appropriate to the plans’ projected benefit cash flow based on yields derived from a database of long-term bonds at consistent maturity dates. The Company determines the expected long-term rate of return based primarily on its expectation of future returns for the pension plans’ investments. Additionally, the

Company considers historical returns on comparable fixed-income and equity investments and adjusts its estimate as deemed appropriate.

- *Income Taxes.* The process of providing for income taxes and determining the related balance sheet accounts requires management to assess uncertainties, make judgments regarding outcomes and utilize estimates. The Company conducts a broad range of operations around the world and is therefore subject to complex tax regulations in numerous international taxing jurisdictions, resulting at times in tax audits, disputes and potential litigation, the outcome of which is uncertain. Management must make judgments currently about such uncertainties and determine estimates of the Company's tax assets and liabilities. To the extent the final outcome differs, future adjustments to the Company's tax assets and liabilities may be necessary.

  The Company assesses the realizability of its deferred tax assets, taking into consideration the Company's forecast of future taxable income, available net operating loss carryforwards and available tax planning strategies that could be implemented to realize the deferred tax assets. Based on this assessment, management must evaluate the need for, and the amount of, valuation allowances against the Company's deferred tax assets. To the extent facts and circumstances change in the future, adjustments to the valuation allowances may be required.

  The Company assesses the uncertainty in its tax positions, by applying a minimum recognition threshold which a tax position is required to meet before a tax benefit is recognized in the financial statements. Once the minimum threshold is met, using a more likely than not standard, a series of probability estimates is made for each item to properly measure and record a tax benefit. The tax benefit recorded is generally equal to the highest probable outcome that is more than 50% likely to be realized after full disclosure and resolution of a tax examination. The underlying probabilities are determined based on the best available objective evidence such as recent tax audit outcomes, published guidance, external expert opinion, or by analogy to the outcome of similar issues in the past. There can be no assurance that these estimates will ultimately be realized given continuous changes in tax policy, legislation and audit practice. The Company recognizes interest and penalties accrued related to uncertain tax positions in income tax expense.

Recent Accounting Pronouncements

See Note 2, Recent Accounting Pronouncements, to the Company's Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for information regarding recently issued accounting pronouncements.

Forward-Looking Information

Certain matters discussed in this Form 10-K are "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 ("PSLRA"), which involve risk and uncertainties that exist in the Company's operations and business environment and can be affected by inaccurate assumptions, or by known or unknown risks and uncertainties. Many such factors will be important in determining the Company's actual future results. The Company wishes to take advantage of the "safe harbor" provisions of the PSLRA by cautioning readers that numerous important factors in some cases have caused, and in the future could cause, the Company's actual results to differ materially from those expressed in any forward-looking statements made by, or on behalf of, the Company. Some, but not all, of the factors or uncertainties that could cause actual results to differ from present expectations are set forth above and under Item 1A. Risk Factors. The Company undertakes no obligation to publicly update any forward-looking statements, whether as a result of new information, subsequent events or otherwise, unless required by the securities laws to do so.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

The Company's primary exposures to market risk are fluctuations in interest rates, foreign currency exchange rates and commodity prices, which could impact its financial condition and results of operations. The Company addresses its exposure to these risks through its normal operating and financing activities. The Company's differentiated and global business activities help to reduce the impact that any particular market risk may have on its operating income as a whole.

The Company's short-term debt carries variable interest rates and generally its long-term debt carries fixed rates. These financial instruments are more fully described in the Notes to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

The foreign currencies to which the Company has the most significant exchange rate exposure are the Euro, the British pound, the Japanese yen, the Chinese renminbi, the Canadian dollar, and the Mexican peso. Exposure to foreign currency rate fluctuation is modest, monitored, and when possible, mitigated through the use of local borrowings and occasional derivative financial instruments in the foreign currency affected. The effect of translating foreign subsidiaries' balance sheets into U.S. dollars is included in other comprehensive income within stockholders' equity. Foreign currency transactions have not had a significant effect on the operating results reported by the Company because revenues and costs associated with the revenues are generally transacted in the same foreign currencies.

The primary commodities to which the Company has market exposure are raw material purchases of nickel, aluminum, copper, steel, titanium, and gold. Exposure to price changes in these commodities are generally mitigated through adjustments in selling prices of the ultimate product and purchase order pricing arrangements, although forward contracts are sometimes used to manage some of those exposures.

Based on a hypothetical ten percent adverse movement in interest rates, commodity prices or foreign currency exchange rates, the Company's best estimate is that the potential losses in future earnings, fair value of risk-sensitive financial instruments and cash flows are not material, although the actual effects may differ materially from the hypothetical analysis.

Item 8. Financial Statements and Supplementary Data

Financial Statement Schedules (Item 15(a)(2))

Financial statement schedules have been omitted because either they are not applicable, or the required information is included in the financial statements or the notes thereto.

Management's Responsibility for Financial Statements

Management has prepared and is responsible for the integrity of the consolidated financial statements and related information. The statements are prepared in conformity with U.S. generally accepted accounting principles consistently applied and include certain amounts based on management's best estimates and judgments. Historical financial information elsewhere in this report is consistent with that in the financial statements.

In meeting its responsibility for the reliability of the financial information, management maintains a system of internal accounting and disclosure controls, including an internal audit program. The system of controls provides for appropriate division of responsibility and the application of written policies and procedures. That system, which undergoes continual reevaluation, is designed to provide reasonable assurance that assets are safeguarded, and records are adequate for the preparation of reliable financial data.

Management is responsible for establishing and maintaining adequate internal control over financial reporting. AMETEK, Inc. maintains a system of internal controls that is designed to provide reasonable assurance as to the fair and reliable preparation and presentation of the consolidated financial statements; however, there are inherent limitations in the effectiveness of any system of internal controls.

Management recognizes its responsibility for conducting the Company's activities according to the highest standards of personal and corporate conduct. That responsibility is characterized and reflected in a code of business conduct for all employees and in a financial code of ethics for the Chief Executive Officer and Senior Financial Officers, as well as in other key policy statements publicized throughout the Company.

The Audit Committee of the Board of Directors, which is composed solely of independent directors who are not employees of the Company, meets with the independent registered public accounting firm, the internal auditors and management to satisfy itself that each is properly discharging its responsibilities. The report of the Audit Committee is included in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders. Both the independent registered public accounting firm and the internal auditors have direct access to the Audit Committee.

The Company's independent registered public accounting firm, Ernst & Young LLP, is engaged to render an opinion as to whether management's financial statements present fairly, in all material respects, the Company's financial position and operating results. This report is included herein.

Management's Report on Internal Control over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in the Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, AMETEK, Inc. conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as of December 31, 2021 based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on that evaluation, our management concluded that the Company's internal control over financial reporting was effective as of December 31, 2021.

The Company acquired Magnetrol International ("Magnetrol") in March 2021, NSI-MI Technologies ("NSI-MI") and Abaco Systems, Inc. ("Abaco") in April 2021, and Alphasense in November 2021. As permitted by the U.S. Securities and Exchange Commission staff interpretative guidance for newly acquired businesses, the Company excluded Magnetrol, NSI-MI, Abaco, and Alphasense from management's assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2021. Magnetrol, NSI-MI, Abaco, and Alphasense constituted 17.4% of total assets as of December 31, 2021 and 6.0% of net sales for the year then ended.

The Company's internal control over financial reporting as of December 31, 2021 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report, which is included herein.

/s/ DAVID A. ZAPICO	/s/ WILLIAM J. BURKE
Chairman of the Board and Chief Executive Officer	Executive Vice President – Chief Financial Officer
February 22, 2022	

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
ON INTERNAL CONTROL OVER FINANCIAL REPORTING

To the Board of Directors and Stockholders of AMETEK, Inc.:

Opinion on Internal Control over Financial Reporting

We have audited AMETEK, Inc.'s internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, AMETEK, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on the COSO criteria.

As indicated in the accompanying *Management's Report on Internal Control over Financial Reporting*, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Magnetrol, NSI-MI, Abaco, and Alphasense, which are included in the 2021 consolidated financial statements of the Company and constituted 17.4% of total assets as of December 31, 2021 and 6.0% of net sales for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Magnetrol, NSI-MI, Abaco, and Alphasense.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of AMETEK, Inc. as of December 31, 2021 and 2020, the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2021, and the related notes and our report dated February 22, 2022 expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ ERNST & YOUNG LLP
Philadelphia, Pennsylvania
February 22, 2022

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON FINANCIAL STATEMENTS

To the Board of Directors and Stockholders of AMETEK, Inc.:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of AMETEK, Inc. (the Company) as of December 31, 2021 and 2020, the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2021, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 22, 2022 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

Critical Audit Matters

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

Accounting for the Acquisition of Abaco Systems, Inc.

Description of the Matter

As described in Note 6 to the consolidated financial statements, the Company completed the acquisition of Abaco Systems, Inc. in April 2021 for consideration of $1,344.5 million, net of cash acquired. This acquisition has been accounted for as a business combination and the finalization of the acquisition accounting was completed in 2021.

Auditing the Company's estimated fair value of the acquired intangible assets for the acquisition of Abaco Systems, Inc. was complex and highly judgmental due to subjectivity of the significant assumptions used by management in the valuation of acquired identifiable intangible assets. In particular, the inputs to the valuation models used to estimate the fair value of acquired identifiable intangible assets were inherently uncertain and generally unobservable, and the resulting valuations were sensitive to changes in the underlying significant assumptions. The significant assumptions used included discount rates, royalty rates and certain assumptions that form the basis of the forecasted future cash flows, including revenue growth rates, earnings before interest, taxes, depreciation and amortization (EBITDA) margins and estimated economic lives. These significant assumptions are forward looking and could be affected by future economic or market conditions.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's estimation of the fair value of the acquired intangible assets of Abaco Systems, Inc. For example, we tested controls over the valuation of acquired identifiable intangible assets including controls over management's review of the valuation models and the significant assumptions described above.

To test the estimated fair value of the acquired intangible assets, we performed audit procedures that included, among others, assessing the fair value methodologies utilized by management and the significant assumptions discussed above, including the underlying data used in the analyses. For example, when evaluating the significant assumptions, we compared them to current financial and operating plans, market and industry studies, historical trends, and assumptions used in prior periods. We also performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value estimates of the acquired identifiable intangible assets that would result from changes in the assumptions. We involved our valuation specialists to assist in evaluating certain significant assumptions and valuation methodologies used by the Company.

Impairment Assessment of Indefinite Lived Intangible Assets (other than Goodwill)

Description of the Matter

At December 31, 2021, the Company's indefinite lived intangible assets (other than goodwill) totaled $874.3 million, consisting of trademarks and trade names. As described in Note 1 to the consolidated financial statements, indefinite lived intangible assets are not amortized but are tested for impairment at least annually in the Company's fourth quarter.

Auditing management's indefinite lived intangible asset impairment tests was complex and highly judgmental due to the significant measurement uncertainty in estimating the fair value of the trademarks and trade names. In particular, the fair value estimates were sensitive to significant assumptions such as discount rate, forecasted revenues and royalty rates, which are affected by expectations about future market or economic conditions.

How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's indefinite lived intangible asset impairment process. For example, we tested controls over management's review of the valuation models and significant assumptions, including forecasted financial information, as well as management's controls to validate that the data used in the valuations was complete and accurate. To test the estimated fair value of the Company's indefinite lived intangible assets, we performed audit procedures that included, among others, assessing the fair value methodologies utilized by management and the significant assumptions discussed above, including the underlying data used in the analyses. For example, when evaluating the significant assumptions, we compared them to current financial and operating plans, market and industry studies, historical trends, and other assumptions used in prior periods. We also assessed the historical accuracy of management's forecasts and performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value estimates of the trademarks and trade names that would result from changes in the assumptions. We involved our valuation specialists to assist in evaluating the discount rate, royalty rate and valuation methodologies used by the Company.

/s/ ERNST & YOUNG LLP

We have served as the Company's auditor since 1930.

Philadelphia, Pennsylvania
February 22, 2022

AMETEK, Inc.
Consolidated Statement of Income
(In thousands, except per share amounts)

	Year Ended December 31,		
	2021	**2020**	**2019**
Net sales	**$ 5,546,514**	$ 4,540,029	$ 5,158,557
Cost of sales	**3,633,900**	2,996,515	3,370,897
Selling, general and administrative	**603,944**	515,630	610,280
Total operating expenses	**4,237,844**	3,512,145	3,981,177
Operating income	**1,308,670**	1,027,884	1,177,380
Interest expense	**(80,381)**	(86,062)	(88,481)
Other (expense) income, net	**(5,119)**	140,487	(19,151)
Income before income taxes	**1,223,170**	1,082,309	1,069,748
Provision for income taxes	**233,117**	209,870	208,451
Net income	**$ 990,053**	$ 872,439	$ 861,297
Basic earnings per share	**$ 4.29**	$ 3.80	$ 3.78
Diluted earnings per share	**$ 4.25**	$ 3.77	$ 3.75
Weighted average common shares outstanding:			
Basic shares	**230,955**	229,435	227,759
Diluted shares	**232,813**	231,150	229,395

See accompanying notes.

AMETEK, Inc.
Consolidated Statement of Comprehensive Income
(In thousands)

	Year Ended December 31,		
	2021	**2020**	**2019**
Net income	**$ 990,053**	$ 872,439	$ 861,297
Other comprehensive income (loss):			
Amounts arising during the period – gains (losses), net of tax (expense) benefit:			
Foreign currency translation:			
Translation adjustments	**(47,331)**	64,521	23,692
Change in long-term intercompany notes	**(16,333)**	16,695	(5,999)
Net investment hedge instruments gain (loss), net of tax of $(12,631), $14,787 and $581 in 2021, 2020 and 2019, respectively	**39,047**	(45,716)	(1,803)
Defined benefit pension plans:			
Net actuarial gain (loss), net of tax of $(15,298), $8,637 and $767 in 2021, 2020 and 2019, respectively	**46,049**	(18,733)	(10,522)
Amortization of net actuarial loss, net of tax of ($4,103), ($3,539) and ($3,505) in 2021, 2020 and 2019, respectively	**12,249**	11,940	12,180
Amortization of prior service costs, net of tax of $(114), $7 and $(83) in 2021, 2020 and 2019, respectively	**343**	(36)	401
Other comprehensive income	**34,024**	28,671	17,949
Total comprehensive income	**$ 1,024,077**	$ 901,110	$ 879,246

See accompanying notes.

AMETEK, Inc.
Consolidated Balance Sheet
(In thousands, except share amounts)

	December 31, 2021	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	**$ 346,772**	$ 1,212,822
Receivables	**829,213**	597,472
Inventories, net	**769,175**	559,171
Other current assets	**183,605**	153,005
Total current assets	**2,128,765**	2,522,470
Property, plant and equipment, net	**617,138**	526,530
Right of use assets, net	**169,924**	167,233
Goodwill	**5,238,726**	4,224,906
Other intangibles, net	**3,368,629**	2,623,719
Investments and other assets	**375,005**	292,625
Total assets	**$ 11,898,187**	$ 10,357,483
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term borrowings and current portion of long-term debt, net	**$ 315,093**	$ 132,284
Accounts payable	**470,252**	360,370
Customer advanced payments	**298,728**	194,633
Income taxes payable	**35,904**	38,896
Accrued liabilities and other	**443,337**	349,732
Total current liabilities	**1,563,314**	1,075,915
Long-term debt, net	**2,229,148**	2,281,441
Deferred income taxes	**719,675**	533,478
Other long-term liabilities	**514,166**	517,303
Total liabilities	**5,026,303**	4,408,137
Stockholders' equity:		
Preferred stock,$0.01 par value; authorized 5,000,000 shares; none issued	**—**	—
Common stock, $0.01 par value; authorized 800,000,000 shares; issued: 2021 – 267,800,160 shares; 2020 – 266,746,248 shares	**2,689**	2,676
Capital in excess of par value	**1,012,526**	921,752
Retained earnings	**7,900,113**	7,094,656
Accumulated other comprehensive loss	**(470,444)**	(504,468)
Treasury stock: 2021 – 36,137,864 shares; 2020 – 36,227,061 shares	**(1,573,000)**	(1,565,270)
Total stockholders' equity	**6,871,884**	5,949,346
Total liabilities and stockholders' equity	**$ 11,898,187**	$ 10,357,483

See accompanying notes.

AMETEK, Inc.
Consolidated Statement of Stockholders' Equity
(In thousands)

	Year Ended December 31,		
	2021	**2020**	**2019**
Capital stock			
Preferred stock, $0.01 par value	$ —	$ —	$ —
Common stock, $0.01 par value			
Balance at the beginning of the year	2,676	2,662	2,640
Shares issued	13	14	22
Balance at the end of the year	2,689	2,676	2,662
Capital in excess of par value			
Balance at the beginning of the year	921,752	832,821	706,743
Issuance of common stock under employee stock plans	44,671	47,366	85,684
Share-based compensation costs	46,103	41,565	40,394
Balance at the end of the year	1,012,526	921,752	832,821
Retained earnings			
Balance at the beginning of the year	7,094,656	6,387,612	5,653,811
Net income	990,053	872,439	861,297
Cash dividends paid	(184,595)	(165,035)	(127,496)
Adoption of ASU 2016-13	—	(360)	—
Other	(1)	—	—
Balance at the end of the year	7,900,113	7,094,656	6,387,612
Accumulated other comprehensive (loss) income			
Foreign currency translation:			
Balance at the beginning of the year	(250,748)	(286,248)	(302,138)
Translation adjustments	(47,331)	64,521	23,692
Change in long-term intercompany notes	(16,333)	16,695	(5,999)
Net investment hedge instruments gain (loss), net of tax of $(12,631), $14,787 and $581 in 2021, 2020 and 2019, respectively	39,047	(45,716)	(1,803)
Balance at the end of the year	(275,365)	(250,748)	(286,248)
Defined benefit pension plans:			
Balance at the beginning of the year	(253,720)	(246,891)	(248,950)
Net actuarial gain (loss), net of tax of $(15,298), $8,637 and $767 in 2021, 2020 and 2019, respectively	46,049	(18,733)	(10,522)
Amortization of net actuarial loss, net of tax of ($4,103), ($3,539) and ($3,505) in 2021, 2020 and 2019, respectively	12,249	11,940	12,180
Amortization of prior service costs, net of tax of $(114), $7 and $(83) in 2021, 2020 and 2019, respectively	343	(36)	401
Balance at the end of the year	(195,079)	(253,720)	(246,891)
Accumulated other comprehensive loss at the end of the year	(470,444)	(504,468)	(533,139)
Treasury stock			
Balance at the beginning of the year	(1,565,270)	(1,574,464)	(1,570,184)
Issuance of common stock under employee stock plans	6,981	13,879	7,644
Purchase of treasury stock	(14,711)	(4,685)	(11,924)
Balance at the end of the year	(1,573,000)	(1,565,270)	(1,574,464)
Total stockholders' equity	$ 6,871,884	$ 5,949,346	$ 5,115,492

See accompanying notes.

AMETEK, Inc.
Consolidated Statement of Cash Flows
(In thousands)

	Year Ended December 31,		
	2021	**2020**	**2019**
Cash provided by (used for):			
Operating activities:			
Net income	**$ 990,053**	$ 872,439	$ 861,297
Adjustments to reconcile net income to total operating activities:			
Depreciation and amortization	**292,112**	255,275	234,042
Deferred income taxes	**(29,762)**	1,839	19,380
Share-based compensation expense	**46,103**	41,565	40,394
Gain on sale of business	**(6,349)**	(141,020)	—
Gain on sale of facilities	**—**	(7,523)	(5,332)
Changes in assets and liabilities, net of acquisitions:			
(Increase) decrease in receivables	**(172,791)**	163,471	14,398
(Increase) decrease in inventories and other current assets	**(129,593)**	77,448	16,410
Increase (decrease) in payables, accruals and income taxes	**212,101**	7,017	(58,932)
(Decrease) increase in other long-term liabilities	**(35,104)**	20,430	(16,845)
Pension contributions	**(10,277)**	(9,527)	(5,609)
Other, net	**3,964**	(434)	15,219
Total operating activities	**1,160,457**	1,280,980	1,114,422
Investing activities:			
Additions to property, plant and equipment	**(110,671)**	(74,199)	(102,346)
Purchases of businesses, net of cash acquired	**(1,959,218)**	(116,509)	(1,061,945)
Proceeds from sale of business	**12,000**	245,311	—
Proceeds from sale of facilities	**2,341**	9,508	11,306
Other, net	**(294)**	(2,481)	2,060
Total investing activities	**(2,055,842)**	61,630	(1,150,925)
Financing activities:			
Net change in short-term borrowings	**243,615**	(328,003)	130,705
Proceeds from long-term borrowings	**—**	—	100,000
Repayments of long-term borrowings	**(59,718)**	(102,947)	(100,000)
Repurchases of common stock	**(14,711)**	(4,685)	(11,924)
Cash dividends paid	**(184,595)**	(165,035)	(127,496)
Acquisition contingent consideration	**—**	—	(3,000)
Proceeds from stock option exercises	**60,297**	64,903	90,388
Other, net	**(5,551)**	(3,669)	(5,760)
Total financing activities	**39,337**	(539,436)	72,913
Effect of exchange rate changes on cash and cash equivalents	**(10,002)**	16,618	2,645
(Decrease) increase in cash and cash equivalents	**(866,050)**	819,792	39,055
Cash and cash equivalents:			
Beginning of year	1,212,822	393,030	353,975
End of year	**$ 346,772**	$ 1,212,822	$ 393,030

See accompanying notes.

AMETEK, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Significant Accounting Policies

Basis of Consolidation

The accompanying consolidated financial statements reflect the results of operations, financial position and cash flows of AMETEK, Inc. (the “Company”), and include the accounts of the Company and subsidiaries, after elimination of all intercompany transactions in the consolidation.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (“GAAP”) requires management to make estimates and assumptions that affect amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates and assumptions.

Cash Equivalents, Securities and Other Investments

All highly liquid investments with maturities of three months or less when purchased are considered cash equivalents.

Accounts Receivable

The Company maintains allowances for estimated credit losses resulting from the inability of customers to meet their financial obligations to the Company. The Company recognizes an allowance for credit losses, on all accounts receivable and contract assets, which considers risk of future credit losses based on factors such as historical experience, contract terms, as well as general and market business conditions, country, and political risk. Balances are written off when considered uncollectible. Bad debt expense was $1.2 million in 2021, $3.6 million in 2020 and $2.8 million in 2019. At December 31, 2021 and 2020, the allowance for estimated credit losses was $11.2 million and $12.7 million, respectively.

Inventories

The Company uses the first-in, first-out (“FIFO”) method of accounting, which approximates current replacement cost, for approximately 89% of its inventories at December 31, 2021. The last-in, first-out (“LIFO”) method of accounting is used to determine cost for the remaining 11% of the Company’s inventory at December 31, 2021. For inventories where cost is determined by the LIFO method, the FIFO value would have been $29.8 million and $22.8 million higher than the LIFO value reported in the consolidated balance sheet at December 31, 2021 and 2020, respectively. The Company provides estimated inventory reserves for slow-moving and obsolete inventory based on current assessments about future demand, market conditions, customers who may be experiencing financial difficulties and related management initiatives.

Business Combinations

The Company allocates the purchase price of an acquired company, including when applicable, the acquisition date fair value of contingent consideration between tangible and intangible assets acquired and liabilities assumed from the acquired business based on their estimated fair values, with the residual of the purchase price recorded as goodwill. The results of operations of the acquired business are included in the Company’s operating results from the date of acquisition.

Property, Plant and Equipment

Property, plant and equipment are stated at cost. Expenditures for additions to plant facilities, or that extend their useful lives, are capitalized. The cost of minor tools, jigs and dies, and maintenance and repairs is charged to expense as incurred. Depreciation of plant and equipment is calculated principally on a straight-line basis over the estimated useful lives of the related assets. The range of lives for depreciable assets is generally three to 10 years for machinery and equipment, five to 27 years for leasehold improvements and 25 to 50 years for buildings. Depreciation expense was $108.5 million, $101.3 million and $101.4 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Goodwill and Other Intangible Assets

Goodwill and other intangible assets with indefinite lives, primarily trademarks and trade names, are not amortized; rather, they are tested for impairment at least annually.

The Company identifies its reporting units at the component level, which is one level below its operating segments. Generally, goodwill arises from acquisitions of specific operating companies and is assigned to the reporting unit in which the operating company resides. The Company's reporting units are divisions that are one level below its operating segments and for which discrete financial information is prepared and regularly reviewed by segment management.

The Company principally relies on a discounted cash flow analysis to estimate the fair value of each reporting unit, which considers forecasted cash flows discounted at an appropriate discount rate. The Company believes that market participants would use a discounted cash flow analysis to determine the fair value of its reporting units in a sale transaction. The annual goodwill impairment test requires the Company to make several assumptions and estimates concerning future levels of revenue growth, operating margins, depreciation, amortization and working capital requirements, which are based on the Company's long-range plan and are considered level 3 inputs. The Company's long-range plan is updated as part of its annual planning process and is reviewed and approved by management. The discount rate is an estimate of the overall after-tax rate of return required by a market participant whose weighted average cost of capital includes both equity and debt, including a risk premium. While the Company uses the best available information to prepare its cash flow and discount rate assumptions, actual future cash flows or market conditions could differ significantly resulting in future impairment charges related to recorded goodwill balances.

The impairment test for indefinite-lived intangibles other than goodwill (primarily trademarks and trade names) consists of a comparison of the estimated fair value of the indefinite-lived intangible asset to the carrying value of the asset as of the impairment testing date. The Company estimates the fair value of its indefinite-lived intangibles using the relief from royalty method using level 3 inputs for revenue growth rates and royalty rates. The fair value derived from the relief from royalty method is measured as the discounted cash flow savings realized from owning such trademarks and trade names and not having to pay a royalty for their use.

The Company completed its required annual impairment tests in the fourth quarter of 2021, 2020 and 2019 and determined that the carrying values of the Company's goodwill were not impaired. The Company completed its required annual impairment tests in the fourth quarter of 2021, 2020 and 2019 and determined that the carrying values of the Company's other intangible assets with indefinite lives were not impaired.

Other intangible assets with finite lives are evaluated for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. The carrying value of other intangible assets with finite lives is considered impaired when the total projected undiscounted cash flows from the asset group are less than the carrying value. In that event, a loss is recognized based on the amount by which the carrying value exceeds the fair value of those assets. Fair value is determined primarily using present value techniques based on projected cash flows from the asset group.

Intangible assets, other than goodwill, with definite lives are amortized over their estimated useful lives. Patents and technology are being amortized over useful lives of nine to 20 years, with a weighted average life of 14 years. Customer relationships are being amortized over a period of ten to 20 years, with a weighted average life of 19 years. On a quarterly basis, the Company evaluates the reasonableness of the estimated useful lives of these intangible assets.

Financial Instruments and Foreign Currency Translation

Assets and liabilities of foreign operations are translated using exchange rates in effect at the balance sheet date and their results of operations are translated using average exchange rates for the year. Certain transactions of the Company and its subsidiaries are denominated in currencies other than their functional currency. Exchange gains and losses from those transactions are included in operating results for the year.

The Company makes infrequent use of derivative financial instruments. Forward contracts are entered into from time to time to hedge certain inventory purchases, export sales, debt or foreign currency transactions, thereby minimizing the Company's exposure to raw material commodity price or foreign currency fluctuation.

In instances where transactions are designated as hedges of an underlying item, the gains and losses on those transactions are included in accumulated other comprehensive income within stockholders' equity to the extent they are effective as hedges. An evaluation of hedge effectiveness is performed by the Company on an ongoing basis and any changes in the hedge are made as appropriate.

Revenue Recognition

Revenue is derived from sales of products and services. The Company's products and services are marketed and sold worldwide through two operating groups: EIG and EMG. See Note 15 *Descriptive Information about Reportable Segments.*

The majority of the Company's revenues on product sales were recognized at a point in time when the customer obtains control of the product. The transfer in control of the product to the customer was typically evidenced by one or more of the following: the customer having legal title to the product, the Company's present right to payment, the customer's physical possession of the product, the customer accepting the product, or the customer having the benefits of ownership or risk of loss. For a small percentage of sales where title and risk of loss transfers at the point of delivery, the Company recognized revenue upon delivery to the customer, which is the point that control transferred, assuming all other criteria for revenue recognition were met.

Research and Development

Research and development costs are included in Cost of sales as incurred and were $194.2 million in 2021, $158.9 million in 2020 and $161.9 million in 2019.

Shipping and Handling Costs

Shipping and handling costs are included in Cost of sales and were $86.1 million in 2021, $56.8 million in 2020 and $66.7 million in 2019.

Share-Based Compensation

The Company expenses the fair value of share-based awards made under its share-based plans in the consolidated financial statements over their requisite service period of the grants.

Income Taxes

The Company's process of providing for income taxes and determining the related balance sheet accounts requires management to assess uncertainties, make judgments regarding outcomes and utilize estimates. The Company conducts a broad range of operations around the world and is therefore subject to complex tax regulations in numerous international taxing jurisdictions, resulting at times in tax audits, disputes and potential litigation, the outcome of which is uncertain. Management must make judgments currently about such uncertainties and determine estimates of the Company's tax assets and liabilities. To the extent the final outcome differs, future adjustments to the Company's tax assets and liabilities may be necessary. The Company recognizes interest and penalties accrued related to uncertain tax positions in income tax expense.

The Company assesses the realizability of its deferred tax assets, taking into consideration the Company's forecast of future taxable income, available net operating loss carryforwards and available tax planning strategies that could be implemented to realize the deferred tax assets. Based on this assessment, management must evaluate the need for, and amount of, valuation allowances against the Company's deferred tax assets. To the extent facts and circumstances change in the future, adjustments to the valuation allowances may be required.

The Company assesses the uncertainty in its tax positions, by applying a minimum recognition threshold which a tax position is required to meet before a tax benefit is recognized in the financial statements. Once the minimum threshold is met, using a more likely than not standard, a series of probability estimates is made for each item to properly measure and record a tax benefit. The tax benefit recorded is generally equal to the highest probable outcome that is more than 50% likely to be realized after full disclosure and resolution of a tax examination. The underlying probabilities are determined based on the best available objective evidence such as recent tax audit outcomes, published guidance, external expert opinion, or by analogy to the outcome of similar issues in the past. There can be no assurance that these estimates will ultimately be realized given continuous changes in tax policy, legislation and audit practice. The Company recognizes interest and penalties accrued related to uncertain tax positions in income tax expense.

Pensions

The Company has U.S. and foreign defined benefit and defined contribution pension plans. The most significant assumptions in determining the Company's pension income or expense are the assumed pension liability discount rate and the expected return on plan assets. All unrecognized prior service costs, remaining transition obligations or assets and actuarial gains and losses have been recognized, net of tax effects, as a charge to accumulated other comprehensive income in stockholders' equity and will be amortized as a component of net periodic pension cost. The Company uses a measurement date of December 31 (its fiscal year end) for its U.S. and foreign defined benefit plans.

Earnings Per Share

The calculation of basic earnings per share is based on the weighted average number of common shares considered outstanding during the periods. The calculation of diluted earnings per share reflects the effect of all potentially dilutive securities (principally outstanding stock options and restricted stock grants). The number of weighted average shares used in the calculation of basic earnings per share and diluted earnings per share was as follows for the years ended December 31:

	2021	2020	2019
		(In thousands)	
Weighted average shares:			
Basic shares	**230,955**	229,435	227,759
Equity-based compensation plans	**1,858**	1,715	1,636
Diluted shares	**232,813**	231,150	229,395

2. Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncement

In December 2019, the FASB issued ASU No. 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes (“ASU 2019-12”), which simplifies the accounting for income taxes by removing certain exceptions to the general principles in ASC Topic 740. The Company prospectively adopted ASU 2019-12, effective January 1, 2021, and the adoption did not have a significant impact on the Company’s consolidated results of operations, financial position, cash flows and financial statement disclosures.

Recent Accounting Pronouncement

In October 2021, the FASB issued ASU No. 2021-08, Business Combinations (Topic 8050): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers (“ASU 2021-08”), which provides a single comprehensive accounting model for the acquisition of contract balances under ASC 805. ASU 2021-08 is effective for fiscal years beginning after December 15, 2022. Early adoption is permitted. The Company will adopt the ASU on January 1, 2022, and the amendments in this ASU will be applied on a prospective basis to all periods presented. The adoption of ASU 2021-08 is not expected to impact the Company’s consolidated results of operations, financial position, cash flows or financial statement disclosures.

3. Revenues

The majority of the Company’s revenues on product sales are recognized at a point in time when the customer obtains control of the product. The Company determined that revenues from certain of its customer contracts met the criteria of satisfying its performance obligations over time, primarily in the areas of the manufacture of custom-made equipment and for service repairs of customer-owned equipment. Recognizing revenue over time for custom-manufactured equipment is based on the Company’s judgment that, in certain contracts, the product does not have an alternative use and the Company has an enforceable right to payment for performance completed to date.

The Company recognizes incremental cost of obtaining contracts as an expense when incurred if the amortization period of the contract cost assets that the Company would have otherwise recognized is one year or less. These costs are included in Selling, general and administrative expenses in the consolidated statement of income.

The determination of the revenue to be recognized in each period for performance obligations satisfied over time is based on the input method. The Company recognizes revenue over time as it performs on these contracts because the transfer of control to the customer occurs over time. Revenue is recognized based on the extent of progress towards completion of the performance obligation. The Company generally uses the total cost-to-cost input method of progress because it best depicts the transfer of control to the customer that occurs as costs are incurred. Under the cost-to-cost method, the extent of progress towards completion is measured based on the proportion of costs incurred to date to the total estimated costs at completion of the performance obligation. On certain contracts, labor hours are used as the measure of progress when it is determined to be a better depiction of the transfer of control to the customer due to the timing and pattern of labor hours incurred.

Performance obligations also include post-delivery service, installation and training. Post-delivery service revenues are recognized over the contract term. Installation and training revenues are recognized over the period the service is provided. Warranty terms in customer contracts can also be considered separate performance obligations if the warranty provides services beyond assurance that a product complies with agreed-upon specification or if a warranty can be purchased separately. The Company does not incur significant obligations for customer returns and refunds.

The Company has certain contracts with variable consideration in the form of volume discounts, rebates and early payment options, which may affect the transaction price used as the basis for revenue recognition. In these contracts, the amount of the variable consideration is allocated among the various performance obligations in the customer contract based on the relative standalone selling price of each performance obligation to the total standalone value of all the performance obligations.

Payment terms generally begin upon shipment of the product. The Company does have contracts with multiple billing terms that are all due within one year from when the product is delivered. No significant financing component exists. Payment terms are generally 30-60 days from the time of shipment or customer acceptance, but terms can be shorter or longer, not exceeding one year. For customer contracts that have revenue recognized over time, revenue is generally recognized prior to a payment being due from the customer. In such cases, the Company recognizes a contract asset at the time the revenue is recognized. When payment becomes due based on the contract terms, the Company reduces the contract asset and records a receivable. In contracts with billing milestones or in other instances with a long production cycle or concerns about credit, customer advance payments are received. The Company may receive a payment in excess of revenue recognized to that date. In these circumstances, a contract liability is recorded. Contract liabilities are derecognized when the performance obligations are satisfied, and revenue is recognized.

The outstanding contract asset and liability accounts were as follows:

	2021	2020
	(In thousands)	
Contract assets – January 1	$ 68,971	$ 73,039
Contract assets – December 31	**95,274**	68,971
Change in contract assets – (decrease) increase	**26,303**	(4,068)
Contract liabilities – January 1	215,093	167,306
Contract liabilities – December 31	**328,816**	215,093
Change in contract liabilities – increase	**(113,723)**	(47,787)
Net change	**$ (87,420)**	$ (51,855)

The net change in 2021 and 2020 was primarily driven by the receipt of advance payments from customers significantly exceeding the recognition of revenue and customer advance payments from acquired businesses. For the years ended December 31, 2021 and 2020, the Company recognized revenue of $184 million and $133 million, respectively, that was previously included in the beginning balance of contract liabilities.

Contract assets are reported as a component of Other current assets in the consolidated balance sheet. At December 31, 2021 and 2020, $30.1 million and $20.5 million, respectively, of Customer advanced payments (contract liabilities) were recorded in Other long-term liabilities in the consolidated balance sheet.

The remaining performance obligations exceeding one year as of December 31, 2021 and 2020 were $342.5 million and $300.8 million, respectively. Remaining performance obligations represent the transaction price of firm, non-cancelable orders, with expected delivery dates to customers greater than one year from the balance sheet date, for which the performance obligation is unsatisfied or partially unsatisfied. These performance obligations will be substantially satisfied within two to three years.

Geographic Areas

Net sales were attributed to geographic areas based on the location of the customer. Information about the Company's operations in different geographic areas was as follows for the year ended December 31:

	2021		
	EIG	EMG (In thousands)	Total
United States	**$ 1,910,203**	**$ 890,737**	**$ 2,800,940**
International[1]:			
United Kingdom	**96,206**	**121,290**	**217,496**
European Union countries	**482,426**	**403,890**	**886,316**
Asia	**927,027**	**254,370**	**1,181,397**
Other foreign countries	**347,896**	**112,469**	**460,365**
Total international	**1,853,555**	**892,019**	**2,745,574**
Consolidated net sales	**$ 3,763,758**	**$ 1,782,756**	**$ 5,546,514**

(1) Includes U.S. export sales of $1,475.6 million.

	2020		
	EIG	EMG (In thousands)	Total
United States	$ 1,513,967	$ 816,159	$ 2,330,126
International[1]:			
United Kingdom	54,158	117,469	171,627
European Union countries	371,884	324,203	696,087
Asia	769,532	189,987	959,519
Other foreign countries	280,387	102,283	382,670
Total international	1,475,961	733,942	2,209,903
Consolidated net sales	$ 2,989,928	$ 1,550,101	$ 4,540,029

(1) Includes U.S. export sales of $1,196.4 million.

	2019		
	EIG	EMG (In thousands)	Total
United States	$ 1,685,369	$ 998,317	$ 2,683,686
International[1]:			
United Kingdom	64,423	132,485	196,908
European Union countries	434,072	392,283	826,355
Asia	773,034	186,535	959,569
Other foreign countries	365,983	126,056	492,039
Total international	1,637,512	837,359	2,474,871
Consolidated net sales	$ 3,322,881	$ 1,835,676	$ 5,158,557

(1) Includes U.S. export sales of $1,306.2 million

Major Products and Services

The Company's major products and services in the reportable segments were as follows for the year ended December 31:

	2021		
	EIG	EMG	Total
	(In thousands)		
Process and analytical instrumentation	**$ 2,627,476**	**$ —**	**$ 2,627,476**
Aerospace and power	**1,136,282**	**506,925**	**1,643,207**
Automation and engineered solutions	**—**	**1,275,831**	**1,275,831**
Consolidated net sales	**$ 3,763,758**	**$ 1,782,756**	**$ 5,546,514**

	2020		
	EIG	EMG	Total
	(In thousands)		
Process and analytical instrumentation	$ 2,199,167	$ —	$ 2,199,167
Aerospace and power	790,761	466,343	1,257,104
Automation and engineered solutions	—	1,083,758	1,083,758
Consolidated net sales	$ 2,989,928	$ 1,550,101	$ 4,540,029

	2019		
	EIG	EMG	Total
	(In thousands)		
Process and analytical instrumentation	$ 2,393,587	$ —	$ 2,393,587
Aerospace and power	929,294	491,171	1,420,465
Automation and engineered solutions	—	1,344,505	1,344,505
Consolidated net sales	$ 3,322,881	$ 1,835,676	$ 5,158,557

Timing of Revenue Recognition

The Company's timing of revenue recognition was as follows for the year ended December 31:

	2021		
	EIG	EMG	Total
	(In thousands)		
Products transferred at a point in time	**$ 3,048,819**	**$ 1,596,911**	**$ 4,645,730**
Products and services transferred over time	**714,939**	**185,845**	**900,784**
Consolidated net sales	**$ 3,763,758**	**$ 1,782,756**	**$ 5,546,514**

	2020		
	EIG	EMG	Total
	(In thousands)		
Products transferred at a point in time	$ 2,427,254	$ 1,390,574	$ 3,817,828
Products and services transferred over time	562,674	159,527	722,201
Consolidated net sales	$ 2,989,928	$ 1,550,101	$ 4,540,029

	2019		
	EIG	EMG	Total
	(In thousands)		
Products transferred at a point in time	$ 2,680,296	$ 1,670,448	$ 4,350,744
Products and services transferred over time	642,585	165,228	807,813
Consolidated net sales	$ 3,322,881	$ 1,835,676	$ 5,158,557

Product Warranties

The Company provides limited warranties in connection with the sale of its products. The warranty periods for products sold vary among the Company's operations, but the majority do not exceed one year. The Company calculates its warranty expense provision based on its historical warranty experience and adjustments are made periodically to reflect actual warranty expenses. Product warranty obligations are reported as a component of Accrued liabilities and other in the consolidated balance sheet.

Changes in the accrued product warranty obligation were as follows:

	2021	2020	2019
	(In thousands)		
Balance at the beginning of the year	$ 27,839	$ 27,611	$ 23,482
Accruals for warranties issued during the year	**11,518**	12,000	21,145
Settlements made during the year	**(13,669)**	(14,602)	(19,637)
Warranty accruals related to acquired businesses and other during the year	**1,790**	2,830	2,621
Balance at the end of the year	**$ 27,478**	$ 27,839	$ 27,611

4. Fair Value Measurements

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

The Company utilizes a valuation hierarchy for disclosure of the inputs to the valuations used to measure fair value. This hierarchy prioritizes the inputs into three broad levels as follows. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument. Level 3 inputs are unobservable inputs based on the Company's own assumptions used to measure assets and liabilities at fair value. A financial asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The following table provides the Company's assets that are measured at fair value on a recurring basis, consistent with the fair value hierarchy, at December 31:

	2021	2020
	Fair Value	Fair Value
	(In thousands)	
Mutual fund investments	**$ 10,703**	$ 8,969

The fair value of mutual fund investments, which are valued as level 1 investments, was based on quoted market prices. The mutual fund investments are shown as a component of long-term assets in the consolidated balance sheet.

For the years ended December 31, 2021 and 2020, gains and losses on the investments detailed above were not significant.

Financial Instruments

Cash, cash equivalents and mutual fund investments are recorded at fair value at December 31, 2021 and 2020 in the accompanying consolidated balance sheet.

The following table provides the estimated fair values of the Company's financial instrument liabilities, for which fair value is measured for disclosure purposes only, compared to the recorded amounts at December 31:

	2021		2020	
	Recorded Amount	Fair Value	Recorded Amount	Fair Value
	(In thousands)			
Long-term debt (including current portion)	**$ (2,233,705)**	**$ (2,378,930)**	$ (2,347,587)	$ (2,550,956)

The fair value of short-term borrowings, net approximates the carrying value. Short-term borrowings, net are valued as level 2 liabilities as they are corroborated by observable market data. The Company's long-term debt, net is all privately held with no public market for this debt, therefore, the fair value of long-term debt, net was computed based on comparable current market data for similar debt instruments and is considered to be a level 3 liability. See Note 10 for long-term debt principal amounts, interest rates and maturities.

Foreign Currency

At December 31, 2021 and 2020, the Company had no foreign currency forward contracts outstanding. At December 31, 2019, the Company had a Canadian dollar forward contract for a total notional value of 14.0 million Canadian dollars ($0.1 million fair value unrealized loss at December 31, 2019). For the year ended December 31, 2021 and 2020, realized gains and losses on foreign currency forward contracts were not significant. The Company does not typically designate its foreign currency forward contracts as accounting hedges.

5. Hedging Activities

The Company has designated certain foreign-currency-denominated long-term borrowings as hedges of the net investment in certain foreign operations. As of December 31, 2021, and 2020, these net investment hedges included British-pound and Euro-denominated long-term debt. These borrowings were designed to create net investment hedges in each of the designated foreign subsidiaries. The Company designated the British-pound- and Euro-denominated loans referred to above as hedging instruments to offset translation gains or losses on the net investment due to changes in the British pound and Euro exchange rates. These net investment hedges are evidenced by management's contemporaneous documentation supporting the hedge designation. Any gain or loss on the hedging instruments (the debt) following hedge designation is reported in accumulated other comprehensive income in the same manner as the translation adjustment on the hedged investment based on changes in the spot rate, which is used to measure hedge effectiveness.

At December 31, 2021 and 2020, the Company had $304.6 million and $307.3 million, respectively, of British-pound denominated loans, which were designated as a hedge against the net investment in British pound functional currency foreign subsidiaries. At December 31, 2021 and 2020, the Company had $654.1 million and $699.7 million, respectively, in Euro-denominated loans, which were designated as a hedge against the net investment in Euro functional currency foreign subsidiaries. As a result of the British-pound and Euro-denominated loans being designated and 100% effective as net investment hedges, $51.7 million of pre-tax currency remeasurement losses and $60.5 million of pre-tax currency remeasurement losses have been included in the foreign currency translation component of other comprehensive income for the years ended December 31, 2021 and 2020, respectively.

6. Acquisitions and Divestiture

Acquisitions

The Company spent $1,959.2 million in cash, net of cash acquired, to acquire Magnetrol International ("Magnetrol"), Crank Software, and EGS Automation ("EGS") in March 2021, and NSI-MI Technologies ("NSI-MI"), Abaco Systems, Inc. ("Abaco") in April 2021, and Alphasense in November 2021. Magnetrol is a leading provider of level and flow control solutions for challenging process applications across a diverse set of end markets including medical, pharmaceutical, oil and gas, food and beverage, and general industrial. Crank Software is a leading provider of embedded graphical user interface software and services. EGS is an automation solutions provider that designs and manufactures highly engineered, customized robotic solutions used in critical applications for the medical, food and beverage, and general industrial markets. NSI-MI is a leading provider of radio frequency and microwave test and measurement systems for niche applications across the aerospace, defense, automotive, wireless communications, and research markets. Abaco specializes in open-architecture computing and electronic systems for aerospace, defense, and specialized industrial markets and is a leading provider of mission critical embedded computing systems. Alphasense is a leading provider of gas and particulate sensors for use in environmental, health and safety, and air quality applications. Magnetrol, Crank Software, NSI-MI, Abaco, and Alphasense are part of EIG. EGS is part of EMG.

The following table represents the allocation of the purchase price for the net assets of the acquisitions based on the estimated fair values at acquisition (in millions):

	Abaco	Other Acquisitions	Total
		(in millions)	
Property, plant and equipment	$ 56.2	$ 45.5	$ 101.7
Goodwill	739.3	304.5	1,043.8
Other intangible assets	620.8	319.9	940.7
Deferred income taxes	(123.3)	(51.1)	(174.4)
Net working capital and other[(1)]	51.5	(4.1)	47.4
Total cash paid	$ 1,344.5	$ 614.7	$ 1,959.2

(1) Includes $70.6 million in accounts receivable, whose fair value, contractual cash flows and expected cash flows are approximately equal as well as $71.6 million of customer advance payments.

The amounts allocated to goodwill are reflective of the benefits the Company expects to realize from the 2021 acquisitions. Abaco's computing and electronic solutions expand and complement the Company's existing aerospace and defense businesses. NSI-MI strengthens the Company's test and measurement platform. Magnetrol's solutions combined with the Company's existing Sensors, Test and Calibration business, becomes an industry leading differentiated sensor platform with a broad range of level and flow measurement solutions. Alphasense complements the Company's existing sensor business expanding the Company's presence in the environmental health and safety market. Crank Software expands the Company's growing portfolio of software solutions. EGS complements the Company's existing Dunkermotoren business providing highly customizable engineering design and automation capabilities. The Company expects approximately $123.2 million of the goodwill relating to the 2021 acquisitions will be tax deductible in future years.

At December 31, 2021, the purchase price allocated to other intangible assets of $940.7 million consists of $126.2 million of indefinite-lived intangible trade names, which are not subject to amortization. The remaining $814.5 million of other intangible assets consists of $614.6 million of customer relationships, which are being amortized over a period of 15 to 20 years and $199.9 million of purchased technology, which is being amortized over a period of 11 to 20 years. Amortization expense for each of the next five years for the 2021 acquisitions is expected to be $45.1 million per year.

The Company finalized the measurements of its tangible and intangible assets and liabilities for its 2021 acquisitions of EGS, Crank Software, Abaco, and NSI-MI, excluding the accounting for income taxes for Abaco, Magnetrol, and NSI-MI, which had no material impact to the consolidated statement of income and balance sheet. The Company is in the process of finalizing its measurements of certain tangible and intangible assets and liabilities for its November 2021 acquisition of Alphasense.

The acquisitions had an immaterial impact on reported sales, net income, and diluted earnings per share for the year ended December 31, 2021. Had the acquisitions been made at the beginning of 2021 or 2020, pro forma net income and diluted earnings per share for the year ended December 31, 2021 and 2020, would not have been materially different than the amounts reported. Pro forma net sales would not have been materially different than the amounts reported for the year ended December 31, 2021 and would have been approximately 12% higher than the reported amounts for the year ended December 31, 2020.

In 2020, the Company spent $116.5 million in cash, net of cash acquired, to acquire IntelliPower in January 2020. IntelliPower designs and manufactures a broad portfolio of ruggedized solutions including uninterruptible power systems, external battery packs, power distribution units and power conditioners. IntelliPower was privately held and is headquartered in Orange, California. IntelliPower is part of EIG.

In 2019, the Company spent $1,061.9 million in cash, net of cash acquired, to acquire Pacific Design Technologies, Inc. (“PDT”) in September 2019 and Gatan in October 2019. PDT designs and manufactures a complete range of custom-engineered, liquid cooling systems and components used in a broad set of current and next-generation commercial aerospace, defense and space platforms. Gatan is a leading manufacturer of instrumentation and software used to enhance and extend the operation and performance of electron microscopes. PDT is part of EMG and Gatan is part of EIG.

Divestiture

The Company completed its sale of Reading Alloys to Kymera International in March 2020 for net cash proceeds of $245.3 million. The transaction resulted in a pre-tax gain of $141.0 million, recorded in Other Income (expense) in the Consolidated Statement of Income, and income tax expense of $31.4 million in connection with the sale. Reading Alloys revenue and costs were reported within the EMG segment through the date of sale.

7. Goodwill and Other Intangible Assets

The changes in the carrying amounts of goodwill by segment were as follows:

	EIG	EMG	Total
		(In millions)	
Balance at December 31, 2019	$ 2,892.2	$ 1,155.3	$ 4,047.5
Goodwill acquired	57.3	—	57.3
Purchase price allocation adjustments and other	74.6	—	74.6
Foreign currency translation adjustments	26.2	19.3	45.5
Balance at December 31, 2020	3,050.3	1,174.6	4,224.9
Goodwill acquired	**1,037.9**	**5.9**	**1,043.8**
Purchase price allocation adjustments and other	**1.9**	**—**	**1.9**
Foreign currency translation adjustments	**(16.3)**	**(15.6)**	**(31.9)**
Balance at December 31, 2021	**$ 4,073.8**	**$ 1,164.9**	**$ 5,238.7**

Other intangible assets were as follows at December 31:

	2021	2020
	(In thousands)	
Definite-lived intangible assets (subject to amortization):		
Patents	**$ 48,071**	$ 49,396
Purchased technology	**677,896**	487,517
Customer lists	**2,930,120**	2,326,934
	3,656,087	2,863,847
Accumulated amortization:		
Patents	**(37,713)**	(37,858)
Purchased technology	**(235,989)**	(209,308)
Customer lists	**(888,092)**	(745,945)
	(1,161,794)	(993,111)
Net intangible assets subject to amortization	**2,494,293**	1,870,736
Indefinite-lived intangible assets (not subject to amortization):		
Trademarks and trade names	**874,336**	752,983
	$ 3,368,629	$ 2,623,719

Amortization expense was $183.6 million, $154.0 million and $132.6 for the years ended December 31, 2021, 2020 and 2019, respectively. Amortization expense for each of the next five years is expected to approximate $198 million per year, not considering the impact of potential future acquisitions.

8. Other Consolidated Balance Sheet Information

	December 31,	
	2021	2020
	(In thousands)	
INVENTORIES, NET		
Finished goods and parts	**$ 89,985**	$ 81,619
Work in process	**122,356**	102,945
Raw materials and purchased parts	**556,834**	374,607
	$ 769,175	$ 559,171
PROPERTY, PLANT AND EQUIPMENT, NET		
Land	**$ 41,709**	$ 33,382
Buildings	**343,996**	302,158
Machinery and equipment	**1,149,316**	1,119,419
	1,535,021	1,454,959
Less: Accumulated depreciation	**(917,883)**	(928,429)
	$ 617,138	$ 526,530

	December 31,	
	2021	2020
	(In thousands)	
ACCRUED LIABILITIES AND OTHER		
Employee compensation and benefits	**$ 205,994**	$ 124,347
Product warranty obligation	**27,478**	27,839
Realignment	**30,476**	32,904
Short term lease liability	**47,353**	44,948
Other	**132,036**	119,694
	$ 443,337	$ 349,732

9. Income Taxes

The components of income before income taxes and the details of the provision for income taxes were as follows for the years ended December 31:

	2021	2020	2019
	(In thousands)		
Income before income taxes:			
Domestic	**$ 958,206**	$ 810,844	$ 766,436
Foreign	**264,964**	271,465	303,312
Total	**$ 1,223,170**	$ 1,082,309	$ 1,069,748
Provision for income taxes:			
Current:			
Federal	**$ 99,706**	$ 126,427	$ 88,526
Foreign	**146,890**	61,672	81,452
State	**16,282**	19,932	19,093
Total current	**262,878**	208,031	189,071
Deferred:			
Federal	**23,538**	(1,254)	18,005
Foreign	**(56,572)**	(4,072)	(29)
State	**3,273**	7,165	1,404
Total deferred	**(29,761)**	1,839	19,380
Total provision	**$ 233,117**	$ 209,870	$ 208,451

Significant components of the deferred tax (asset) liability were as follows at December 31:

	2021	2020
	(In thousands)	
Non-current deferred tax (asset) liability:		
Differences in basis of property and accelerated depreciation [(1)]	**$ 44,199**	$ 46,023
Reserves not currently deductible	**(113,392)**	(61,872)
Pensions	**63,329**	39,256
Differences in basis of intangible assets and accelerated amortization	**768,542**	565,661
Net operating loss carryforwards	**(44,164)**	(26,767)
Share-based compensation	**(12,728)**	(13,780)
Foreign Tax Credit Carryforwards	**(2,291)**	(261)
Unremitted earnings	**11,361**	10,657
Other	**(33,529)**	(43,507)
	681,327	515,410
Less: Valuation allowance	**11,349**	5,965
	692,676	521,375
Portion included in non-current assets	**26,999**	12,103
Gross non-current deferred tax liability	**$ 719,675**	$ 533,478

(1) Presented net of deferred tax asset of approximately $33.3 million and $32.4 million at December 31, 2021 and 2020, respectively, resulting from lease obligations.

The Company's effective tax rate reconciles to the U.S. Federal statutory rate as follows for the years ended December 31:

	2021	2020	2019
U.S. Federal statutory rate	**21.0 %**	21.0 %	21.0 %
State income taxes, net of federal income tax benefit	**1.5**	2.3	1.8
Foreign operations, net	**(0.4)**	(1.4)	(0.9)
U.S. Benefits for Manufacturing, Export and credits	**(2.6)**	(1.9)	(2.0)
Uncertain Tax Items	**(0.1)**	(1.3)	(1.0)
Stock compensation	**(1.7)**	(1.0)	(1.5)
U.S. Tax on Foreign Earnings	**3.9**	2.2	2.6
U.S. General Basket FTC	**(2.9)**	(0.1)	(0.3)
Other	**0.3**	(0.5)	(0.3)
Consolidated effective tax rate	**19.1 %**	19.4 %	19.5 %

The Company elected to pay the cash tax cost of the one-time mandatory tax on previously deferred earnings of non-U.S. subsidiaries over an eight-year period. As of December 31, 2021, the Company has a remaining cash tax obligation of $35.9 million, all of which is classified as non-current.

The Company has evaluated the impact of the global intangible low-taxed income ("GILTI") section of the Tax Act and has made a tax accounting policy election to record the annual tax cost of GILTI as a current period expense when incurred and, as such, will not be measuring an impact of GILTI in its determination of deferred taxes.

As a result of the one-time mandatory deemed repatriation and the taxable inclusions under the GILTI provisions of the Tax Act, the Company has approximately $714.6 million in previously taxed income (“PTI”) as of December 31, 2021 which can be repatriated without incremental U.S. Federal tax. The Company intends to reinvest its earnings indefinitely in operations outside the United States except to the extent of the PTI. There has been no provision for U.S. deferred income taxes for the undistributed earnings over PTI of approximately $186.4 million and $411.0 million at December 31, 2021 and 2020 respectively because determination of the amount of the unrecognized deferred income tax liability on these undistributed earnings is not practicable.

As of December 31, 2021, and 2020, the Company recorded deferred income taxes totaling $11.4 million and $10.7 million respectively in state income and foreign withholding taxes expected to be incurred when the cash amounts related to the mandatory tax are ultimately repatriated to the U.S.

The Company is acquisitive and at times acquires entities with tax attributes (net operating losses or tax credits) that carry over to post-acquisition tax periods of the Company. At December 31, 2021, the Company had tax effected benefits, net of uncertain tax positions of $44.1 million related to net operating loss carryforwards, which will be available to offset future income taxes payable, subject to certain annual or other limitations based on foreign and U.S. tax laws. This amount includes net operating loss carryforwards of $11.7 million for federal income tax purposes with no valuation allowance for the U.S. consolidated group, $12.0 million for state income tax purposes with a valuation allowance of $2.9 million, and $20.4 million for foreign income tax purposes with a valuation allowance of $1.4 million. These net operating loss carryforwards, if not used, will expire between 2022 and 2041.

At December 31, 2021, the Company had tax effected benefits of $11.8 million related to tax credit carryforwards, which will be available to offset future income taxes payable, subject to certain annual or other limitations based on foreign and U.S. tax laws. This amount includes tax credit carryforwards of $5.4 million for federal income tax purposes with a valuation allowance of $3.3 million, $6.4 million for state income tax purposes with a valuation allowance of $2.4 million, and no remaining credit carryforwards for foreign income tax purposes. These tax credit carryforwards, if not used, will expire between 2022 and 2041.

The Company maintains a valuation allowance (VA) to reduce certain deferred tax assets to amounts that are more likely than not to be realized. This allowance primarily relates to deferred tax assets established for state non-deductible interest expense, federal and state credits and state net operating loss carryforwards. In 2021, the Company recorded an increase of $5.4 million in the valuation allowance of which $2.1 million mostly relates to foreign tax credit carryforwards and $3.3 million relates to state net operating losses and credits that are not expected to be utilized.

At December 31, 2021, the Company had gross unrecognized tax benefits of $147.0 million, of which $110.0 million, if recognized, would impact the effective tax rate. At December 31, 2020, the Company had gross unrecognized tax benefits of $100.7 million, of which $60.6 million, if recognized, would impact the effective tax rate.

At December 31, 2021 and 2020, the Company reported $9.1 million and $11.6 million, respectively, related to interest and penalty exposure as accrued income tax expense in the consolidated balance sheet. During 2021, and 2020, the Company recognized a net benefit of $2.5 million, and $2.6 million respectively for interest and penalties related to uncertain tax positions in the consolidated statement of income as a component of income tax expense.

Approximately 62% of the Company's overall tax liability is incurred in the United States. The Company files income tax returns in various other state and foreign tax jurisdictions, in some cases for multiple legal entities per jurisdiction. Generally, the Company has open tax years subject to tax audit on average of between three and six years in these jurisdictions. At December 31, 2021, the Company was notified by the Internal Revenue Service ("IRS") that the U.S. consolidated tax group and a separate company filer was selected for audit for the 2019 tax year. A preliminary meeting with the IRS and company representative has been scheduled. The Company has not materially extended any other statutes of limitation for any significant location and has reviewed and accrued for, where necessary, tax liabilities for open periods including state and foreign jurisdictions that remain subject to examination. There have been no penalties asserted or imposed by the IRS related to substantial understatement of income, gross valuation misstatement or failure to disclose a listed or reportable transaction.

During 2021, the Company added $58.6 million of tax, interest and penalties related to identified uncertain tax positions and reversed $35.2 million of tax and interest related to statute expirations and settlement of prior uncertain positions. During 2020, the Company added $24.3 million of tax, interest and penalties related to identified uncertain tax positions and reversed $35.3 million of tax and interest related to statute expirations and settlement of prior uncertain positions.

The following is a reconciliation of the liability for uncertain tax positions at December 31:

	2021	**2020**	**2019**
		(In millions)	
Balance at the beginning of the year	**$ 100.7**	$ 109.1	$ 119.3
Additions for tax positions related to the current year	**41.4**	15.6	17.5
Additions for tax positions of prior years	**34.9**	6.2	2.8
Reductions for tax positions of prior years	**(1.5)**	(0.3)	(1.3)
Reductions related to settlements with taxing authorities	**(0.1)**	(0.5)	(0.9)
Reductions due to statute expirations	**(28.4)**	(29.4)	(28.3)
Balance at the end of the year	**$ 147.0**	$ 100.7	$ 109.1

In 2021, the additions above primarily reflect the increase in tax liabilities for uncertain tax positions related to certain higher transfer pricing risks. The reductions above primarily relate to statute expirations. The net increase of $46.3 million in uncertain tax positions resulted in an increase of $18.9 million to income tax expense and the remainder primarily in goodwill. At December 31, 2021, tax, interest and penalties of $134.2 million were classified as a non-current liability and $22.0 million was reflected as a reduction against deferred tax assets.

10. Debt

Long-term debt, net consisted of the following at December 31:

	2021	2020
	(In thousands)	
U.S. dollar 3.73% senior notes due September 2024	**$ 300,000**	$ 300,000
U.S. dollar 3.91% senior notes due June 2025	**50,000**	50,000
U.S. dollar 3.96% senior notes due August 2025	**100,000**	100,000
U.S. dollar 4.18% senior notes due December 2025	**275,000**	275,000
U.S. dollar 3.83% senior notes due September 2026	**100,000**	100,000
U.S. dollar 4.32% senior notes due December 2027	**250,000**	250,000
U.S. dollar 4.37% senior notes due December 2028	**50,000**	50,000
U.S. dollar 3.98% senior notes due September 2029	**100,000**	100,000
U.S. dollar 4.45% senior notes due August 2035	**50,000**	50,000
British pound 2.59% senior note due November 2028	**203,046**	204,880
British pound 2.70% senior note due November 2031	**101,510**	102,433
Euro 1.34% senior notes due October 2026	**341,284**	366,806
Euro 1.71% senior notes due December 2027	**85,323**	91,706
Euro 1.53% senior notes due October 2028	**227,541**	244,572
Swiss franc 2.44% senior note due December 2021	**—**	62,190
Revolving credit facility borrowings	**314,480**	72,145
Other, principally foreign	**1,976**	—
Less: Debt issuance costs	**(5,919)**	(6,007)
Total debt, net	**2,544,241**	2,413,725
Less: Current portion, net	**(315,093)**	(132,284)
Total long-term debt, net	**$ 2,229,148**	$ 2,281,441

Maturities of long-term debt borrowings outstanding at December 31, 2021 were as follows: none in 2023; $300.0 million in 2024; $425.0 million in 2025; $441.3 million in 2026; $335.3 million in 2027; and $732.1 million in 2028 and thereafter.

In the fourth quarter of 2021, the Company paid in full, at maturity, a 55 million Swiss franc ($59.7 million) in aggregate principal amount of 2.44% senior note.

In the third quarter of 2020, the Company paid in full, at maturity, an 80 million British pound ($102.9 million) in aggregate principal amount of 4.68% senior note.

In December 2018, the Company completed a private placement agreement to sell $575 million and 75 million Euros in senior notes to a group of institutional investors (the "2018 Private Placement") utilizing two funding dates. The first funding occurred in December 2018 for $475 million and 75 million Euros ($85.3 million at December 31, 2021). The second funding was in January 2019 for $100 million. The 2018 Private Placement senior notes carry a weighted average interest rate of 3.93% and are subject to certain customary covenants, including financial covenants that, among other things, require the Company to maintain certain debt-to-EBITDA (earnings before interest, income taxes, depreciation and amortization) and interest coverage ratios.

In September 2014, the Company issued $300 million in aggregate principal amount of 3.73% senior notes due September 2024, $100 million in aggregate principal amount of 3.83% senior notes due September 2026 and $100 million in aggregate principal amount of 3.98% senior notes due September 2029. In June 2015, the Company issued $50 million in aggregate principal amount of 3.91% senior notes due June 2025. In August 2015, the

Company issued $100 million in aggregate principal amount of 3.96% senior notes due August 2025 and $50 million in aggregate principal amount of 4.45% senior notes due August 2035.

In September 2010, the Company issued an 80 million British pound 4.68% senior note due September 2020 (paid in full, at maturity, as previously noted). In December 2011, the Company issued a 55 million Swiss franc (paid in full, at maturity, as previously noted) 2.44% senior note due December 2021. In October 2016, the Company issued 300 million Euros ($341.3 million at December 31, 2021) in aggregate principal amount of 1.34% senior notes due October 2026 and 200 million Euros ($227.5 million at December 31, 2021) in aggregate principal amount of 1.53% senior notes due October 2028. In November 2016, the Company issued 150 million British pounds ($203.0 million at December 31, 2021) in aggregate principal amount of 2.59% senior notes due November 2028 and 75 million British pounds ($101.5 million at December 31, 2021) in aggregate principal amount of 2.70% senior notes due November 2031.

In April 2021, the Company along with certain of its foreign subsidiaries amended its credit agreement dated as of September 22, 2011, as amended and restated as of March 10, 2016 and as further amended and restated as of October 30, 2018 (the “Credit Agreement”). The Credit Agreement amends the Company’s existing revolving credit facility to add a new five-year, delayed draw, term loan for up to $800.0 million. The Credit Agreement consists of a five-year revolving credit facility in an aggregate principal amount of $1.5 billion with a final maturity date in October 2023. The revolving credit facility total borrowing capacity excludes an accordion feature that permits the Company to request up to an additional $500 million in revolving credit commitments at any time during the life of the Credit Agreement under certain conditions. The credit agreement places certain restrictions on allowable additional indebtedness. In November 2021, the Company further amended the Credit Agreement to address the cessation of LIBOR on certain currencies. At December 31, 2021, the Company had available borrowing capacity of $2,447.5 million under its revolving credit facility and term loan, including the $500 million accordion feature. At December 31, 2021, the Company had $150.0 million outstanding on the term loan with a maturity date of June 2026. The proceeds from the term loan were used to fund the Company's 2021 acquisitions.

Interest rates on outstanding borrowings under the revolving credit facility are at the applicable benchmark rate plus a negotiated spread or at the U.S. prime rate. At December 31, 2021 and 2020 the Company had $314.5 million and $72.1 million of borrowings outstanding under the revolving credit facility, respectively. The weighted average interest rate on the revolving credit facility for the years ended December 31, 2021 and 2020 was 1.34% and 1.84%, respectively. The Company had outstanding letters of credit primarily under the revolving credit facility totaling $38.0 million and $30.2 million at December 31, 2021 and 2020, respectively.

The private placements, the senior notes and the revolving credit facility are subject to certain customary covenants, including financial covenants that, among other things, require the Company to maintain certain debt-to-EBITDA and interest coverage ratios. The Company was in compliance with all provisions of the debt arrangements at December 31, 2021.

Foreign subsidiaries of the Company had available credit facilities with local foreign lenders of $56.8 million and $53.0 million at December 31, 2021 and 2020, respectively. At December 31, 2021, foreign subsidiaries had $2.0 million in debt borrowings outstanding, which was reported in short-term borrowings. At December 31, 2020, foreign subsidiaries had no debt borrowings outstanding.

The weighted average interest rate on total debt borrowings outstanding at December 31, 2021 and 2020 was 3.1% and 3.0%, respectively.

11. Share-Based Compensation

Under the terms of the Company’s stockholder-approved share-based plans, performance restricted stock units (“PRSUs”), incentive and non-qualified stock options and restricted stock have been, and may be, issued to the Company’s officers, management-level employees and members of its Board of Directors. Stock options granted prior to 2018 generally vest at a rate of one-fourth on each of the first four anniversaries of the grant date and have a maximum contractual term of seven years. Beginning in 2018, stock options granted generally vest at a rate of one-third on each of the first three anniversaries of the grant date and have a maximum contractual term of ten years. Restricted stock granted to employees prior to 2018 generally vests four years after the grant date (cliff vesting) and is subject to accelerated vesting due to certain events, including doubling of the grant price of the Company’s common stock as of the close of business during any five consecutive trading days. Beginning in 2018, restricted stock granted to employees generally vests one-third on each of the first three anniversaries of the grant date. Restricted stock granted to non-employee directors generally vests two years after the grant date (cliff vesting) and is subject to accelerated vesting due to certain events, including doubling of the grant price of the Company’s common stock as of the close of business during any five consecutive trading days.

Share Based Compensation Expense

The Company measures and records compensation expense related to all stock awards by recognizing the grant date fair value of the awards over their requisite service periods in the financial statements. For grants under any of the Company’s plans that are subject to graded vesting based on a service condition, the Company recognizes expense on a straight-line basis over the requisite service period for the entire award.

Total share-based compensation expense was as follows for the years ended December 31:

	2021	2020	2019
		(In thousands)	
Stock option expense	**$ 12,733**	$ 13,695	$ 12,810
Restricted stock expense	**21,393**	17,997	16,169
PRSU expense	**11,977**	9,873	11,415
Total pre-tax expense	**$ 46,103**	$ 41,565	$ 40,394

Pre-tax share-based compensation expense is included in the consolidated statement of income in either Cost of sales or Selling, general and administrative expenses, depending on where the recipient’s cash compensation is reported.

Stock Options

The fair value of each stock option grant is estimated on the date of grant using a Black-Scholes-Merton option pricing model. The following weighted average assumptions were used in the Black-Scholes-Merton model to estimate the fair values of stock options granted during the years indicated:

	2021	2020	2019
Expected volatility	**24.2 %**	22.2 %	19.1 %
Expected term (years)	**5.0**	5.0	5.0
Risk-free interest rate	**0.85 %**	0.52 %	2.25 %
Expected dividend yield	**0.66 %**	1.14 %	0.66 %
Black-Scholes-Merton fair value per stock option granted	**$ 25.63**	$ 11.01	$ 16.85

Expected volatility is based on the historical volatility of the Company’s stock over the stock options’ expected term. The Company used historical exercise data to estimate the stock options’ expected term, which represents the period of time that the stock options granted are expected to be outstanding. Management anticipates that the future stock option holding periods will be similar to the historical stock option holding periods. The risk-free interest rate for periods within the expected term of the stock option is based on the U.S. Treasury yield curve at the time of grant. The expected dividend yield is calculated by dividing the Company's annual dividend, based on the most recent quarterly dividend rate, by the Company's closing common stock price on the grant date. Compensation expense recognized for all share-based awards is net of estimated forfeitures. The Company's estimated forfeiture rates are based on its historical experience.

The following is a summary of the Company's stock option activity and related information for the year ended December 31, 2021:

	Shares (In thousands)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value (In millions)
Outstanding at the beginning of the year	3,950	$ 65.16		
Granted	**552**	**121.91**		
Exercised	**(1,025)**	**57.60**		
Forfeited	**(123)**	**85.52**		
Expired	**(2)**	**59.79**		
Outstanding at the end of the year	**3,352**	**$ 76.08**	**6.2**	**$ 237.9**
Exercisable at the end of the year	**2,060**	**$ 67.15**	**4.7**	**$ 164.6**

The aggregate intrinsic value of stock options exercised during 2021, 2020 and 2019 was $59.1 million, $63.7 million and $88.2 million, respectively. The total fair value of stock options vested during 2021, 2020 and 2019 was $13.7 million, $12.9 million and $11.8 million, respectively.

The following is a summary of the Company's non-vested stock option activity and related information for the year ended December 31, 2021:

	Shares (In thousands)	Weighted Average Grant Date Fair Value
Non-vested stock options outstanding at the beginning of the year	1,906	$ 13.34
Granted	**552**	**25.63**
Vested	**(1,043)**	**13.18**
Forfeited	**(123)**	**16.61**
Non-vested stock options outstanding at the end of the year	**1,292**	**$ 18.41**

As of December 31, 2021, there was approximately $14 million of expected future pre-tax compensation expense related to the 1.3 million non-vested stock options outstanding, which is expected to be recognized over a weighted average period of less than two years.

Restricted Stock

The fair value of restricted shares under the Company's restricted stock arrangement is determined by the product of the number of shares granted and the Company's closing common stock price on the grant date. Upon the grant of restricted stock, the fair value of the restricted shares (unearned compensation) at the grant date is charged as a reduction of capital in excess of par value in the Company's consolidated balance sheet and is amortized to expense on a straight-line basis over the vesting period, which is the same as the calculated derived service period as determined on the grant date.

The following is a summary of the Company's non-vested restricted stock activity and related information for the year ended December 31, 2021:

	Shares	Weighted Average Grant Date Fair Value
	(In thousands)	
Non-vested restricted stock outstanding at the beginning of the year	701	$ 76.86
Granted	**153**	**122.60**
Vested	**(395)**	**72.45**
Forfeited	**(46)**	**94.80**
Non-vested restricted stock outstanding at the end of the year	**413**	**$ 96.07**

The total fair value of restricted stock vested during 2021, 2020 and 2019 was $28.6 million, $14.4 million and $25.2 million, respectively. The weighted average fair value of restricted stock granted per share during 2021 and 2020 was $122.60 and $80.27, respectively. As of December 31, 2021, there was approximately $28 million of expected future pre-tax compensation expense related to the 0.4 million non-vested restricted shares outstanding, which is expected to be recognized over a weighted average period of less than two years.

Performance Restricted Stock Units

The PRSUs vest over a period up to three years from the grant date based on continuous service, with the number of shares earned (0% to 200% of the target award) depending upon the extent to which the Company achieves certain financial and market performance targets measured over the period from January 1 of the year of grant through December 31 of the third year. Half of the PRSUs are valued in a manner similar to restricted stock as the financial targets are based on the Company's operating results. The grant date fair value of these PRSUs are recognized as compensation expense over the vesting period based on the number of awards expected to vest at each reporting date. The other half of the PRSUs were valued using a Monte Carlo model as the performance target is related to the Company's total shareholder return compared to a group of peer companies, which represents a market condition. The Company recognizes the grant date fair value of these awards as compensation expense ratably over the vesting period.

The following is a summary of the Company's non-vested performance restricted stock activity and related information for the year ended December 31, 2021:

	Shares	Weighted Average Grant Date Fair Value
	(In thousands)	
Non-vested performance restricted stock outstanding at the beginning of the year	264	$ 72.90
Granted	**81**	**121.91**
Performance assumption change [1]	**39**	**78.20**
Vested	**(88)**	**78.20**
Forfeited	**(7)**	**89.83**
Non-vested performance restricted stock outstanding at the end of the year	**289**	**$ 85.29**

[1] Reflects the number of PRSUs above target levels based on performance metrics.

As of December 31, 2021, there was approximately $4 million of expected future pre-tax compensation expense related to the 0.3 million non-vested performance restricted shares outstanding, which is expected to be recognized over a weighted average period of less than one year.

The Company issues previously unissued shares when stock options are exercised, and shares are issued from treasury stock upon the award of restricted stock.

12. Retirement Plans and Other Postretirement Benefits

Retirement and Pension Plans

The Company sponsors several retirement and pension plans covering eligible salaried and hourly employees. The plans generally provide benefits based on participants' years of service and/or compensation. The following is a brief description of the Company's retirement and pension plans.

The Company maintains contributory and non-contributory defined benefit pension plans. Benefits for eligible salaried and hourly employees under all defined benefit plans are funded through trusts established in conjunction with the plans. The Company's funding policy with respect to its defined benefit plans is to contribute amounts that provide for benefits based on actuarial calculations and the applicable requirements of U.S. federal and local foreign laws. The Company estimates that it will make both required and discretionary cash contributions of approximately $8 million to $12 million to its worldwide defined benefit pension plans in 2022.

The Company uses a measurement date of December 31 (its fiscal year end) for its U.S. and foreign defined benefit pension plans.

The Company sponsors a 401(k) retirement and savings plan for eligible U.S. employees. Participants in the retirement and savings plan may contribute a specified portion of their compensation on a pre-tax basis, which varies by location. The Company matches employee contributions ranging from 20% to 100%, up to a maximum percentage ranging from 1% to 8% of eligible compensation or up to a maximum of $1,200 per participant in some locations.

The Company's retirement and savings plan has a defined contribution retirement feature principally to cover U.S. salaried employees joining the Company after December 31, 1996. Under the retirement feature, the Company makes contributions for eligible employees based on a pre-established percentage of the covered employee's salary subject to pre-established vesting. Employees of certain of the Company's foreign operations participate in various local defined contribution plans.

The Company has non-qualified unfunded retirement plans for certain Directors and retired employees. It also provides supplemental retirement benefits, through contractual arrangements and/or a Supplemental Executive Retirement Plan ("SERP") covering certain current and former executives of the Company. These supplemental benefits are designed to compensate the executive for retirement benefits that would have been provided under the Company's primary retirement plan, except for statutory limitations on compensation that must be taken into account under those plans. The projected benefit obligations of the SERP and the contracts will primarily be funded by a grant of shares of the Company's common stock upon retirement or termination of the executive. The Company is providing for these obligations by charges to earnings over the applicable periods.

The following tables set forth the changes in net projected benefit obligation and the fair value of plan assets for the funded and unfunded defined benefit plans for the years ended December 31:

U.S. Defined Benefit Pension Plans:

	2021	2020
	(In thousands)	
Change in projected benefit obligation:		
Net projected benefit obligation at the beginning of the year	$ 532,357	$ 510,514
Service cost	**2,767**	3,015
Interest cost	**14,074**	17,235
Actuarial (gains) losses	**(12,593)**	32,963
Gross benefits paid	**(31,832)**	(31,370)
Net projected benefit obligation at the end of the year	**$ 504,773**	$ 532,357
Change in plan assets:		
Fair value of plan assets at the beginning of the year	$ 662,298	$ 621,632
Actual return on plan assets	**70,540**	71,281
Employer contributions	**621**	755
Gross benefits paid	**(31,832)**	(31,370)
Fair value of plan assets at the end of the year	**$ 701,627**	$ 662,298

Foreign Defined Benefit Pension Plans:

	2021	2020
	(In thousands)	
Change in projected benefit obligation:		
Net projected benefit obligation at the beginning of the year	$ 351,584	$ 311,783
Service cost	**4,218**	4,246
Interest cost	**4,458**	5,376
Foreign currency translation adjustments	**(6,580)**	13,955
Employee contributions	**76**	92
Actuarial (gains) losses	**(10,199)**	27,055
Expenses paid from assets	**(1,121)**	(838)
Gross benefits paid	**(10,426)**	(10,615)
Curtailments	**412**	—
Plan amendments	**—**	530
Net projected benefit obligation at the end of the year	**$ 332,422**	$ 351,584
Change in plan assets:		
Fair value of plan assets at the beginning of the year	$ 250,735	$ 224,347
Actual return on plan assets	**20,184**	20,966
Employer contributions	**9,656**	8,772
Employee contributions	**76**	92
Foreign currency translation adjustments	**(2,816)**	8,011
Expenses paid from assets	**(1,121)**	(838)
Gross benefits paid	**(10,426)**	(10,615)
Fair value of plan assets at the end of the year	**$ 266,288**	$ 250,735

The projected benefit obligation assumptions impacting net actuarial losses (gains) consist of changes in discount and mortality rates, as well as changes in plan experience. A significant component of the decrease in actuarial losses in 2020 for both the U.S. and Foreign Defined Benefit Plans was the change in discount rates.

The accumulated benefit obligation consisted of the following at December 31:

U.S. Defined Benefit Pension Plans:

	2021	2020
	(In thousands)	
Funded plans	**$ 492,957**	$ 515,667
Unfunded plans	**3,913**	4,494
Total	**$ 496,870**	$ 520,161

Foreign Defined Benefit Pension Plans:

	2021	2020
	(In thousands)	
Funded plans	**$ 284,013**	$ 295,998
Unfunded plans	**47,761**	53,090
Total	**$ 331,774**	$ 349,088

Weighted average assumptions used to determine benefit obligations at December 31:

	2021	2020
U.S. Defined Benefit Pension Plans:		
Discount rate	**3.02 %**	2.69 %
Rate of compensation increase (where applicable)	**3.75 %**	3.75 %
Foreign Defined Benefit Pension Plans:		
Discount rate	**1.78 %**	1.27 %
Rate of compensation increase (where applicable)	**2.50 %**	2.50 %

The following is a summary of the fair value of plan assets for U.S. plans at December 31:

Asset Class	2021			2020		
	Total	Level 1	Level 2	Total	Level 1	Level 2
	(In thousands)					
Corporate debt instruments	**$ 4,053**	**$ —**	**$ 4,053**	$ 3,442	$ —	$ 3,442
Corporate debt instruments – Preferred	**11,265**	**—**	**11,265**	12,196	—	12,196
Corporate stocks – Common	**67,975**	**67,975**	**—**	62,897	62,897	—
Municipal bonds	**676**	**—**	**676**	876	—	876
Registered investment companies	**150,535**	**150,535**	**—**	236,530	236,530	—
U.S. Government securities	**663**	**—**	**663**	526	—	526
Total investments	**235,167**	**218,510**	**16,657**	316,467	299,427	17,040
Investments measured at net asset value	**466,460**	**—**	**—**	345,831	—	—
Total investments	**$ 701,627**	**$ 218,510**	**$ 16,657**	$ 662,298	$ 299,427	$ 17,040

U.S. equity securities and global equity securities categorized as level 1 are traded on national and international exchanges and are valued at their closing prices on the last trading day of the year. For U.S. equity securities and global equity securities not traded on an active exchange, or if the closing price is not available, the trustee obtains indicative quotes from a pricing vendor, broker or investment manager. These securities are categorized as level 2 if the custodian obtains corroborated quotes from a pricing vendor. Additionally, some U.S. equity securities and global equity securities are public investment vehicles valued using the Net Asset Value (“NAV”) provided by the fund manager. The NAV is the total value of the fund divided by the number of shares outstanding.

Fixed income securities categorized as level 1 are traded on national and international exchanges and are valued at their closing prices on the last trading day of the year and categorized as level 2 if valued by the trustee using pricing models that use verifiable observable market data, bids provided by brokers or dealers or quoted prices of securities with similar characteristics.

The expected long-term rate of return on these plan assets was 6.75% in 2021 and 7.00% in 2020. Equity securities included 384,788 shares of AMETEK, Inc. common stock with a market value of $56.6 million (8.1% of total plan investment assets) at December 31, 2021 and 384,788 shares of AMETEK, Inc. common stock with a market value of $46.5 million (7.0% of total plan investment assets) at December 31, 2020.

The objectives of the Company’s U.S. defined benefit plans’ investment strategy are to maximize the plans’ funded status and minimize Company contributions and plan expense. Because the goal is to optimize returns over the long term, an investment policy that favors equity holdings has been established. Since there may be periods of time where both equity and mutual fund markets provide poor returns, an allocation to alternative assets may be made to improve the overall portfolio’s diversification and return potential. The Company periodically reviews its asset allocation, taking into consideration plan liabilities, plan benefit payment streams and the investment strategy of the pension plans. The actual asset allocation is monitored frequently relative to the established targets and ranges and is re-balanced when necessary. The target allocations for the U.S. defined benefits plans are approximately 50% equity securities, 20% fixed income securities and 30% other securities and/or cash.

The equity portfolio is diversified by market capitalization and style. The equity portfolio also includes international components.

The objective of the mutual fund portion of the pension assets is to provide interest rate sensitivity for a portion of the assets and to provide diversification. The mutual fund portfolio is diversified within certain quality and maturity guidelines to minimize the adverse effects of interest rate fluctuations.

Certain investments are prohibited and include venture capital, private placements, unregistered or restricted stock, margin trading, commodities, short selling and rights and warrants. Foreign currency futures, options and forward contracts may be used to manage foreign currency exposure.

The following is a summary of the fair value of plan assets for foreign defined benefit pension plans at December 31:

	2021		2020	
Asset Class	Total	Level 3	Total	Level 3
	(In thousands)			
Life insurance	**$ 18,806**	**$ 18,806**	$ 20,908	$ 20,908
Total investments	**18,806**	**18,806**	20,908	20,908
Investments measured at net asset value	**247,482**	**—**	229,827	—
Total investments	**$ 266,288**	**$ 18,806**	$ 250,735	$ 20,908

Life insurance assets are considered level 3 investments as their values are determined by the sponsor using unobservable market data.

Life insurance assets categorized as level 3 are valued based on unobservable inputs and cannot be corroborated using verifiable observable market data. Investments in level 3 funds are redeemable, however, cash reimbursement may be delayed, or a portion held back until asset finalization.

The following is a summary of the changes in the fair value of the foreign plans' level 3 investments (fair value determined using significant unobservable inputs):

	Life Insurance
	(In thousands)
Balance, December 31, 2019	$ 19,298
Actual return on assets:	
Unrealized losses relating to instruments still held at the end of the year	$ 1,610
Realized gains (losses) relating to assets sold during the year	$ —
Purchases, sales, issuances and settlements, net	$ —
Balance, December 31, 2020	$ 20,908
Actual return on assets:	
Unrealized gains (losses) relating to instruments still held at the end of the year	**$ (2,102)**
Realized gains (losses) relating to assets sold during the year	$ —
Purchases, sales, issuances and settlements, net	**$ —**
Balance, December 31, 2021	**$ 18,806**

The objective of the Company's foreign defined benefit plans' investment strategy is to maximize the long-term rate of return on plan investments, subject to a reasonable level of risk. Liability studies are also performed on a regular basis to provide guidance in setting investment goals with an objective to balance risks against the current and future needs of the plans. The trustees consider the risk associated with the different asset classes, relative to the plans' liabilities and how this can be affected by diversification, and the relative returns available on equities, mutual fund investments, real estate and cash. Also, the likely volatility of those returns and the cash flow requirements of the plans are considered. It is expected that equities will outperform mutual fund investments over the long term. However, the trustees recognize the fact that mutual fund investments may better match the liabilities for pensioners. Because of the relatively young active employee group covered by the plans and the immature nature of the plans, the trustees have chosen to adopt an asset allocation strategy more heavily weighted toward equity investments. This asset allocation strategy will be reviewed, from time to time, in view of changes in market conditions and in the plans' liability profile. The target allocations for the foreign defined benefit plans are approximately 22% equity securities, 21% fixed income securities, 51% multi-asset funds and 6% other securities, insurance or cash.

The assumption for the expected return on plan assets was developed based on a review of historical investment returns for the investment categories for the defined benefit pension assets. This review also considered current capital market conditions and projected future investment returns. The estimates of future capital market returns by asset class are lower than the actual long-term historical returns. The current low interest rate environment influences this outlook. Therefore, the assumed rate of return for U.S. plans is 6.75% and 5.85% for foreign plans in 2022.

The projected benefit obligation, accumulated benefit obligation and fair value of plan assets for pension plans with a projected benefit obligation in excess of plan assets and pension plans with an accumulated benefit obligation in excess of plan assets were as follows at December 31:

U.S. Defined Benefit Pension Plans:

	Projected Benefit Obligation Exceeds Fair Value of Assets		Accumulated Benefit Obligation Exceeds Fair Value of Assets	
	2021	2020	2021	2020
	(In thousands)			
Benefit obligation	**$ 6,234**	$ 6,842	**$ 6,234**	$ 6,842
Fair value of plan assets	**1,239**	1,155	**1,239**	1,155

Foreign Defined Benefit Pension Plans:

	Projected Benefit Obligation Exceeds Fair Value of Assets		Accumulated Benefit Obligation Exceeds Fair Value of Assets	
	2021	2020	2021	2020
	(In thousands)			
Benefit obligation	**$ 272,245**	$ 349,762	**$ 271,596**	$ 347,267
Fair value of plan assets	**200,862**	248,914	**200,862**	248,914

The following table provides the amounts recognized in the consolidated balance sheet at December 31:

	2021	2020
	(In thousands)	
Funded status asset (liability):		
Fair value of plan assets	**$ 967,915**	$ 913,034
Projected benefit obligation	**(837,195)**	(883,940)
Funded status at the end of the year	**$ 130,720**	$ 29,094
Amounts recognized in the consolidated balance sheet consisted of:		
Non-current asset for pension benefits (other assets)	**$ 207,099**	$ 135,628
Current liabilities for pension benefits	**(2,133)**	(2,174)
Non-current liability for pension benefits	**(74,246)**	(104,360)
Net amount recognized at the end of the year	**$ 130,720**	$ 29,094

The following table provides the amounts recognized in accumulated other comprehensive income, net of taxes, at December 31:

Net amounts recognized:	2021	2020
	(In thousands)	
Net actuarial loss	**$ 193,220**	$ 249,468
Prior service costs	**1,855**	4,247
Transition asset	**4**	5
Total recognized	**$ 195,079**	$ 253,720

The following table provides the components of net periodic pension benefit expense (income) for the years ended December 31:

	2021	2020	2019
		(In thousands)	
Defined benefit plans:			
Service cost	**$ 6,985**	$ 7,261	$ 6,556
Interest cost	**18,532**	22,611	26,979
Expected return on plan assets	**(56,752)**	(54,629)	(52,402)
Curtailment	**3,151**	—	—
Settlement	**—**	—	739
Amortization of:			
Net actuarial loss	**16,353**	15,479	15,685
Prior service costs	**456**	486	484
Transition asset	**1**	1	1
Total net periodic benefit income	**(11,274)**	(8,791)	(1,958)
Other plans:			
Defined contribution plans	**31,149**	30,829	32,508
Foreign plans and other	**8,454**	7,902	9,406
Total other plans	**39,603**	38,731	41,914
Total net pension expense	**$ 28,329**	$ 29,940	$ 39,956

The total net periodic benefit expense (income) is included in Cost of sales, General and administrative expense and Other income and expense in the consolidated statement of income.

The following weighted average assumptions were used to determine the above net periodic pension benefit income for the years ended December 31:

	2021	2020	2019
U.S. Defined Benefit Pension Plans:			
Discount rate	**2.69 %**	3.45 %	4.40 %
Expected return on plan assets	**6.75 %**	7.00 %	7.50 %
Rate of compensation increase (where applicable)	**3.75 %**	3.75 %	3.75 %
Foreign Defined Benefit Pension Plans:			
Discount rate	**1.27 %**	1.83 %	2.59 %
Expected return on plan assets	**5.47 %**	5.97 %	6.52 %
Rate of compensation increase (where applicable)	**2.50 %**	2.50 %	2.50 %

Estimated Future Benefit Payments

The estimated future benefit payments for U.S. and foreign plans are as follows: 2022 – $42.4 million; 2023 – $43.7 million; 2024 – $44.2 million; 2025 – $43.7 million; 2026 – $43.8 million; 2026 to 2030 - $216.1 million. Future benefit payments primarily represent amounts to be paid from pension trust assets. Amounts included that are to be paid from the Company’s assets are not significant in any individual year.

Postretirement Plans and Post-employment Benefits

The Company provides limited postretirement benefits other than pensions for certain retirees and a small number of former employees. Benefits under these arrangements are not funded and are not significant.

The Company also provides limited post-employment benefits for certain former or inactive employees after employment but before retirement. Those benefits are not significant in amount.

The Company has a deferred compensation plan, which allows employees whose compensation exceeds the statutory IRS limit for retirement benefits to defer a portion of earned bonus compensation. The plan permits deferred amounts to be deemed invested in either, or a combination of, (a) an interest-bearing account, benefits from which are payable out of the general assets of the Company, or (b) the equivalent of a fund which invests in shares of the Company's common stock on behalf of the employee. The amount deferred under the plan, including income earned, was $28.4 million and $25.1 million at December 31, 2021 and 2020, respectively. Administrative expense for the deferred compensation plan is borne by the Company and is not significant.

13. Contingencies

Indemnifications

In conjunction with certain acquisition and divestiture transactions, the Company may agree to make payments to compensate or indemnify other parties for possible future unfavorable financial consequences resulting from specified events (e.g., breaches of contract obligations or retention of previously existing environmental, tax or employee liabilities) whose terms range in duration and often are not explicitly defined. Where appropriate, the obligation for such indemnifications is recorded as a liability. Because the amount of these types of indemnifications generally is not specifically stated, the overall maximum amount of the obligation under such indemnifications cannot be reasonably estimated. Further, the Company indemnifies its directors and officers for claims against them in connection with their positions with the Company. Historically, any such costs incurred to settle claims related to these indemnifications have been minimal for the Company. The Company believes that future payments, if any, under all existing indemnification agreements would not have a material impact on its consolidated results of operations, financial position or cash flows.

Asbestos Litigation

The Company (including its subsidiaries) has been named as a defendant in a number of asbestos-related lawsuits. Certain of these lawsuits relate to a business which was acquired by the Company and do not involve products which were manufactured or sold by the Company. In connection with these lawsuits, the seller of such business has agreed to indemnify the Company against these claims (the "Indemnified Claims"). The Indemnified Claims have been tendered to, and are being defended by, such seller. The seller has met its obligations, in all respects, and the Company does not have any reason to believe such party would fail to fulfill its obligations in the future. To date, no judgments have been rendered against the Company as a result of any asbestos-related lawsuit. The Company believes that it has good and valid defenses to each of these claims and intends to defend them vigorously.

Environmental Matters

Certain historic processes in the manufacture of products have resulted in environmentally hazardous waste by-products as defined by federal and state laws and regulations. At December 31, 2021, the Company is named a Potentially Responsible Party ("PRP") at 13 non-AMETEK-owned former waste disposal or treatment sites (the "non-owned"sites). The Company is identified as a "de minimis" party in 12 of these sites based on the low volume of waste attributed to the Company relative to the amounts attributed to other named PRPs. In eight of these sites, the Company has reached a tentative agreement on the cost of the de minimis settlement to satisfy its obligation and is awaiting executed agreements. The tentatively agreed-to settlement amounts are fully accrued. In the other four sites, the Company is continuing to investigate the accuracy of the alleged volume attributed to the Company as estimated by the parties primarily responsible for remedial activity at the sites to establish an appropriate settlement amount. At the remaining site where the Company is a non-de minimis PRP, the Company is participating in the investigation and/or related required remediation as part of a PRP Group and reserves have been established sufficient to satisfy the Company's expected obligations. The Company historically has resolved these issues within established reserve levels and reasonably expects this result will continue. In addition to these non-owned sites, the Company has an ongoing practice of providing reserves for probable remediation activities at certain of its current or previously owned manufacturing locations (the "owned" sites). For claims and proceedings against the Company with respect to other environmental matters, reserves are established once the Company has determined that a loss is probable and estimable. This estimate is refined as the Company moves through the various stages of investigation, risk assessment, feasibility study and corrective action processes. In certain instances, the Company has developed a range of estimates for such costs and has recorded a liability based on the best estimate. It is reasonably possible that the actual cost of remediation of the individual sites could vary from the current estimates and the amounts accrued in the consolidated financial statements; however, the amounts of such variances are not expected to result in a material change to the consolidated financial statements. In estimating the Company's liability for remediation, the Company also considers the likely proportionate share of the anticipated remediation expense and the ability of the other PRPs to fulfill their obligations.

Total environmental reserves at December 31, 2021 and 2020 were $37.2 million and $32.4 million, respectively, for both non-owned and owned sites. In 2021, the Company recorded $12.1 million in reserves. Additionally, in 2021 the Company spent $7.3 million on environmental matters.

The Company has agreements with other former owners of certain of its acquired businesses, as well as new owners of previously owned businesses. Under certain of the agreements, the former or new owners retained, or assumed and agreed to indemnify the Company against, certain environmental and other liabilities under certain circumstances. The Company and some of these other parties also carry insurance coverage for some environmental matters.

The Company believes it has established reserves for the environmental matters described above, which are sufficient to perform all known responsibilities under existing claims and consent orders. In the opinion of management, based on presently available information and the Company's historical experience related to such matters, an adequate provision for probable costs has been made and the ultimate cost resulting from these actions is not expected to materially affect the consolidated results of operations, financial position or cash flows of the Company.

14. Leases and Other Commitments

Leases

The Company determines if an arrangement is a lease at inception. This determination generally depends on whether the arrangement conveys to the Company the right to control the use of an explicitly or implicitly identified fixed asset for a period of time in exchange for consideration. Control of an underlying asset is conveyed to the Company if the Company obtains the rights to direct the use of and to obtain substantially all of the economic benefits from using the underlying asset. The Company has lease agreements which include lease and non-lease components, which the Company has elected to account for as a single lease component for all classes of underlying assets. Lease expense for variable lease components are recognized when the obligation is probable.

Operating leases are included in right-of-use ("ROU") assets, accrued liabilities and other, and other long-term liabilities on our consolidated balance sheets. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. Operating lease payments are recognized as lease expense on a straight-line basis over the lease term. The Company has no finance leases. The Company primarily leases buildings (real estate) and automobiles which are classified as operating leases. ASC 842 requires a lessee to discount its unpaid lease payments using the interest rate implicit in the lease or, if that rate cannot be readily determined, its incremental borrowing rate. As an implicit interest rate is not readily determinable in our leases, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments.

The lease term for all of the Company's leases includes the non-cancellable period of the lease plus any additional periods covered by either a Company option to extend (or not to terminate) the lease that the Company is reasonably certain to exercise, or an option to extend (or not to terminate) the lease controlled by the lessor. Options for lease renewals have been excluded from the lease term (and lease liability) for the majority of the Company's leases as the reasonably certain threshold is not met. In a small number of the Company's leases, the options for renewals have been included in the lease term as the reasonably certain threshold is met due to the Company having significant economic incentive for extending the lease.

Lease payments included in the measurement of the lease liability are comprised of fixed payments, variable payments that depend on an index or rate and amounts probable to be payable under the exercise of the Company option to purchase the underlying asset if reasonably certain.

Variable lease payments not dependent on a rate or index associated with the Company's leases are recognized when the events, activities, or circumstances in the lease agreement on which those payments are assessed are probable. Variable lease payments are presented as operating expense in the Company's income statement in the same line item as expense arising from fixed lease payments. Cash used in operations for operating leases is not materially different than total lease costs.

The Company has commitments under operating leases for certain facilities, vehicles and equipment used in its operations. Our leases have initial lease terms ranging from 1 month to 16 years, with the exception of a single land lease with 62 years remaining. Certain lease agreements contain provisions for future rent increases.

The components of lease expense were as follows:

	2021	2020	2019
	(In thousands)		
Operating lease cost	**$ 61,680**	$ 44,498	$ 45,438
Variable lease cost	**7,724**	4,526	7,813
Total lease cost	**$ 69,404**	$ 49,024	$ 53,251

Supplemental balance sheet information related to leases was as follows:

	December 31,	
	2021	2020
	(In thousands)	
Right of use assets, net	**$ 169,924**	$ 167,233
Lease liabilities included in Accrued liabilities and other	**47,353**	44,948
Lease liabilities included in Other long-term liabilities	**129,101**	128,173
Total lease liabilities	**$ 176,454**	$ 173,121

Supplemental cash flow information and other information related to leases was as follows for the year ended December 31:

	2021	2020
	(In thousands)	
Right-of-use assets obtained in exchange for new operating liabilities	$ 64,653	$ 35,923
Weighted-average remaining lease terms – operating leases (years)	5.36	5.44
Weighted-average discount rate – operating leases	2.91 %	3.40 %

Maturities of lease liabilities as of December 31, 2021 were as follows:

Lease Liability Maturity Analysis	Operating Leases
	(In thousands)
2022	$ 50,854
2023	41,993
2024	30,070
2025	22,186
2026	15,638
Thereafter	30,839
Total lease payments	191,580
Less: imputed interest	15,126
	$ 176,454

The Company does not have any significant leases that have not yet commenced.

Other Commitments

As of December 31, 2021, and 2020, the Company had $890.9 million and $494.1 million, respectively, in purchase obligations outstanding, which primarily consisted of contractual commitments to purchase certain inventories at fixed prices.

The Company does not provide significant guarantees on a routine basis. The Company primarily issues guarantees, stand-by letters of credit and surety bonds in the ordinary course of its business to provide financial or performance assurance to third parties on behalf of its consolidated subsidiaries to support or enhance the subsidiary's stand-alone creditworthiness. The amounts subject to certain of these agreements vary depending on the covered contracts outstanding at any particular point in time. At December 31, 2021, the maximum amount of future payment obligations relative to these various guarantees was $107.9 million and the outstanding liability under certain of those guarantees was $1.0 million.

15. Reportable Segments and Geographic Areas Information

Descriptive Information about Reportable Segments

The Company has two reportable segments, EIG and EMG. The Company's operating segments are identified based on the existence of segment managers. Certain of the Company's operating segments have been aggregated for segment reporting purposes primarily on the basis of product type, production processes, distribution methods and similarity of economic characteristics.

EIG manufactures advanced instruments for the process, power and industrial, and aerospace markets. It provides process and analytical instruments for the oil and gas, petrochemical, pharmaceutical, semiconductor, automation, and food and beverage industries. EIG also provides instruments to the laboratory equipment, ultra-precision manufacturing, medical, and test and measurement markets. It makes power quality monitoring and metering devices, uninterruptible power supplies, programmable power equipment, electromagnetic compatibility test equipment and gas turbines sensors. EIG also provides dashboard instruments for heavy trucks and other vehicles, as well as instrumentation and controls for the food and beverage industries. It supplies the aerospace industry with aircraft and engine sensors, monitoring systems, power supplies, fuel and fluid measurement systems, and data acquisition systems.

EMG is a differentiated supplier of automation solutions, thermal management systems, specialty metals and electrical interconnects. It manufactures highly engineered electrical connectors and electronic packaging used to protect sensitive electronic devices. EMG also makes precision motion control products for data storage, medical devices, business equipment, automation and other applications. It supplies high-purity powdered metals, strip and foil, specialty clad metals and metal matrix composites. EMG also manufactures motors used in commercial appliances, fitness equipment, food and beverage machines, hydraulic pumps and industrial blowers. It produces motor-blower systems and heat exchangers used in thermal management and other applications on a variety of military and commercial aircraft and military ground vehicles. EMG also operates a global network of aviation maintenance, repair and overhaul facilities.

Measurement of Segment Results

Segment operating income represents net sales less all direct costs and expenses (including certain administrative and other expenses) applicable to each segment but does not include interest expense. Net sales by segment are reported after elimination of intra- and inter-segment sales and profits, which are insignificant in amount. Reported segment assets include allocations directly related to the segment's operations. Corporate assets consist primarily of investments, prepaid pensions, insurance deposits and deferred taxes.

Reportable Segment Financial Information

	2021	2020	2019
		(In thousands)	
Operating income and income before income taxes:			
Segment operating income:			
Electronic Instruments	**$ 958,183**	$ 770,620	$ 865,307
Electromechanical	**437,378**	324,962	387,931
Total segment operating income	**1,395,561**	1,095,582	1,253,238
Corporate administrative expenses	**(86,891)**	(67,698)	(75,858)
Consolidated operating income	**1,308,670**	1,027,884	1,177,380
Interest and other income (expenses), net	**(85,500)**	54,425	(107,632)
Consolidated income before income taxes	**$ 1,223,170**	$ 1,082,309	$ 1,069,748
Assets:			
Electronic Instruments	**$ 8,672,711**	$ 6,554,414	
Electromechanical	**2,638,773**	2,646,985	
Total segment assets	**11,311,484**	9,201,399	
Corporate	**586,703**	1,156,084	
Consolidated assets	**$ 11,898,187**	$ 10,357,483	
Additions to property, plant and equipment[(1)]:			
Electronic Instruments	**$ 168,267**	$ 48,638	$ 74,994
Electromechanical	**34,586**	26,381	42,924
Total segment additions to property, plant and equipment	**202,853**	75,019	117,918
Corporate	**10,417**	1,007	4,770
Consolidated additions to property, plant and equipment	**$ 213,270**	$ 76,026	$ 122,688
Depreciation and amortization:			
Electronic Instruments	**$ 210,118**	$ 174,494	$ 153,111
Electromechanical	**79,497**	78,297	78,664
Total segment depreciation and amortization	**289,615**	252,791	231,775
Corporate	**2,497**	2,484	2,267
Consolidated depreciation and amortization	**$ 292,112**	$ 255,275	$ 234,042

(1) Includes $102.6 million in 2021, $1.8 million in 2020 and $20.3 million in 2019 from acquired businesses.

Geographic Areas

Information about the Company's operations in different geographic areas for the years ended December 31, 2021 and 2020 is shown below.

	2021	2020
	(In thousands)	
Long-lived assets from continuing operations (excluding intangible assets):		
United States	**$ 416,323**	$ 344,535
International[1]:		
United Kingdom	**74,525**	55,519
European Union countries	**87,117**	82,256
Asia	**11,971**	14,066
Other foreign countries	**27,202**	30,154
Total international	**200,815**	181,995
Total consolidated	**$ 617,138**	$ 526,530

(1) Represents long-lived assets of foreign-based operations only.

16. Additional Consolidated Income Statement and Cash Flow Information

Included in other income (expense), net are interest and other investment income of $2.0 million, $2.7 million and $4.6 million for 2021, 2020 and 2019, respectively. Income taxes paid in 2021, 2020 and 2019 were $245.5 million, $210.4 million and $221.6 million, respectively. Cash paid for interest was $78.7 million, $86.2 million and $84.9 million in 2021, 2020 and 2019, respectively.

17. Stockholders' Equity

In 2020, the Company repurchased approximately 55,000 shares of its common stock for $4.7 million in cash under its share repurchase authorization. In 2021, the Company repurchased approximately 113,000 shares of its common stock for $14.7 million in cash under its share repurchase authorization. At December 31, 2021, $469.7 million was available under the Company's Board of Directors authorization for future share repurchases.

Effective February 11, 2021, the Company's Board of Directors approved an 11% increase in the quarterly cash dividend on the Company's common stock to $0.20 per common share from $0.18 per common share.

At December 31, 2021, the Company held 36,137,864 shares in its treasury at a cost of $1,573.0 million, compared with 36,227,061 shares at a cost of $1,565.3 million at December 31, 2020. The number of shares outstanding at December 31, 2021 was 231.7 million shares, compared with 230.5 million shares at December 31, 2020.

Subsequent Event

Effective February 9, 2022, the Company's Board of Directors approved a 10% increase in the quarterly cash dividend on the Company's common stock to $0.22 per common share from $0.20 per common share.

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

None.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

The Company maintains a system of disclosure controls and procedures that is designed to provide reasonable assurance that information, which is required to be disclosed, is accumulated and communicated to management in a timely manner. Under the supervision and with the participation of our management, including the Company's principal executive officer and principal financial officer, we have evaluated the effectiveness of our system of disclosure controls and procedures as required by Exchange Act Rule 13a-15(b) as of December 31, 2021. Based on that evaluation, the Company's principal executive officer and principal financial officer concluded that the Company's disclosure controls and procedures are effective at the reasonable assurance level.

Such evaluation did not identify any change in the Company's internal control over financial reporting during the quarter ended December 31, 2021 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Internal Control over Financial Reporting

Management's report on the Company's internal controls over financial reporting is included in Part II, Item 8 of this Annual Report on Form 10-K.The report of the independent registered public accounting firm with respect to the effectiveness of internal control over financial reporting is included in Part II, Item 8 of this Annual Report on Form 10-K.

Item 9B. Other Information

None

PART III

Item 10. Directors, Executive Officers and Corporate Governance

a) Directors of the Registrant.

Information with respect to Directors of the Company is set forth under the heading “Election of Directors” in the Company’s Proxy Statement for the 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

b) Executive Officers of the Registrant.

Information with respect to executive officers of the Company is set forth under the heading “Executive Officers” in the Company’s Proxy Statement for the 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

c) Section 16(a) Compliance.

Information concerning compliance with Section 16(a) of the Securities Exchange Act of 1934 is set forth under the heading “Delinquent Section 16(a) Reports” in the Company’s Proxy Statement for the 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

d) Identification of the Audit Committee.

Information concerning the audit committee of the Company is set forth under the heading “Committees of the Board” in the Company’s Proxy Statement for the 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

e) Audit Committee Financial Experts.

Information concerning the audit committee financial experts of the Company is set forth under the heading “Committees of the Board” in the Company’s Proxy Statement for the 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

f) Corporate Governance/Nominating Committee.

Information concerning any material changes to the way in which security holders may recommend nominees to the Company’s Board of Directors is set forth under the heading “Stockholder Proposals and Director Nominations for the 2023 Annual Meeting” in the Company’s Proxy Statement for the 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

g) Code of Ethics for Chief Executive Officer and Senior Financial Officers.

The Company has adopted a Code of Ethics for the principal executive officer, principal financial officer and principal accounting officer, which may be found on the Company’s website at www.ametek.com. Any amendments to the Code of Ethics or any grant of a waiver from the provisions of the Code of Ethics requiring disclosure under applicable U.S. Securities and Exchange Commission rules will be disclosed on the Company’s website.

Item 11. Executive Compensation

Information regarding executive compensation, including the “Compensation Discussion and Analysis,” the “Compensation Committee Report,” “Compensation Tables” and “Potential Payments Upon Termination or Change of Control" is set forth under the heading "Executive Compensation" in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

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

Information regarding security ownership of certain beneficial owners and management appearing under "Stock Ownership of Executive Officers and Directors" and "Beneficial Ownership of Principal Stockholders" in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders is incorporated herein by reference.

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

Information appearing under "Certain Relationships and Related Transactions" and "Independence" in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

Information appearing under "Ratification of Appointment of Independent Registered Public Accounting Firm" in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) Financial Statements:

Financial statements are shown in the Index to Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

(a)(2) Financial Statement Schedules:

Financial statement schedules have been omitted because either they are not applicable or the required information is included in the financial statements or the notes thereto.

(a)(3) Exhibits:

Exhibit Number	Description	Incorporated Herein by Reference to
3.1	Conformed Copy of Amended and Restated Certificate of Incorporation of AMETEK, Inc. as amended to and including May 9, 2019.	Exhibit 3.1 to Form 8-K, dated May 13, 2019, SEC File No. 1-12981.
3.2	By-Laws of AMETEK, Inc. as amended to and including November 9, 2018.	Exhibit 3.2 to Form 10-Q dated March 31, 2020, SEC File No. 1-12981.
4.3†	AMETEK, Inc. 2011 Omnibus Incentive Compensation Plan, dated as of May 3, 2011 (the “2011 Plan”).	Exhibit 4 to Form S-8 dated May 6, 2011, SEC File No. 1-12981.
4.4†	Amendment No. 1 to the 2011 Plan.	Exhibit 4.5 to 2012 Form 10-K, SEC File No. 1-12981.
4.5†	AMETEK, Inc. 2020 Omnibus Incentive Compensation Plan	Exhibit 4.3 to Form S-8 dated May 8, 2020, No. 1-12981
10.1†	AMETEK, Inc. Retirement Plan for Directors, amended and restated effective January 1, 2005.	Exhibit 10.4 to Form 10-Q dated September 30, 2007, SEC File No. 1-12981.
10.2†	AMETEK, Inc. Director’s Deferred Compensation Plan, amended and restated as of October 1, 2018.	Exhibit 10.1 to Form 10-Q dated September 30, 2018, SEC File No. 1-12981.
10.3†	AMETEK, Inc. Deferred Compensation Plan, amended and restated as of June 15, 2018.	Exhibit 10.1 to Form 10-Q dated June 30, 2018, SEC File No. 1-12981.
10.5†	AMETEK, Inc. 2004 Executive Death Benefit Plan, amended and restated effective January 1, 2017.	Exhibit 10.5 to 2016 Form 10-K, SEC File No. 1-12981.
10.6†	AMETEK, Inc. Directors’ Death Benefit Plan, effective January 1, 2005.	Exhibit 10.3 to Form 10-Q dated September 30, 2007, SEC File No. 1-12981.
10.7†	Form of Executive Change of Control Separation Agreement between AMETEK, Inc. and a named executive.	Exhibit 10.7 to Form 10-Q dated September 30, 2007, SEC File No. 1-12981.

Exhibit Number	Description	Incorporated Herein by Reference to
10.8†	Termination and Change of Control Agreement between AMETEK, Inc. and a named executive, dated May 8, 2017.	Exhibit 10.1 to Form 10-Q dated March 31, 2017, SEC File No. 1-12981.
10.9†	AMETEK, Inc. Retirement and Savings Plan, amended and restated as of September 4, 2018.	Exhibit 10.2 to Form 10-Q dated September 30, 2018, SEC File No. 1-12981.
10.10†	AMETEK, Inc. Supplemental Executive Retirement Plan, amended and restated as of October 1, 2018.	Exhibit 10.3 to Form 10-Q dated September 30, 2018, SEC File No. 1-12981.
10.11†	Form of Performance Restricted Stock Unit Agreement for Chief Executive Officer.	Exhibit 10.1 to Form 10-Q dated March 31, 2018, SEC File No. 1-12981.
10.12†	Form of Performance Restricted Stock Unit Agreement.	Exhibit 10.2 to Form 10-Q dated March 31, 2018, SEC File No. 1-12981.
10.13†	AMETEK, Inc. 2011 Omnibus Incentive Compensation Plan, Form of Restricted Stock Agreement for non-employee Directors.	Exhibit 10.1 to Form 8-K dated May 8, 2018, SEC File No. 1-12981.
10.14†	AMETEK, Inc. 2011 Omnibus Incentive Compensation Plan, Form of Restricted Stock Agreement for Chief Executive Officer.	Exhibit 10.2 to Form 8-K dated May 8, 2018, SEC File No. 1-12981.
10.15†	AMETEK, Inc. 2011 Omnibus Incentive Compensation Plan, Form of Restricted Stock Agreement for Employees.	Exhibit 10.3 to Form 8-K dated May 8, 2018, SEC File No. 1-12981.
10.16†	AMETEK, Inc. 2011 Omnibus Incentive Compensation Plan, Form of Global Non-Qualified Stock Option Agreement for Employees.	Exhibit 10.4 to Form 8-K dated May 8, 2018, SEC File No. 1-12981.
10.17	Amended and Restated Credit Agreement as of September 22, 2011, as amended and restated as of March 10, 2016, and as further amended and restated as of October 30, 2018, among AMETEK, Inc., the Foreign Subsidiary Borrowers Party Hereto, the Lenders Party Hereto, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A., PNC Bank, National Association, SunTrust Bank and Wells Fargo Bank, National Association, as Co-Syndication Agents, and U.S. Bank National Association, Mizuho Bank (USA), BNP Paribas, National Westminster Bank Plc and Commerzbank AG, New York Branch, as Co-Documentation Agents.	Exhibit 10.4 to Form 10-Q dated September 30, 2018, SEC File No. 1-12981.

Exhibit Number	Description	Incorporated Herein by Reference to
10.18	Amendment No. 1 to Amended and Restated Credit Agreement, dated April 26, 2021, by and among AMETEK, Inc., AMETEK European Holdings Limited, AMETEK Canada Limited Partnership and AMETEK Material Analysis Holdings GmbH as Foreign Subsidiary Borrowers, with the lenders from time to time party thereto and JPMorgan Chase Bank, N.A., as Administrative Agent and Bank of America, N.A., PNC Bank, National Association, Truist Bank and Wells Fargo Bank, National Association, as Co-Syndication Agents.	Exhibit 10.1 to Form 8-K dated April 29, 2021, SEC File No. 1-12981
10.19*	Amendment No. 2 to Amended and Restated Credit Agreement, dated November 18, 2021.	
10.24	AMETEK, Inc. Note Purchase Agreement, as of September 30, 2014.	Exhibit 10.1 to Form 8-K dated October 2, 2014, SEC File No. 1-12981.
10.25	Amendment No. 1 to Note Purchase Agreement, as of September 30, 2014.	Exhibit 10.1 to Form 10-Q dated September 30, 2016, SEC File No. 1-12981.
10.26	AMETEK, Inc. Note Purchase Agreement, as of October 31, 2016.	Exhibit 10.1 to Form 8-K dated November 2, 2016, SEC File No. 1-12981.
10.27	AMETEK, Inc. 2018 Note Purchase Agreement, dated as of December 13, 2018.	Exhibit 10.1 to Form 8-K dated December 13, 2018, SEC File No. 1-12981.
10.28	AMETEK, Inc. 2020 Omnibus Incentive Compensation Plan Form of Performance Restricted Stock Unit Award for Chief Executive Officer	Exhibit 10.1 to Form 10-Q dated March 31, 2021, SEC File No. 1-12981.
10.29	AMETEK, Inc. 2020 Omnibus Incentive Compensation Plan Form of Performance Restricted Stock Unit Award	Exhibit 10.2 to Form 10-Q dated March 31, 2021, SEC File No. 1-12981.
10.30	AMETEK, Inc. 2020 Omnibus Incentive Compensation Plan Form of Restricted Stock Award for Chief Executive Officer	Exhibit 10.3 to Form 10-Q dated March 31, 2021, SEC File No. 1-12981.
10.31	AMETEK, Inc. 2020 Omnibus Incentive Compensation Plan Form of Restricted Stock Award for Non-Employee Directors	Exhibit 10.4 to Form 10-Q dated March 31, 2021, SEC File No. 1-12981.
10.32	AMETEK, Inc. 2020 Omnibus Incentive Compensation Plan Form of Restricted Stock Award	Exhibit 10.5 to Form 10-Q dated March 31, 2021, SEC File No. 1-12981.
10.33	AMETEK, Inc. 2020 Omnibus Incentive Compensation Plan Form of Global Non-Qualified Stock Option Award for Chief Executive Officer	Exhibit 10.6 to Form 10-Q dated March 31, 2021, SEC File No. 1-12981.
10.34	AMETEK, Inc. 2020 Omnibus Incentive Compensation Plan Form of Global Non-Qualified Stock Option Award	Exhibit 10.7 to Form 10-Q dated March 31, 2021, SEC File No. 1-12981.
21*	Subsidiaries of the Registrant.	
23*	Consent of Independent Registered Public Accounting Firm.	

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Exhibit Number	Description	Incorporated Herein by Reference to
31.1*	Certification of Chief Executive Officer, Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	
31.2*	Certification of Chief Financial Officer, Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	
32.1*	Certification of Chief Executive Officer, Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	
32.2*	Certification of Chief Financial Officer, Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	
101.INS*	XBRL Instance Document.	
101.SCH*	XBRL Taxonomy Extension Schema Document.	
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document.	
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document.	
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document.	
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document.	
104	Cover Page Interactive Date File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibit 101).	

† Management contract or compensatory plan required to be filed pursuant to Item 601 of Regulation S-K.
* Filed electronically 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.

AMETEK, Inc.

By: /s/ DAVID A. ZAPICO
David A. Zapico
Chief Executive Officer

Date : February 22, 2022

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ DAVID A. ZAPICO David A. Zapico	Chairman of the Board of Directors and Chief Executive Officer (Principal Executive Officer)	February 22, 2022
/s/ WILLIAM J. BURKE William J. Burke	Executive Vice President – Chief Financial Officer (Principal Financial Officer)	February 22, 2022
/s/ THOMAS M. MONTGOMERY Thomas M. Montgomery	Senior Vice President – Comptroller (Principal Accounting Officer)	February 22, 2022
/s/ THOMAS A. AMATO Thomas A. Amato	Director	February 22, 2022
/s/ TOD E. CARPENTER Tod E. Carpenter	Director	February 22, 2022
/s/ ANTHONY J. CONTI Anthony J. Conti	Director	February 22, 2022
/s/ STEVEN W. KOHLHAGEN Steven W. Kohlhagen	Director	February 22, 2022
/s/ GRETCHEN W. MCCLAIN Gretchen W. McClain	Director	February 22, 2022
/s/ KARLEEN M. OBERTON Karleen M. Oberton	Director	February 22, 2022

Exhibit 10.19

EXECUTION COPY

AMENDMENT NO. 2

Dated as of November 18, 2021 to

AMENDED AND RESTATED CREDIT AGREEMENT

Dated as of September 22, 2011
as amended and restated as of March 10, 2016
and as further amended and restated as of October 30, 2018

THIS AMENDMENT NO. 2 (this "Amendment") is made as of November 18, 2021 by and among AMETEK, INC. (the "Company") and JPMORGAN CHASE BANK, N.A., in its capacity as administrative agent for the Lenders (the "Administrative Agent"), under that certain Amended and Restated Credit Agreement dated as of September 22, 2011, as amended and restated as of March 10, 2016 and as further amended and restated as of October 30, 2018, by and among the Borrowers, the Lenders from time to time party thereto and the Administrative Agent (as amended, restated, supplemented or otherwise modified from time to time prior to the date hereof, the "Credit Agreement"). Capitalized terms used herein and not otherwise defined herein shall have the respective meanings given to them in the Amended Credit Agreement (as defined below).

WHEREAS, the Company and the Administrative Agent have determined that one or more of the circumstances described in Section 2.14(c) of the Credit Agreement have arisen;

WHEREAS, pursuant to the terms of Section 2.14(c) of the Credit Agreement, the Company and the Administrative Agent have agreed to amend the Credit Agreement to establish an alternate rate of interest to the LIBO Rate for euro and Swiss Francs that gives due consideration to the currently prevailing market convention for determining a rate of interest for euro and Swiss Francs for syndicated loans in the United States currently, and to make such other related changes as may be applicable, all on the terms and conditions set forth herein;

NOW, THEREFORE, in consideration of the premises set forth above, the terms and conditions contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and the Administrative Agent hereby agree to enter into this Amendment.

1. Amendments to the Credit Agreement. Effective as of 12:00 a.m., New York time, on January 1, 2022 (following the date of satisfaction of the conditions precedent set forth in Section 2 below), the parties hereto agree that the Credit Agreement shall be amended to delete the stricken text (indicated textually in the same manner as the following example: ~~stricken text~~) and to add the double-underlined text (indicated textually in the same manner as the following example: **double-underlined text**) as set forth in the pages of the Credit Agreement attached as Annex A hereto (the Credit Agreement as so amended, the "Amended Credit Agreement").

2. Conditions of Effectiveness. The effectiveness of this Amendment (which shall occur at 12:00 a.m., New York City time, on November 30, 2021, unless the Administrative Agent shall have received prior to 5:00 p.m., New York City time, on the fifth (5th) Business Day after the date of this

Amendment written notice of objection to this Amendment from Lenders comprising the Required Lenders) is subject to the satisfaction of the following conditions precedent:

(a) The Administrative Agent (or its counsel) shall have received counterparts of this Amendment duly executed by the Company and the Administrative Agent.

(b) The Administrative Agent shall have received payment of the Administrative Agent's and its affiliates' fees and reasonable and documented out-of-pocket expenses (including reasonable and documented fees, charges and expenses of counsel for the Administrative Agent) for which invoices have been provided to the Company at least two (2) Business Days prior to the date hereof in connection with this Amendment and the other Loan Documents to the extent provided for in Section 9.03 of the Amended Credit Agreement.

3. Representations and Warranties of the Company. The Company hereby represents and warrants as follows:

(a) This Amendment and the Amended Credit Agreement are within each Borrower's organizational powers and have been duly authorized by all necessary organizational actions and, if required, actions by equity holders, and this Amendment has been duly executed and delivered by the Company.

(b) This Amendment and the Amended Credit Agreement constitute legal, valid and binding obligations of each Borrower, enforceable in accordance with their respective terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium or other laws affecting creditors' rights generally and subject to general principles of equity, regardless of whether considered in a proceeding in equity or at law.

(c) As of the date hereof and after giving effect to the terms of this Amendment, (i) no Default or Event of Default has occurred and is continuing and (ii) the representations and warranties of each Borrower set forth in the Amended Credit Agreement are true and correct in all material respects (or, in the case of any representation or warranty qualified by materiality or Material Adverse Effect, in all respects) (except to the extent any such representation or warranty expressly relates to any earlier and/or specific date, in which case such representation and warranty shall be true and correct in all material respects (or, in the case of any representation or warranty qualified by materiality or Material Adverse Effect, in all respects) as of such earlier and/or specific date).

4. Reference to and Effect on the Credit Agreement.

(a) From and after the effectiveness of the amendment to the Credit Agreement evidenced hereby, the terms "Agreement", "this Agreement", "herein", "hereinafter", "hereto", "hereof" and words of similar import, as used in the Amended Credit Agreement, shall, unless the context otherwise requires, refer to the Amended Credit Agreement, and the term "Credit Agreement", as used in the other Loan Documents, shall mean the Amended Credit Agreement.

(b) The Company, for itself and on behalf of each Borrower, consents to this Amendment and reaffirms the terms and conditions of the Amended Credit Agreement and any other Loan Document executed by it and acknowledges and agrees that such Amended Credit Agreement and each and every such Loan Document executed by such Borrower in connection with the Amended Credit Agreement remains in full force and effect and is hereby reaffirmed, ratified and confirmed.

(c) The execution, delivery and effectiveness of this Amendment shall not operate as a waiver of any right, power or remedy of the Administrative Agent or the Lenders, nor constitute a waiver of any provision of the Credit Agreement, the other Loan Documents or any other documents, instruments and agreements executed and/or delivered in connection therewith.

(d) This Amendment is a Loan Document under (and as defined in) the Amended Credit Agreement.

5. Governing Law; Jurisdiction. This Amendment shall be construed in accordance with and governed by the law of the State of New York. Each of the parties hereto hereby irrevocably and unconditionally submits, for itself and its property, to the exclusive jurisdiction of the United States District Court for the Southern District of New York sitting in the Borough of Manhattan (or if such court lacks subject matter jurisdiction, the Supreme Court of the State of New York sitting in the Borough of Manhattan), and any appellate court from any thereof, in any action or proceeding arising out of or relating to this Amendment, the Amended Credit Agreement or any other Loan Document or the transactions relating hereto or thereto, or for recognition or enforcement of any judgment, and each of the parties hereto hereby irrevocably and unconditionally agrees that all claims in respect of any such action or proceeding may (and any such claims, cross-claims or third party claims brought against the Administrative Agent or any of its Related Parties may only) be heard and determined in such Federal (to the extent permitted by law) or New York State court. Each of the parties hereto agrees that a final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law. Nothing in this Amendment, the Amended Credit Agreement or in any other Loan Document shall affect any right that the Administrative Agent, any Issuing Bank or any Lender may otherwise have to bring any action or proceeding relating to this Amendment, the Amended Credit Agreement or any other Loan Document against any Borrower or its properties in the courts of any jurisdiction.

6. Headings. Section headings used herein are for convenience of reference only, are not part of this Amendment and shall not affect the construction of, or be taken into consideration in interpreting, this Amendment.

7. Counterparts. This Amendment may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. The words “execution,” “signed,” “signature,” “delivery,” and words of like import in or relating to this Amendment and/or any document to be signed in connection with this Amendment and the transactions contemplated hereby shall be deemed to include Electronic Signatures (as defined below), deliveries or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature, physical delivery thereof or the use of a paper-based recordkeeping system, as the case may be. As used herein, “Electronic Signatures” means any electronic symbol or process attached to, or associated with, any contract or other record and adopted by a person with the intent to sign, authenticate or accept such contract or record.

[Signature Pages Follow]

IN WITNESS WHEREOF, this Amendment has been duly executed as of the day and year first above written.

AMETEK, Inc.,
as the Company

By: /s/ KEVIN C. COLEMAN
Name: Kevin C. Coleman
Title: Vice President - Investor Relations and Treasurer

JPMORGAN CHASE BANK, N.A.,
as Administrative Agent

By: /s/ PETER PREDUN
Name: Peter Predun
Title: Executive Director

ANNEX A

Attached

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(continued)

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(continued)

"ABR" when used in reference to any Loan or Borrowing, refers to such Loan, or the Loans comprising such Borrowing, bearing interest at a rate determined by reference to the Alternate Base Rate.

"Adjusted Covenant Period" has the meaning assigned to such term in Section 6.07(a).

"Adjusted CDOR Rate" means, with respect to any Eurocurrency Borrowing denominated in Canadian Dollars for any Interest Period, an interest rate per annum equal to (a) the CDOR Rate for such Interest Period multiplied by (b) the Statutory Reserve Rate.

"Adjusted EURIBO Rate" means, with respect to any Eurocurrency Borrowing denominated in euro for any Interest Period, an interest rate per annum equal to (a) the EURIBO Rate for such Interest Period multiplied by (b) the Statutory Reserve Rate.

"Adjusted LIBO Rate" means, with respect to any Eurocurrency Borrowing for any Interest Period, an interest rate per annum (rounded upwards, if necessary, to the next 1/16 of 1%) equal to ~~(a)~~ in the case of any Eurocurrency Borrowing denominated in a LIBOR Quoted Currency, (i) the LIBO Rate for such Interest Period multiplied by (ii) the Statutory Reserve Rate ~~and (b) in the case of any Eurocurrency Borrowing denominated in Canadian Dollars, the CDOR Rate for such Interest Period~~.

"Administrative Agent" means JPMorgan Chase Bank, N.A. (including its branches and affiliates), in its capacity as administrative agent for the Lenders hereunder.

"Administrative Questionnaire" means an Administrative Questionnaire in a form supplied by the Administrative Agent.

"Affected Financial Institution" means (a) any EEA Financial Institution or (b) any UK Financial Institution.

"Affiliate" means, with respect to a specified Person, another Person that directly, or indirectly through one or more intermediaries, Controls or is Controlled by or is under common Control with the Person specified.

"Agreed Currencies" means (i) Dollars, (ii) euro, (iii) Pounds Sterling, (iv) Canadian Dollars, (v) Japanese Yen, (vi) Swiss Francs and (vii) any other currency (x) that is a lawful currency (other than Dollars) that is readily available and freely transferable and convertible into Dollars~~,~~ **and** (y) ~~for which a LIBO Screen Rate is available in the Administrative Agent's determination and (z)~~ that is agreed to by the Administrative Agent and each of the Revolving Lenders, and with respect to any Letter of Credit, any other currency other than Dollars which is approved by the Issuing Bank in respect of such Letter of Credit and the Administrative Agent prior to the issuance of such Letter of Credit.

"Agreement" has the meaning assigned to such term in the introductory paragraph.

"Alternate Base Rate" means, for any day, a rate per annum equal to the greatest of

(a) the Prime Rate in effect on such day, (b) the NYFRB Rate in effect on such day plus ½ of 1% and

(c) the Adjusted LIBO Rate for a one month Interest Period in Dollars on such day (or if such day is not a Business Day, the immediately preceding Business Day) plus 1%, provided that for the purpose of this definition, the Adjusted LIBO Rate for any day shall be based on the LIBO Screen Rate (or if the LIBO Screen Rate is not available for such one month Interest Period, the **LIBO** Interpolated Rate) at approximately 11:00 a.m. London time on such day. Any change in the Alternate Base Rate due to a change in the Prime Rate, the NYFRB Rate or the Adjusted LIBO Rate shall be effective from and including the effective date of such change in the Prime Rate, the NYFRB Rate or the Adjusted LIBO Rate, respectively. If the Alternate Base Rate is being used as an alternate rate of interest pursuant to Section 2.14 hereof, then the Alternate Base Rate shall be the greater of clauses (a) and (b) above and shall be determined without reference to clause (c) above. For the avoidance of doubt, if the Alternate Base Rate as determined pursuant to the foregoing would be less than 1.00%, such rate shall be deemed to be 1.00% for purposes of this Agreement.

~~**"Alternative Rate" has the meaning assigned to such term in Section 2.14(a).**~~

"Amendment No. 1 Effective Date" means April 26, 2021.

"Ancillary Document" has the meaning assigned to such term in Section 9.06.

"Anti-Corruption Laws" means all laws, rules, and regulations of any jurisdiction applicable to the Company or its Subsidiaries from time to time concerning or relating to bribery or corruption.

"Anti-Money Laundering Laws" means any and all laws, statutes, regulations or obligatory government orders, decrees, ordinances or rules applicable to a Credit Party, its Subsidiaries or Affiliates related to terrorism financing or money laundering, including any applicable provision of the Patriot Act and The Currency and Foreign Transactions Reporting Act (also known as the "Bank Secrecy Act," 31 U.S.C. §§ 5311-5330 and 12U.S.C. §§ 1818(s), 1820(b) and 1951-1959).

"Applicable Party" has the meaning assigned to such term in Section 8.03(c). "Applicable

Percentage" means, with respect to any Lender, (a) with respect to

Revolving Loans or LC Exposure, the percentage equal to a fraction, the numerator of which is such Lender's Revolving Commitment and the denominator of which is the aggregate Revolving Commitments of all Revolving Lenders (if the Revolving Commitments have terminated or expired, the Applicable Percentages shall be determined based upon the Revolving Commitments most recently in effect, giving effect to any assignments), and (b) with respect to the Term Loans, (i) at any time prior to funding any of the Term Loans, a percentage equal to a fraction, the numerator of which is such Lender's Term Loan Commitment and the denominator of which is the aggregate Term Loan Commitments of all Term Lenders, (ii) at any time after funding any of the Term Loans but while any Term Loan Commitments remain outstanding, a percentage equal to a fraction, the numerator of which is such Lender's Term Loan Commitment plus such Lender's outstanding principal amount of the Term Loans and the denominator of which is the aggregate Term Loan Commitments of all Term Lenders plus the aggregate outstanding amount of the Term Loans of all Term Lenders, and (iii) at any time after the funding of the Term Loans and the termination of the Term Loan Commitments, a percentage equal to a fraction, the numerator of which is such Lender's outstanding principal amount of the Term Loans and the denominator of which is the aggregate outstanding amount of the Term Loans of all Term Lenders; provided that, in the case of each of the foregoing clauses (a) and (b), in the case of Section 2.25 when a Defaulting Lender shall exist, any such Defaulting Lender's Revolving Commitment and/or Term Loan Commitment, as applicable, shall be disregarded in the calculation.

"Applicable Rate" means, for any day, with respect to any Eurocurrency Revolving Loan, any Eurocurrency Term Loan, any **RFR Loan, any** ABR Revolving Loan, any ABR Term Loan or with respect to the facility fees payable hereunder, as the case may be, the applicable rate per annum set forth below under the caption "Eurocurrency Spread for Revolving Loans", "Eurocurrency Spread for Term Loans", "**RFR Spread for Revolving Loans", "**ABR Spread for Revolving Loans", "ABR Spread for

Term Loans" or "Facility Fee Rate", as the case may be, based upon the Pricing Level applicable on such date:

Pricing Level	Facility Fee Rate	Eurocurrency Spread for Revolving Loans	**RFR Spread for Revolving Loans**	ABR Spread for Revolving Loans	Eurocurrency Spread for Term Loans	ABR Spread for Term Loans
Level I	0.08%	0.795%	**0.795%**	0%	0.875%	0%
Level II	0.09%	0.91%	**0.91%**	0%	1.00%	0%
Level III	0.125%	1.00%	**1.00%**	0%	1.125%	0.125%
Level IV	0.15%	1.10%	**1.10%**	0.10%	1.25%	0.25%
Level V	0.20%	1.30%	**1.30%**	0.30%	1.50%	0.50%

For purposes hereof: (i) Pricing Level I, Leverage Level 1 and Ratings Level A are equivalent and correspond to each other, (ii) Pricing Level II, Leverage Level 2 and Ratings Level B are equivalent and correspond to each other, (iii) Pricing Level III, Leverage Level 3 and Ratings Level C are equivalent and correspond to each other, (iv) Pricing Level IV, Leverage Level 4 and Ratings Level D are equivalent and correspond to each other and (v) Pricing Level V, Leverage Level 5 and Ratings Level E are equivalent and correspond to each other.

At any time of determination, the Pricing Level shall be determined by reference to the Leverage Level or the Ratings Level, as the Company shall from time to time elect by written notice to the Administrative Agent, and any change in Pricing Level resulting from such election by the Company shall be effected as promptly as practicable by the Administrative Agent after receiving such written election from the Company (but in any event no later than three (3) Business Days after such receipt).

<u>Leverage Level Determination</u>

Leverage Level	Total Leverage Ratio
Level 1	≤ 0.75 to 1.00
Level 2	> 0.75 to 1.00 but ≤ 1.25 to 1.00
Level 3	> 1.25 to 1.00 but ≤ 2.25 to 1.00
Level 4	> 2.25 to 1.00 but ≤ 3.25 to 1.00
Level 5	> 3.25 to 1.00

(i) if at any time the Company fails to deliver the Financials on or before the date the Financials are due pursuant to Section 5.01, Leverage Level 5 shall be deemed applicable for the period commencing three (3) Business Days after the required date of delivery and ending on the date which is three (3) Business Days after the Financials are actually delivered, after which the Leverage Level shall be determined in accordance with the table above as applicable;

(ii) adjustments, if any, to the Leverage Level then in effect shall be effective three (3) Business Days

"Benefit Plan" means any of (a) an "employee benefit plan" (as defined in Section 3(3) of ERISA) that is subject to Title I of ERISA, (b) a "plan" as defined in Section 4975 of the Code to which Section 4975 of the Code applies, and (c) any Person whose assets include (for purposes of the Plan Asset Regulations or otherwise for purposes of Title I of ERISA or Section 4975 of the Code) the assets of any such "employee benefit plan" or "plan".

"BHC Act Affiliate" of a party means an "affiliate" (as such term is defined under, and interpreted in accordance with, 12 U.S.C. 1841(k)) of such party.

"Board" means the Board of Governors of the Federal Reserve System of the United States of America.

"Borrower" means the Company or any Foreign Subsidiary Borrower.

"Borrowing" means (a) Revolving Loans of the same Type, made, converted or continued on the same date and, in the case of Eurocurrency Loans, as to which a single Interest Period is in effect or (b) a Term Loan of the same Type, made, converted or continued on the same date and, in the case of Eurocurrency Loans, as to which a single Interest Period is in effect.

"Borrowing Request" means a request by any Borrower for a Borrowing in accordance with Section 2.03, which shall be substantially in the form attached hereto as Exhibit H-1 or any other form approved by the Administrative Agent.

"Borrowing Subsidiary Agreement" means a Borrowing Subsidiary Agreement substantially in the form of Exhibit F-1.

"Borrowing Subsidiary Termination" means a Borrowing Subsidiary Termination substantially in the form of Exhibit F-2.

"Business Day" means, any day ~~that is not~~(other than a Saturday, or a Sunday~~ or other day~~) on which ~~commercial~~ banks are open for business in New York City ~~are authorized or required by law to remain closed~~or Chicago; provided that~~, when used in connection with a Eurocurrency Loan,~~ the term "Business Day~~" shall also exclude any day (i) on~~ shall (a) include (i) in relation to the calculation or computation of LIBOR, any day (other than a Saturday or a Sunday) on which banks are open for business in London, (ii) in relation to Loans denominated in euro and in relation to the calculation or computation of EURIBOR, any day which is a TARGET Day, (iii) in relation to Loans denominated in Canadian Dollars and in relation to the calculation or computation of CDOR, any day (other than a Saturday or a Sunday) on which banks are open for business in Toronto or (iv) in relation to RFR Loans and any interest rate settings, fundings, disbursements, settlements or payments of any such RFR Loan, or any other dealings in Swiss Francs, any such day that is only an RFR Business Day and (b) exclude (i) in relation to Loans denominated in Pounds Sterling or Japanese Yen, any day on which banks are not open for dealings in ~~the~~Pounds Sterling or Japanese Yen, as applicable, in the London interbank market or the principal financial center of Pounds Sterling or Japanese Yen, as applicable and (ii) in relation to Loans denominated in any Agreed Currency other than Dollars, euros, Canadian Dollars, Pounds Sterling, Swiss Francs, or Japanese Yen, any day on which banks are not open for dealings in such relevant Agreed Currency in the London interbank market or the principal financial center of such Agreed Currency~~ and (ii) in connection with any Loan denominated in Canadian Dollars, on which banks in Toronto, Ontario are authorized or required by law to remain closed (and, if the Borrowings or LC Disbursements which are the subject of a borrowing, drawing, payment, reimbursement or rate~~

~~selection are denominated in euro, the term "Business Day" shall also exclude any day on which the TARGET2 payment system is not open for the settlement of payments in euro).~~.

"Canadian Borrower" means any Canadian Subsidiary that becomes a Foreign Subsidiary Borrower pursuant to Section 2.24 and that has not ceased to be a Foreign Subsidiary Borrower pursuant to such Section.

"Canadian Dollars" means the lawful currency of Canada.

"Canadian Subsidiary" means any Subsidiary that is organized under the laws of Canada or any province or territory thereof.

"Capital Lease Obligations" of any Person means the obligations of such Person to pay rent or other amounts under any lease of (or other arrangement conveying the right to use) real or personal property, or a combination thereof, which obligations are required to be classified and accounted for as capital leases or financing leases on a balance sheet of such Person under GAAP, and the amount of such obligations shall be the capitalized amount thereof determined in accordance with GAAP.

"Captive Insurance Subsidiary" means AMETEK (Bermuda) Ltd., a corporation organized and existing under the laws of Bermuda.

"CDOR" has the meaning assigned to such term in Section 1.05.

"CDOR Interpolated Rate" means, at any time, with respect to any Eurocurrency Borrowing denominated in Canadian Dollars and for any Interest Period, the rate per annum determined by the Administrative Agent (which determination shall be conclusive and binding absent manifest error) to be equal to the rate that results from interpolating on a linear basis between: (a) the CDOR Screen Rate for the longest period (for which the CDOR Screen Rate is available for Canadian Dollars) that is shorter than the Impacted CDOR Rate Interest Period; and (b) the CDOR Screen Rate for the shortest period (for which the CDOR Screen Rate is available for Canadian Dollars) that exceeds the Impacted CDOR Rate Interest Period, in each case, at such time; provided that, if any CDOR Interpolated Rate as so determined would be less than zero, such rate shall be deemed to be zero for the purposes of this Agreement.

"CDOR Rate" means, with respect to any CDOR Rate Borrowing denominated in Canadian Dollars for any Interest Period, the Canadian dollar offered rate which, in turn means on any day the sum of (a) the CDOR Screen Rate, at or about 10:15 a.m. Toronto local time on the first day of the applicable Interest Period and, if such day is not a Business Day, then on the immediately preceding Business Day (as adjusted by the Administrative Agent after 10:15 a.m. Toronto local time to reflect any error in the posted rate of interest or in the posted average annual rate of interest) plus (b) 0.10% per annum; provided that (x) if the CDOR Screen Rate shall be less than zero, such rate shall be deemed to be zero and (y) if the CDOR Screen Rate is not available on the Reuters Screen CDOR Page on any particular day for any particular Interest Period (an "Impacted CDOR Rate Interest Period"), then the Canadian dollar offered rate component of such rate on that day shall be calculated as the ~~applicable~~**CDOR** Interpolated Rate as of such time on such day; or if such day is not a Business Day, then as so determined on the immediately preceding Business Day.

"CDOR Screen Rate" means, for any day and time, with respect to any CDOR Rate Borrowing and for any applicable Interest Period, the annual rate of interest determined with reference to the arithmetic average of the discount rate quotations of all institutions listed in respect of the relevant interest period for Canadian Dollar-denominated bankers' acceptances displayed and identified as such on

"Credit Party" means the Administrative Agent, any Issuing Bank or any other Lender.

"CRR" means the Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.

"Daily Simple RFR" means, for any day (an "RFR Interest Day"), an interest rate per annum equal to the greater of (a) (x) SARON for the day that is five (5) RFR Business Days prior to (A) if such RFR Interest Day is a RFR Business Day, such RFR Interest Day or (B) if such RFR Interest Day is not a RFR Business Day, the RFR Business Day immediately preceding such RFR Interest Day plus (y) -0.0571% and (b) 0%. Any change in Daily Simple RFR due to a change in the RFR shall be effective from and including the effective date of such change in the RFR without notice to the Company.

"Default" means any event or condition which constitutes an Event of Default or which upon notice, lapse of time or both would, unless cured or waived, become an Event of Default.

"Default Right" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable.

"Defaulting Lender" means any Lender that (a) has failed, within two (2) Business Days of the date required to be funded or paid, to (i) fund any portion of its Loans, (ii) fund any portion of its participations in Letters of Credit or (iii) pay over to any Credit Party any other amount required to be paid by it hereunder, unless, in the case of clause (i) above, such Lender notifies the Administrative Agent in writing that such failure is the result of such Lender's good faith determination that a condition precedent to funding (specifically identified and including the particular default, if any) has not been satisfied, (b) has notified the Company or any Credit Party in writing, or has made a public statement to the effect, that it does not intend or expect to comply with any of its funding obligations under this Agreement (unless such writing or public statement indicates that such position is based on such Lender's good faith determination that a condition precedent (specifically identified and including the particular default, if any) to funding a loan under this Agreement cannot be satisfied) or generally under other agreements in which it commits to extend credit, (c) has failed, within three (3) Business Days after request by a Credit Party, acting in good faith, to provide a certification in writing from an authorized officer of such Lender that it will comply with its obligations (and is financially able to meet such obligations as of the date of certification) to fund prospective Loans and participations in then outstanding Letters of Credit under this Agreement, provided that such Lender shall cease to be a Defaulting Lender pursuant to this clause (c) upon such Credit Party's receipt of such certification in form and substance satisfactory to it and the Administrative Agent, or (d) has become the subject of (i) a Bankruptcy Event or
(ii) a Bail-In Action.

"Departing Lender" means each lender under the Existing Credit Agreement that executes and delivers to the Administrative Agent a Departing Lender Signature Page.

"Departing Lender Signature Page" means the signature page to this Agreement on which it is indicated that the Departing Lender executing the same shall cease to be a party to the Existing Credit Agreement on the Effective Date.

"Dividing Person" has the meaning assigned to it in the definition of "Division". "Division"

means the division of the assets, liabilities and/or obligations of a Person (the

"Dividing Person") among two or more Persons (whether pursuant to a "plan of division" or similar

"Establishment" means, in respect of any Person, any place of operations where such Person carries out a non-transitory economic activity with human means and goods, assets or services.

"EU" means the European Union.

"EU Bail-In Legislation Schedule" means the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor Person), as in effect from time to time.

"EURIBO Interpolated Rate" means, at any time, with respect to any Eurocurrency Borrowing denominated in euro and for any Interest Period, the rate per annum determined by the Administrative Agent (which determination shall be conclusive and binding absent manifest error) to be equal to the rate that results from interpolating on a linear basis between: (a) the EURIBO Screen Rate for the longest period (for which the EURIBO Screen Rate is available for euro) that is shorter than the Impacted EURIBO Rate Interest Period; and (b) the EURIBO Screen Rate for the shortest period (for which the EURIBO Screen Rate is available for euro) that exceeds the Impacted EURIBO Rate Interest Period, in each case, at such time; provided that, if any EURIBO Interpolated Rate as so determined would be less than zero, such rate shall be deemed to be zero for the purposes of this Agreement.

"EURIBO Rate" means, with respect to any Eurocurrency Borrowing denominated in euro and for any Interest Period, the EURIBO Screen Rate at approximately 11:00 a.m., Brussels time, two (2) TARGET Days prior to the commencement of such Interest Period; provided that, if the EURIBO Screen Rate shall not be available at such time for such Interest Period (an "Impacted EURIBO Rate Interest Period") with respect to euro then the EURIBO Rate shall be the EURIBO Interpolated Rate.

"EURIBO Screen Rate" means, for any day and time, with respect to any Eurocurrency Borrowing denominated in euro and for any Interest Period, the euro interbank offered rate administered by the European Money Markets Institute (or any other person which takes over the administration of such rate) for euro for the relevant period displayed (before any correction, recalculation or republication by the administrator) on page EURIBOR01 of the Reuters screen (or any replacement Reuters page which displays that rate) or on the appropriate page of such other information service which publishes that rate from time to time in place of Reuters. If such page or service ceases to be available, the Administrative Agent may specify another page or service displaying the relevant rate after consultation with the Company. If the EURIBO Screen Rate as so determined would be less than zero, such rate shall be deemed to be zero for the purposes of this Agreement.

"EURIBOR" has the meaning assigned to such term in Section 1.05.

"euro" and/or "EUR" means the single currency of the Participating Member States.

"Euro Holdings" has the meaning assigned to such term in the definition of Foreign Subsidiary Borrower.

"Eurocurrency", when used in reference to a currency means an Agreed Currency and when used in reference to any Loan or Borrowing, means that such Loan, or the Loans comprising such Borrowing, bears interest at a rate determined by reference to the Adjusted LIBO Rate**, the Adjusted EURIBO Rate or the Adjusted CDOR Rate**.

"Eurocurrency Payment Office" of the Administrative Agent shall mean, for each Foreign Currency, the office, branch, affiliate or correspondent bank of the Administrative Agent for such currency as specified from time to time by the Administrative Agent to the Company and each Lender.

"Event of Default" has the meaning assigned to such term in Article VII.

"Excluded Taxes" means any of the following Taxes imposed on or with respect to a Recipient or required to be withheld or deducted from a payment to a Recipient, (a) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (i) imposed as a result of such Recipient being organized under the laws of, or having its principal office or, in the case of any Lender, its applicable lending office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (ii) that are Other Connection Taxes, (b) in the case of a Lender, U.S. federal withholding Taxes imposed on amounts payable to or for the account of such Lender with respect to an applicable interest in a Loan, Letter of Credit or Commitment pursuant to a law in effect on the date on which (i) such Lender acquires such interest in the Loan, Letter of Credit or Commitment (other than pursuant to an assignment request by any Borrower under Section 2.20(b)) or (ii) such Lender changes its lending office, except in each case to the extent that, pursuant to Section 2.17, amounts with respect to such Taxes were payable either to such Lender's assignor immediately before such Lender acquired the applicable interest in a Loan, Letter of Credit or Commitment or to such Lender immediately before it changed its lending office, (c) Taxes attributable to such Recipient's failure to comply with Section 2.17(f) and (d) any withholding Taxes imposed under FATCA.

"Existing Credit Agreement" has the meaning assigned to such term in the recitals hereto.

"Existing Letters of Credit" is defined in Section 2.06(a).

"Existing Loans" has the meaning assigned to such term in Section 2.01.

"FATCA" means Sections 1471 through 1474 of the Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof, any agreement entered into pursuant to Section 1471(b)(1) of the Code and any fiscal or regulatory legislation, rules or practices adopted pursuant to any intergovernmental agreement, treaty or convention among Governmental Authorities and implementing such Sections of the Code.

"FCA" has the meaning assigned to such term in Section 1.05.

"Federal Funds Effective Rate" means, for any day, the rate calculated by the NYFRB based on such day's federal funds transactions by depositary institutions, as determined in such manner as the NYFRB shall set forth on its public website from time to time, and published on the next succeeding Business Day by the NYFRB as the effective federal funds rate; provided that if the Federal Funds Effective Rate as so determined would be less than zero, such rate shall be deemed to be zero for the purposes of this Agreement.

"Financial Officer" means the chief financial officer, principal accounting officer, treasurer or controller of the Company.

"Financials" means the annual or quarterly financial statements, and accompanying certificates and other documents, of the Company and its Subsidiaries required to be delivered pursuant to Section 5.01(a) or 5.01(b).

purchase (or to advance or supply funds for the purchase of) any security for the payment thereof, (b) to purchase or lease property, securities or services for the purpose of assuring the owner of such Indebtedness or other obligation of the payment thereof, (c) to maintain working capital, equity capital or any other financial statement condition or liquidity of the primary obligor so as to enable the primary obligor to pay such Indebtedness or other obligation or (d) as an account party in respect of any letter of credit or letter of guaranty issued to support such Indebtedness or obligation; provided, that the term "Guarantee" shall not include endorsements for collection or deposit in the ordinary course of business.

"Hazardous Materials" means all explosive or radioactive substances or wastes and all hazardous or toxic substances, wastes or other pollutants, including petroleum or petroleum distillates, asbestos or asbestos containing materials, polychlorinated biphenyls, radon gas, infectious or medical wastes and all other substances or wastes of any nature regulated pursuant to any Environmental Law.

"~~IBA~~**Impacted CDOR Rate Interest Period**" has the meaning assigned to such term in ~~**Section 1.05**~~**the definition of "CDOR Rate"**.

~~**"Impacted Interest Period" means an Impacted LIBO Rate Interest Period or an Impacted CDOR Rate Interest Period, as applicable.**~~

"Impacted ~~**CDOR**~~**EURIBO** Rate Interest Period" has the meaning assigned to such term in the definition of "~~**CDOR**~~**EURIBO** Rate".

"Impacted LIBO Rate Interest Period" has the meaning assigned to such term in the definition of "LIBO Rate".

"Increasing Lender" has the meaning assigned to such term in Section 2.21. "Incremental Term Loan" has the meaning assigned to such term in Section 2.21.

"Incremental Term Loan Amendment" has the meaning assigned to such term in Section 2.21.

"Indebtedness" of any Person means, without duplication, (a) all obligations of such Person for borrowed money, (b) all obligations of such Person evidenced by bonds, debentures, notes or similar instruments, (c) all obligations of such Person under conditional sale or other title retention agreements relating to property acquired by such Person, (d) all obligations of such Person in respect of the deferred purchase price of property or services which in accordance with GAAP would be shown on the liability side of the balance sheet of such Person, (e) all Indebtedness of others secured by (or for which the holder of such Indebtedness has an existing right, contingent or otherwise, to be secured by) any Lien on property owned or acquired by such Person, whether or not the Indebtedness secured thereby has been assumed, (f) all Guarantees by such Person of Indebtedness of others, (g) all Capital Lease Obligations of such Person, (h) all obligations, contingent or otherwise, of such Person as an account party in respect of letters of credit and bank guarantees, (i) all obligations, contingent or otherwise, of such Person in respect of bankers' acceptances, (j) all Attributable Receivables Indebtedness of such Person, (k) all obligations of such Person under Sale and Leaseback Transactions and (l) all obligations of such Person to pay a specified purchase price for goods or services whether or not delivered or accepted, i.e. take-or-pay and similar obligations; provided that Indebtedness shall not include trade payables and accrued expenses, in each case arising in the ordinary course of business. For all purposes of this Agreement, the Indebtedness of any Person shall include all Indebtedness of any partnership or joint venture or limited liability company in which such Person is a general partner or a joint venturer or a member, but in any such case, only to the extent any such Indebtedness is recourse to such Person.

"Indemnified Taxes" means (a) Taxes, other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of any Loan Party under any Loan Document and (b) to the extent not otherwise described in clause (a) hereof, Other Taxes.

"Indemnitee" has the meaning assigned to such term in Section 9.03(b).

"Index Debt" means senior, unsecured, long-term indebtedness for borrowed money of the Company that is not guaranteed by any other person or entity or subject to any other credit enhancement.

"Ineligible Institution" has the meaning assigned to such term in Section 9.04(b).

"Information" has the meaning assigned to such term in Section 9.12.

"Information Memorandum" means the Confidential Information Memorandum dated October 2018 relating to the Company and the Transactions.

"Initial Foreign Subsidiary Borrower" has the meaning assigned to such term in the definition of Foreign Subsidiary Borrower.

"Initial Term Loan Availability Period" means the period from and including the Amendment No. 1 Effective Date to the earlier of (i) June 26, 2021 and (ii) the date of termination of all of the Term Loan Commitments.

"Initial Term Loan Funding Date" means the date on which the conditions specified in Section 4.04 are satisfied (or waived in accordance with Section 9.02) and the Initial Term Loans are funded.

"Initial Term Loans" means the Term Loans advanced to the Company on the Initial Term Loan Funding Date.

"Intercompany Loans" means intercompany loans and advances from (a) the Company to its Subsidiaries (other than to the Captive Insurance Subsidiary unless required by applicable law or required to fund its insurance operations), and (b) any Subsidiary to any other Subsidiary (other than the Captive Insurance Subsidiary unless required by applicable law or required to fund its insurance operations) or to the Company.

"Interest Coverage Ratio" has the meaning assigned to such term in Section 6.07(b). "Interest

Election Request" means a request by the applicable Borrower to convert or

continue a Borrowing in accordance with Section 2.08, which shall be substantially in the form attached hereto as Exhibit H-2 or any other form approved by the Administrative Agent.

"Interest Payment Date" means (a) with respect to any ABR Loan, the last day of each March, June, September and December and the Revolving Credit Maturity Date or the Term Loan Maturity Date, as applicable, ~~and~~ (b) **with respect to any RFR Loan, each date that is on the numerically corresponding day in each calendar month that is one month after the Borrowing of such RFR Loan (or, if there is no such numerically corresponding day in such month, then the last**

day of such month) and the Maturity Date and (c) with respect to any Eurocurrency Loan, the last day of ~~the~~**each** Interest Period applicable to the Borrowing of which such Loan is a part and, in the case of a Eurocurrency Borrowing with an Interest Period of more than three months' duration, each day prior to the last day of such Interest Period that occurs at intervals of three months' duration after the first day of such Interest Period and the Revolving Credit Maturity Date or the Term Loan Maturity Date, as applicable.

"Interest Period" means with respect to any Eurocurrency Borrowing, the period commencing on the date of such Borrowing and ending on the numerically corresponding day in the calendar month that is one, three or six months thereafter, as the applicable Borrower (or the Company on behalf of the applicable Borrower) may elect; provided, that (i) if any Interest Period would end on a day other than a Business Day, such Interest Period shall be extended to the next succeeding Business Day unless such next succeeding Business Day would fall in the next calendar month, in which case such Interest Period shall end on the immediately preceding Business Day and (ii) any Interest Period pertaining to a Eurocurrency Borrowing that commences on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the last calendar month of such Interest Period) shall end on the last Business Day of the last calendar month of such Interest Period. For purposes hereof, the date of a Borrowing initially shall be the date on which such Borrowing is made and thereafter shall be the effective date of the most recent conversion or continuation of such Borrowing.

~~**"Interpolated Rate" means, at any time, for any Interest Period, the rate *per annum* (rounded to the same number of decimal places as the applicable Screen Rate) determined by the Administrative Agent (which determination shall be conclusive and binding absent manifest error) to be equal to the rate that results from interpolating on a linear basis between: (a) the applicable Screen Rate for the longest period (for which the applicable Screen Rate is available for the applicable currency) that is shorter than the applicable Impacted Interest Period; and (b) the applicable Screen Rate for the shortest period (for which the applicable Screen Rate is available for the applicable currency) that exceeds the applicable Impacted Interest Period, in each case, at such time; provided that if any Interpolated Rate shall be less than zero, such rate shall be deemed to be zero for the purposes of this Agreement.**~~

"IRS" means the United States Internal Revenue Service.

"Issuing Bank" means JPMorgan Chase Bank, N.A., Bank of America, N.A., PNC Bank, National Association, Truist Bank, Wells Fargo Bank, National Association and each other Lender designated by the Company as an "Issuing Bank" hereunder that has agreed to such designation, each in its capacity as the issuer of Letters of Credit hereunder, and its successors in such capacity as provided in Section 2.06(i). Any Issuing Bank may, in its discretion, arrange for one or more Letters of Credit to be issued by Affiliates of such Issuing Bank, in which case the term "Issuing Bank" shall include any such Affiliate with respect to Letters of Credit issued by such Affiliate. Each reference herein to the "Issuing Bank" in connection with a Letter of Credit or other matter shall be deemed to be a reference to the relevant Issuing Bank with respect thereto, and, further, references herein to "the Issuing Bank" shall be deemed to refer to each of the Issuing Banks or the relevant Issuing Bank, as the context requires.

"ITA" means the Income Tax Act 2007.

"Japanese Yen" means the lawful currency of Japan.

"LC Collateral Account" has the meaning assigned to such term in Section 2.06(j).

"LC Disbursement" means a payment made by an Issuing Bank pursuant to a Letter of Credit.

"LC Exposure" means, at any time, the sum of (a) the aggregate undrawn Dollar Amount of all outstanding Letters of Credit at such time plus (b) the aggregate Dollar Amount of all LC Disbursements that have not yet been reimbursed by or on behalf of the Company at such time. The LC Exposure of any Revolving Lender at any time shall be its Applicable Percentage of the LC Exposure at such time.

"Lender Parent" means, with respect to any Lender, any Person as to which such Lender is, directly or indirectly, a subsidiary.

"Lender-Related Person" means the Administrative Agent, any Arranger, any Co-Syndication Agent, any Co-Documentation Agent, any Issuing Bank and any Lender, and any Related Party of any of the foregoing Persons.

"Lenders" means the Persons listed on Schedule 2.01A and any other Person that shall have become a Lender hereunder pursuant to Section 2.21 or pursuant to an Assignment and Assumption or otherwise, other than any such Person that ceases to be a party hereto pursuant to an Assignment and Assumption or otherwise. Unless the context otherwise requires, the term "Lenders" includes the Issuing Banks. For the avoidance of doubt, the term "Lenders" excludes the Departing Lenders.

"Letter of Credit" means any letter of credit issued pursuant to this Agreement.

"Letter of Credit Agreement" has the meaning assigned to such term in Section 2.06(b).

"Letter of Credit Commitment" means, with respect to each Issuing Bank, the

commitment of such Issuing Bank to issue Letters of Credit hereunder. The initial amount of each Issuing Bank's Letter of Credit Commitment is set forth on Schedule 2.01B, or if an Issuing Bank has entered into an Assignment and Assumption, the amount set forth for such Issuing Bank as its Letter of Credit Commitment in the Register maintained by the Administrative Agent. The Letter of Credit Commitment of an Issuing Bank may be modified from time to time by agreement between such Issuing Bank and the Company, and notified to the Administrative Agent.

"Leverage Ratio" has the meaning assigned to such term in Section 6.07(a).

"LIBO Interpolated Rate" means, at any time, with respect to any Eurocurrency Borrowing denominated in a LIBOR Quoted Currency and for any Interest Period, the rate per annum determined by the Administrative Agent (which determination shall be conclusive and binding absent manifest error) to be equal to the rate that results from interpolating on a linear basis between: (a) the LIBO Screen Rate for the longest period (for which the LIBO Screen Rate is available for such LIBOR Quoted Currency) that is shorter than the Impacted LIBO Rate Interest Period; and (b) the LIBO Screen Rate for the shortest period (for which the LIBO Screen Rate is available for such LIBOR Quoted Currency) that exceeds the Impacted LIBO Rate Interest Period, in each case, at such time; provided that if any LIBO Interpolated Rate as so determined would be less than zero, such rate shall be deemed to be zero for the purposes of this Agreement.

"LIBO Rate" means, with respect to any Eurocurrency Borrowing denominated in any LIBOR Quoted Currency and for any Interest Period, the LIBO Screen Rate at approximately 11:00 a.m., London time, on the Quotation Day for such LIBOR Quoted Currency; provided that if the LIBO Screen Rate shall not be available at such time for such Interest Period (an "Impacted LIBO Rate Interest

Period”) with respect to such ~~Agreed~~**LIBOR Quoted** Currency then the LIBO Rate shall be the **LIBO** Interpolated Rate.

“LIBO Screen Rate” means, for any day and time, with respect to any Eurocurrency Borrowing denominated in any LIBOR Quoted Currency and for any Interest Period, the London interbank offered rate as administered by ICE Benchmark Administration (or any other Person that takes over the administration of such rate) for such LIBOR Quoted Currency for a period equal in length to such Interest Period as displayed on such day and time on pages LIBOR01 or LIBOR02 of the Reuters screen that displays such rate (or, in the event such rate does not appear on a Reuters page or screen, on any successor or substitute page on such screen that displays such rate, or on the appropriate page of such other information service that publishes such rate from time to time as selected by the Administrative Agent in its reasonable discretion); provided that if the LIBO Screen Rate as so determined would be less than zero, such rate shall be deemed to be zero for the purposes of this Agreement.

“LIBOR” has the meaning assigned to such term in Section 1.05.

“LIBOR Quoted Currency” means Dollars, ~~euro,~~ Pounds Sterling**, and** Japanese Yen ~~and Swiss Francs~~.

“Lien” means, with respect to any asset, (a) any mortgage, deed of trust, lien, pledge, hypothecation, encumbrance, charge or security interest in, on or of such asset, (b) the interest of a vendor or a lessor under any conditional sale agreement, capital lease or title retention agreement (or any financing lease having substantially the same economic effect as any of the foregoing) relating to such asset and (c) in the case of securities, any purchase option, call or similar right of a third party with respect to such securities.

“LLC” means any Person that is a limited liability company under the laws of its jurisdiction of formation.

“Loan Documents” means this Agreement, any promissory notes issued pursuant to Section 2.10(e) of this Agreement and any Letter of Credit applications, any Letter of Credit Agreement, and any agreements between the Company and an Issuing Bank regarding such Issuing Bank’s Letter of Credit Commitment or the respective rights and obligations between the Company and such Issuing Bank in connection with the issuance of Letters of Credit. Any reference in this Agreement or any other Loan Document to a Loan Document shall include all appendices, exhibits or schedules thereto, and all amendments, restatements, supplements or other modifications thereto, and shall refer to this Agreement or such Loan Document as the same may be in effect at any and all times such reference becomes operative.

“Loan Parties” means the Borrowers.

“Loans” means the loans made by the Lenders to the Borrowers pursuant to this Agreement.

“Local Time” means (i) New York City time in the case of a Loan, Borrowing or LC Disbursement denominated in Dollars and (ii) local time in the case of a Loan, Borrowing or LC Disbursement denominated in a Foreign Currency (it being understood that such local time shall mean **(a)** London, England time **with respect to any Foreign Currency (other than euro and Canadian Dollars), (b) Brussels, Belgium time with respect to euro and (c) Toronto, Canada time with respect**

to Canadian Dollars, in each case of the foregoing clauses (a), (b) and (c) unless otherwise notified by the Administrative Agent).

"Material Adverse Effect" means (a) a material adverse change in, or a material adverse effect upon, the operations, business, properties, or financial condition of the Company and the Subsidiaries taken as a whole, (b) a material impairment of the ability of the Company and its Subsidiaries to perform under any material Loan Document or (c) a material adverse effect upon the legality, validity, binding effect or enforceability against the Company or any Subsidiary of any material Loan Document.

"Material Indebtedness" means Indebtedness (other than the Loans and Letters of Credit), or obligations in respect of one or more Swap Agreements, of any one or more of the Company and its Subsidiaries in an aggregate principal amount exceeding $100,000,000. For purposes of determining Material Indebtedness, the "principal amount" of the obligations of the Company or any Subsidiary in respect of any Swap Agreement at any time shall be the maximum aggregate amount (giving effect to any netting agreements) that the Company or such Subsidiary would be required to pay if such Swap Agreement were terminated at such time.

"Maximum Rate" has the meaning assigned to such term in Section 9.15.

"Moody's" means Moody's Investors Service, Inc.

"Multiemployer Plan" means a multiemployer plan as defined in Section 4001(a)(3) of ERISA.

"Non-Consenting Lender" has the meaning assigned to such term in Section 9.02(d).

"Non-U.S. Pension Plan" means any plan, scheme, fund (including any superannuation fund) or other similar program established, sponsored or maintained outside the United States by the Company or any one or more of its Subsidiaries primarily for the benefit of employees of the Company or such Subsidiaries residing outside the United States, which plan, fund or other similar program provides, or results in, retirement income, a deferral of income in contemplation of retirement or payments to be made upon termination of employment, and which plan is not subject to ERISA or the Code.

"NYFRB" means the Federal Reserve Bank of New York.

"NYFRB Rate" means, for any day, the greater of (a) the Federal Funds Effective Rate in effect on such day and (b) the Overnight Bank Funding Rate in effect on such day (or for any day that is not a Business Day, for the immediately preceding Business Day); provided that if none of such rates are published for any day that is a Business Day, the term "NYFRB Rate" means the rate for a federal funds transaction quoted at 11:00 a.m., New York City time, on such day received by the Administrative Agent from a federal funds broker of recognized standing selected by it; provided, further, that if any of the aforesaid rates as so determined would be less than zero, such rate shall be deemed to be zero for purposes of this Agreement.

"Obligations" means all unpaid principal of and accrued and unpaid interest on the Loans, all LC Exposure, all accrued and unpaid fees and all expenses, reimbursements, indemnities and other obligations and indebtedness (including interest and fees accruing during the pendency of any bankruptcy, insolvency, receivership or other similar proceeding, regardless of whether allowed or allowable in such proceeding), obligations and liabilities of any of the Company and its Subsidiaries to any of the Lenders, the Administrative Agent, any Issuing Bank or any indemnified party, individually or

"Qualifying Material Acquisition" means any acquisition, or the last to occur of a series of acquisitions consummated within a period of six consecutive months, if the aggregate consideration paid or to be paid in respect of such acquisition (or, if applicable, acquisitions) exceeds $150,000,000 and the Company has designated such acquisition (or, if applicable, acquisitions) as a "Qualifying Material Acquisition" by written notice to the Administrative Agent. For the avoidance of doubt, once any acquisition has been so designated as (or as a part of) a Qualifying Material Acquisition, it may not be designated as (or as a part of) any other Qualifying Material Acquisition.

"Quotation Day" means, with respect to any Eurocurrency Borrowing for any Interest Period, (i) if the currency is Pounds Sterling~~ or Canadian Dollars~~, the first day of such Interest Period~~,~~ **and** (ii~~) if the currency is euro, the day that is two (2) TARGET2 Days before the first day of such Interest Period, and (iii~~) for any other currency, two Business Days prior to the commencement of such Interest Period (unless, in each case, market practice differs in the relevant market where the LIBO Rate for such currency is to be determined, in which case the Quotation Day will be determined by the Administrative Agent in accordance with market practice in such market (and if quotations would normally be given on more than one day, then the Quotation Day will be the last of those days)).

"Receivables" shall mean all accounts receivable (including, without limitation, all rights to payment created by or arising from sales of goods, leases of goods or the rendition of services rendered no matter how evidenced whether or not earned by performance).

"Recipient" means, as applicable, (a) the Administrative Agent, (b) any Lender and (c) any Issuing Bank.

~~"Reference Bank Rate" means the arithmetic mean of the rates (rounded upwards to four decimal places) supplied to the Administrative Agent at its request by the Reference Banks (as the case may be) as of the applicable time on the Quotation Day for Loans in the applicable currency and the applicable Interest Period as the rate at which the relevant Reference Bank could borrow funds in the London (or other applicable) interbank market in the relevant currency and for the relevant period, were it to do so by asking for and then accepting interbank offers in reasonable market size in that currency and for that period.~~

~~"Reference Banks" means such banks as may be appointed by the Administrative Agent in consultation with the Company. No Lender shall be obligated to be a Reference Bank without its consent.~~

"Register" has the meaning set forth in Section 9.04.

"Regulation" means Regulation (EU) 2015/848 of the European Parliament and of the Council of 20 May 2015 on insolvency proceedings (recast).

"Related Parties" means, with respect to any specified Person, such Person's Affiliates and the respective directors, officers, employees, agents and advisors of such Person and such Person's Affiliates.

"Relevant Rate" means (i) with respect to any Eurocurrency Borrowing denominated in Dollars, Pounds Sterling or Japanese Yen, the LIBO Rate, (ii) with respect to any Eurocurrency Borrowing denominated in euro, the EURIBO Rate, (iii) with respect to any Eurocurrency Borrowing denominated in Canadian Dollars, the CDOR Rate or (iv) with respect to any Borrowing denominated in Swiss Francs, the Daily Simple RFR, as applicable.

"RFR" means SARON.

"RFR Borrowing" means, as to any Borrowing, the RFR Loans comprising such Borrowing.

"RFR Business Day" means any day except for (a) a Saturday, (b) a Sunday or (c) a day on which banks are closed for the settlement of payments and foreign exchange transactions in Zurich.

"RFR Interest Day" has the meaning specified in the definition of "Daily Simple RFR".

"RFR Loan" means a Loan that bears interest at a rate based on Daily Simple RFR.

"S&P" means Standard & Poor's Rating Services, a Standard & Poor's Financial Services LLC business.

"Sale and Leaseback Transaction" means any sale or other transfer of any real property by any Person with the intent to lease such real property as lessee which is considered a sale leaseback transaction in accordance with GAAP.

"Sanctioned Country" means, at any time, a country, region or territory which is itself the subject or target of any Sanctions (at the time of this Agreement, Crimea, Cuba, Iran, North Korea and Syria).

"Sanctioned Person" means, at any time, (a) any Person listed in any Sanctions-related list of designated Persons that is published publicly and maintained by OFAC, the U.S. Department of State, the United Nations Security Council, the EU, Her Majesty's Treasury of the United Kingdom or any other relevant sanctions authority of a jurisdiction in which a Borrower is organized or where there are Borrowings, (b) any Person operating, organized or resident in a Sanctioned Country, (c) any Person owned or controlled by any such Person or Persons described in the foregoing clauses (a) or (b), or (d) any Person otherwise the subject of any Sanctions.

"Sanctions" means all economic or financial sanctions or trade embargoes imposed, administered or enforced from time to time by (a) the U.S. government, including those administered by OFAC or the U.S. Department of State or (b) the United Nations Security Council, the EU, Her Majesty's Treasury of the United Kingdom or any other relevant sanctions authority of a jurisdiction in which a Borrower is organized or where there are Borrowings.

~~**"Screen Rate" means collectively the LIBO Screen Rate and the CDOR Screen Rate.**~~

"SARON" means, with respect to any Business Day, a rate per annum equal to the Swiss Average Rate Overnight for such Business Day published by the SARON Administrator on the SARON Administrator's Website.

"SARON Administrator" means the SIX Swiss Exchange AG (or any successor administrator of the Swiss Average Rate Overnight).

“SARON Administrator’s Website” means SIX Swiss Exchange AG’s website, currently at https://www.six-group.com, or any successor source for the Swiss Average Rate Overnight identified as such by the SARON Administrator from time to time.

“SEC” means the United States Securities and Exchange Commission.

“Significant Subsidiary” means (i) each Foreign Subsidiary Borrower and (ii) each other Subsidiary which, as of the most recent fiscal quarter of the Company, for the period of four consecutive fiscal quarters then ended, for which financial statements have been delivered pursuant to Section 5.01, contributed greater than ten percent (10%) of Consolidated Total Assets as of such date.

“Statutory Reserve Rate” means a fraction (expressed as a decimal), the numerator of which is the number one and the denominator of which is the number one minus the aggregate of the maximum reserve, liquid asset, fees or similar requirements (including any marginal, special, emergency or supplemental reserves or other requirements) established by any central bank, monetary authority, the Board, the Financial Conduct Authority, the Prudential Regulation Authority, the European Central Bank or other Governmental Authority for any category of deposits or liabilities customarily used to fund loans in the applicable currency, expressed in the case of each such requirement as a decimal. Such reserve, liquid asset, fees or similar requirements shall include those imposed pursuant to Regulation D of the Board. Eurocurrency Loans shall be deemed to be subject to such reserve, liquid asset, fee or similar requirements without benefit of or credit for proration, exemptions or offsets that may be available from time to time to any Lender under any applicable law, rule or regulation, including Regulation D of the Board. The Statutory Reserve Rate shall be adjusted automatically on and as of the effective date of any change in any reserve, liquid asset or similar requirement.

“Subordinated Indebtedness” means any Indebtedness of the Company or any Subsidiary the payment of which is subordinated to payment of the obligations under the Loan Documents.

“Subordinated Indebtedness Documents” means any document, agreement or instrument evidencing any Subordinated Indebtedness or entered into in connection with any Subordinated Indebtedness.

“subsidiary” means, with respect to any Person (the “parent”) at any date, any corporation, limited liability company, partnership, association or other entity the accounts of which would be consolidated with those of the parent in the parent’s consolidated financial statements if such financial statements were prepared in accordance with GAAP as of such date, as well as any other corporation, limited liability company, partnership, association or other entity (a) of which securities or other ownership interests representing more than 50% of the equity or more than 50% of the ordinary voting power or, in the case of a partnership, more than 50% of the general partnership interests are, as of such date, owned, Controlled or held, or (b) that is, as of such date, otherwise Controlled, by the parent or one or more subsidiaries of the parent or by the parent and one or more subsidiaries of the parent.

“Subsidiary” means any subsidiary of the Company.

“Supported QFC” has the meaning assigned to it in Section 9.19.

“Swap Agreement” means any agreement with respect to any swap, forward, future or derivative transaction or option or similar agreement involving, or settled by reference to, one or more rates, currencies, commodities, equity or debt instruments or securities, or economic, financial or pricing indices or measures of economic, financial or pricing risk or value or any similar transaction or any combination of these transactions; provided that no phantom stock or similar plan providing for payments only on account of services provided by current or former directors, officers, employees or consultants of the Company or the Subsidiaries shall be a Swap Agreement.

"Swap Obligations" means any and all obligations of the Company or any Subsidiary, whether absolute or contingent and howsoever and whensoever created, arising, evidenced or acquired (including all renewals, extensions and modifications thereof and substitutions therefor), under (a) any and all Swap Agreements permitted hereunder with a Lender or an Affiliate of a Lender, and (b) any and all cancellations, buy backs, reversals, terminations or assignments of any such Swap Agreement transaction.

"Swiss Francs" means the lawful currency of Switzerland.

"TARGET2" means the Trans-European Automated Real-time Gross Settlement Express Transfer ~~(TARGET2)~~ payment system **which utilizes a single shared platform and which was launched on November 19, 2007.**

"TARGET Day" means any day on which TARGET2 (or, if such payment system ceases to be operative, such other payment system ~~(~~**,** if any)**,** reasonably determined by the Administrative Agent to be a suitable replacement) **is open** for the settlement of payments in euro.

~~**"TARGET2 Day" means a day that TARGET2 is open for the settlement of payments in euro.**~~

"Tax Confirmation" means a confirmation by a Lender that the person beneficially entitled to interest payable to that Lender in respect of an advance under a Loan Document is either:

(a) a company resident in the United Kingdom for United Kingdom tax purposes; or

(b) a partnership each member of which is:

(1) a company resident in the United Kingdom; or

(2) a company not so resident in the United Kingdom which carries on a trade in the United Kingdom through a permanent establishment and which brings into account in computing its chargeable profits (for the purposes of section 19 of the Corporation Tax Act 2009) the whole of any share of interest payable in respect of that advance that falls to it by reason of Part 17 of the Corporation Tax Act 2009; or

(c) a company not so resident in the United Kingdom which carries on a trade in the United Kingdom through a permanent establishment and which brings into account interest payable in respect of that advance in computing its chargeable profits (within the meaning given by section 19 of the Corporation Tax Act 2009).

"Tax Credit" means a credit against, relief of remission for or repayment of any UK Tax.

"Tax Deduction" means a deduction or withholding for or on account of UK Tax from a payment under any Loan Document.

"Tax Payment" means either an increased payment made by a Borrower to a Lender under Section 2.18(d) or a payment under Section 2.18(k).

"Treaty State" means a jurisdiction having a double taxation agreement (a "Treaty") with the United Kingdom which makes provision for full exemption from tax imposed by the United Kingdom on Interest.

"Type", when used in reference to any Loan or Borrowing, refers to whether the rate of interest on such Loan, or on the Loans comprising such Borrowing, is determined by reference to the Adjusted LIBO Rate**, the Adjusted EURIBO Rate, the Adjusted CDOR Rate, the Daily Simple RFR** or the Alternate Base Rate.

"UCC" means the Uniform Commercial Code.

"UK Financial Institution" means any BRRD Undertaking (as such term is defined under the PRA Rulebook (as amended from time to time) promulgated by the United Kingdom Prudential Regulation Authority) or any person falling within IFPRU 11.6 of the FCA Handbook (as amended from time to time) promulgated by the United Kingdom Financial Conduct Authority, which includes certain credit institutions and investment firms, and certain affiliates of such credit institutions or investment firms.

"UK Insolvency Event" means:

(a) a UK Relevant Entity is unable or admits inability to pay its debts as they fall due or is deemed to or declared to be unable to pay its debts under applicable law, suspends or threatens to suspend making payments on any of its debts or, by reason of actual or anticipated financial difficulties, commences negotiations with one or more of its creditors with a view to rescheduling any of its indebtedness;

(b) the value of the assets of any UK Relevant Entity, is less than its liabilities (taking into account contingent and prospective liabilities);

(c) a moratorium is declared in respect of any indebtedness of any UK Relevant Entity; provided that if a moratorium occurs, the ending of the moratorium will not remedy any Event of Default caused by such moratorium;

(d) any corporate action, legal proceedings or other procedure or step is taken in relation to:

(i) the suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration or reorganization (by way of voluntary arrangement, scheme of arrangement or otherwise) of any UK Relevant Entity;

(ii) a composition, compromise, assignment or arrangement with any creditor of any UK Relevant Entity;

(iii) the appointment of a liquidator, receiver, administrative receiver, administrator, compulsory manager or other similar officer in respect of any UK Relevant Entity, or any of its assets; or

(iv) enforcement of any Lien over any assets of any UK Relevant Entity, SECTION 1.02. Classification of Loans and Borrowings. For purposes of this Agreement, Loans may be classified and referred to by Class (e.g., a "Revolving Loan") or by Type (e.g., a "Eurocurrency Loan" **or an "RFR Loan"**) or by Class and Type (e.g., a "Eurocurrency **Revolving Loan" or an "RFR** Revolving Loan"). Borrowings also may be classified and referred to by Class (e.g., a "Revolving Borrowing") or by Type (e.g., a "Eurocurrency Borrowing" **or an "RFR Borrowing"**) or by Class and Type (e.g., a "Eurocurrency Revolving Borrowing" **or an "RFR Revolving Borrowing"**).

SECTION 1.03. Terms Generally. The definitions of terms herein shall apply equally to the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words "include", "includes" and "including" shall be deemed to be followed by the phrase "without limitation". The word "will" shall be construed to have the same meaning and effect as the word "shall". The word "law" shall be construed as referring to all statutes, rules, regulations, codes and other laws (including official rulings and interpretations thereunder having the force of law or with which affected Persons customarily comply), and all judgments, orders and decrees, of all Governmental Authorities. Unless the context requires otherwise (a) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time amended, restated, supplemented or otherwise modified (subject to any restrictions on such amendments, restatements, supplements or modifications set forth herein), (b) any definition of or reference to any statute, rule or regulation shall be construed as referring thereto as from time to time amended, supplemented or otherwise modified (including by succession of comparable successor laws), (c) any reference herein to any Person shall be construed to include such Person's successors and assigns (subject to any restrictions on assignment set forth herein) and, in the case of any Governmental Authority, any other Governmental Authority that shall have succeeded to any or all functions thereof, (d) the words "herein", "hereof" and "hereunder", and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof, (e) all references herein to Articles, Sections, Exhibits and Schedules shall be construed to refer to Articles and Sections of, and Exhibits and Schedules to, this Agreement, (f) any reference to any law, rule or regulation herein shall, unless otherwise specified, refer to such law, rule or regulation as amended, modified or supplemented from time to time, (g) the words "asset" and "property" shall be construed to have the same meaning and effect and to refer to any and all tangible and intangible assets and properties, including cash, securities, accounts and contract rights and (h) any reference herein to a merger, transfer, consolidation, amalgamation, consolidation, assignment, sale, disposition or transfer, or similar term, shall be deemed to apply to a division of or by a limited liability company, or an allocation of assets to a series of a limited liability company (or the unwinding of such a division or allocation), as if it were a merger, transfer, consolidation, amalgamation, consolidation, assignment, sale or transfer, or similar term, as applicable, to, of or with a separate Person, and any division of a limited liability company shall constitute a separate Person hereunder (and each division of any limited liability company that is a Subsidiary, joint venture or any other like term shall also constitute such a Person or entity).

SECTION 1.04. Accounting Terms; GAAP. Except as otherwise expressly provided herein, all terms of an accounting or financial nature shall be construed in accordance with GAAP, as in effect from time to time; provided that, if the Company notifies the Administrative Agent that the Company requests an amendment to any provision hereof to eliminate the effect of any change occurring after the date hereof in GAAP or in the application thereof on the operation of such provision (or if the Administrative Agent notifies the Company that the Required Lenders request an amendment to any provision hereof for such purpose), regardless of whether any such notice is given before or after such change in GAAP or in the application thereof, then such provision shall be interpreted on the basis of GAAP as in effect and applied immediately before such change shall have become effective until such notice shall have been withdrawn or such provision amended in accordance herewith. Notwithstanding any other provision contained herein, all terms of an accounting or financial nature used herein shall be construed, and all computations of amounts and ratios referred to herein shall be made (i) without giving effect to any election under Accounting Standards Codification 825-10-25 (or any other Accounting Standards Codification or Financial Accounting Standard having a similar result or effect) to value any Indebtedness or other liabilities of the Company or any Subsidiary at "fair value", as defined therein and (ii) without giving effect to any treatment of Indebtedness in respect of convertible debt instruments under Accounting Standards Codification 470-20 (or any other Accounting Standards Codification or Financial Accounting Standard having a similar result or effect) to value any such Indebtedness in a reduced or bifurcated manner as described therein, and such Indebtedness shall at all times be valued at the full stated principal amount thereof. Without limiting the foregoing, leases (including any entered into after the Restatement Effective Date) shall continue to be classified and accounted for on a basis consistent with GAAP consistently applied as in effect on the Restatement Effective Date for all purposes of this Agreement, notwithstanding any change in GAAP relating thereto, unless the parties hereto shall enter into a mutually acceptable amendment addressing such changes, as provided for above.

SECTION 1.05. Interest Rates; LIBOR Notification. The interest rate on ~~Eurocurrency Loans~~**a Loan** denominated in ~~a LIBOR-Quoted Currency is determined by reference to the LIBO Rate, which is derived from the London interbank offered rate.~~**an Agreed Currency may be derived from an interest rate benchmark that is, or may in the future become, the subject of regulatory reform. Regulators have signaled the need to use alternative benchmark reference rates for some of these interest rate benchmarks and, as a result, such interest rate benchmarks may cease to comply with applicable laws and regulations, may be permanently discontinued, and/or the basis on which they are calculated may change.** The London interbank offered rate **("LIBOR")** is intended to represent the rate at which contributing banks may obtain short-term borrowings from each other in the London interbank market. ~~In July 2017~~**On March 5, 2021**, the U.K. Financial Conduct Authority **("FCA") publicly** announced that~~, after the end of 2021, it would no longer persuade or compel contributing banks to make rate submissions to the ICE Benchmark Administration (together with any successor to the ICE Benchmark Administrator, the "IBA") for purposes of the IBA setting the London interbank offered rate. As a result, it is possible that commencing in 2022, the London interbank offered rate may no longer be available or may no longer be deemed an appropriate reference rate upon which to determine the interest rate on Eurocurrency Loans denominated in a LIBOR-Quoted Currency. In light of this eventuality, public~~**: (a) immediately after December 31, 2021, publication of all seven euro LIBOR settings, all seven Swiss Franc LIBOR settings, the spot next, 1-week, 2-month and 12-month Japanese Yen LIBOR settings, the overnight, 1-week, 2-month and 12-month Pound Sterling LIBOR settings, and the 1-week and 2-month Dollar LIBOR settings will permanently cease; (b) immediately after June 30, 2023, publication of the overnight and 12-month Dollar LIBOR settings will permanently cease; (c) immediately after December 31, 2021, the 1-month, 3-month and 6-month Japanese Yen LIBOR settings and the 1-month, 3-month and 6-month Pound Sterling LIBOR settings will cease to be provided or, subject to consultation by the FCA, be provided on a changed methodology (or "synthetic") basis and no longer be representative of the underlying market and economic reality they are intended to measure and that representativeness will not be restored; and (d) immediately after June 30, 2023, the 1-month, 3-month and 6-month Dollar LIBOR settings will cease to be provided or, subject to the FCA's consideration of the case, be provided on a synthetic basis and no longer be representative of the underlying market and economic reality they are intended to measure and that representativeness will not be restored. There is no assurance that dates announced by the FCA will not change or that the administrator of LIBOR and/or regulators will not take further action that could impact the availability, composition, or characteristics of LIBOR or the currencies and/or tenors for which LIBOR is published. Each party to this agreement should consult its own advisors to stay informed of any such developments. Public** and private sector industry initiatives are currently underway to identify new or alternative reference rates to be used in place of ~~the London interbank offered rate.~~**LIBOR.** In the event that the London interbank offered rate is no longer available or in certain other circumstances as set forth in Section 2.14(c) ~~of this Agreement~~, such Section 2.14(c) provides a mechanism for determining an alternative rate of interest. The Administrative Agent will promptly notify the Company, pursuant to Section 2.14, ~~in advance~~ of any change to the reference rate upon which the interest rate on Eurocurrency Loans is based. However, the Administrative Agent does not warrant or accept any responsibility for, and shall not have any liability with respect to, the administration, submission, performance or any other matter related to the ~~London interbank offered rate~~Daily Simple RFR, LIBOR, EURIBOR, CDOR or other rates in the definition of "LIBO Rate" (or "EURIBO Rate" or "CDOR Rate", as applicable) or with respect to any alternative or successor rate thereto, or replacement rate thereof, (including, without limitation, (i) any such alternative, successor or replacement rate implemented pursuant to Section 2.14(c), including without limitation, whether the composition or characteristics of any such alternative, successor or replacement reference rate~~, as it may or may not be adjusted pursuant to Section 2.14(c),~~ will be similar to, or produce the same value or economic equivalence of, the Daily Simple RFR, the LIBO Rate (or the EURIBO Rate or the CDOR Rate, as applicable) or have the same volume or liquidity as did LIBOR (or the ~~London~~euro interbank offered rate ("EURIBOR") or the Canadian Dollar offered rate ("CDOR"), as applicable) prior to its discontinuance or unavailability. The Administrative Agent and its affiliates and/or other related entities may engage in transactions that affect the calculation of any Daily Simple RFR, any alternative, successor or alternative rate and/or any relevant adjustments thereto, in each case, in a manner adverse to the Borrowers. The Administrative Agent may select information sources or services in its reasonable discretion to ascertain any RFR, Daily Simple RFR or any rate with respect to any Eurocurrency Loan, any component thereof, or rates referenced in the definition thereof, in each case pursuant to the terms of this Agreement, and shall have no liability to the Borrowers, any Lender or any other person or entity for damages of any kind, including direct or indirect, special, punitive, incidental or consequential damages, costs, losses or expenses (whether in tort, contract or otherwise and whether at law or in equity), for any error or calculation of any such rate (or component thereof) provided by any such information source or service.

SECTION 1.06. Status of Obligations. In the event that the Company or any other Loan Party shall at any time issue or have outstanding any Subordinated Indebtedness, the Company shall take or cause such other Loan Party to take all such actions as shall be necessary to cause the Obligations to constitute senior indebtedness (however denominated) in respect of such Subordinated Indebtedness and to enable the Administrative Agent and the Lenders to have and exercise any payment blockage or other remedies available or potentially available to holders of senior indebtedness under the terms of such Subordinated Indebtedness. Without limiting the foregoing, the Obligations are hereby designated as "senior indebtedness" and as "designated senior indebtedness" and words of similar import under and in respect of any indenture or other agreement or instrument under which such Subordinated Indebtedness is outstanding and are further given all such other designations as shall be required under the terms of any such Subordinated Indebtedness in order that the Lenders may have and exercise any payment blockage or other remedies available or potentially available to holders of senior indebtedness under the terms of such Subordinated Indebtedness.

SECTION 1.07. Amendment and Restatement of Existing Credit Agreement. The parties to this Agreement agree that, upon (i) the execution and delivery by each of the parties hereto of this Agreement and (ii) satisfaction or waiver of the conditions set forth in Section 4.01, the terms and provisions of the Existing Credit Agreement shall be and hereby are amended, superseded and restated in their entirety by the terms and provisions of this Agreement. This Agreement is not intended to and shall not constitute a novation. The Borrowers, the Administrative Agent and the Lenders hereby further acknowledge and agree that this Agreement constitutes an amendment of the Existing Credit Agreement made under and in accordance with Section 9.02 thereof. All "Loans" made and "Obligations" incurred under the Existing Credit Agreement which are outstanding on the Restatement Effective Date shall continue as Loans and Obligations under (and shall be governed by the terms of) this Agreement and the

Credit Exposure exceeding such Lender's Revolving Commitment, (ii) subject to Sections 2.04 and 2.11(b), the sum of the Dollar Amount of the Total Revolving Credit Exposure exceeding the aggregate Revolving Commitments or (iii) subject to Sections 2.04 and 2.11(b), the Dollar Amount of the total outstanding Revolving Loans and LC Exposure, in each case denominated in Foreign Currencies, exceeding the Foreign Currency Sublimit and (b) each Term Lender with a Term Loan Commitment (severally and not jointly) agrees to make a Term Loan to the Company in Dollars in up to four (4) separate drawings (with each such drawing being in a principal amount of not less than $150,000,000) during the Term Loan Availability Period, in an amount equal to such Lender's Term Loan Commitment by making immediately available funds available to the Administrative Agent's designated account, not later than the time specified by the Administrative Agent. Within the foregoing limits and subject to the terms and conditions set forth herein, the Borrowers may borrow, prepay and reborrow Revolving Loans. Amounts repaid or prepaid in respect of Term Loans may not be reborrowed.

SECTION 2.02. Loans and Borrowings. (a) Each Loan shall be made as part of a Borrowing consisting of Loans of the same Class and Type made by the applicable Lenders ratably in accordance with their respective Commitments of the applicable Class. The failure of any Lender to make any Loan required to be made by it shall not relieve any other Lender of its obligations hereunder; provided that the Commitments of the Lenders are several and no Lender shall be responsible for any other Lender's failure to make Loans as required. The Term Loans shall amortize as set forth in Section 2.10.

(b) Subject to Section 2.14, each Revolving Borrowing and Term Loan Borrowing shall be comprised **(i) in the case of Borrowings in Dollars,** entirely of ABR Loans or Eurocurrency Loans **and (ii) in the case of Borrowings in any other Agreed Currency, entirely of Eurocurrency Loans or RFR Loans, as applicable, in each case of the same Agreed Currency,** as the relevant Borrower may request in accordance herewith; provided that each ABR Loan shall only be made in Dollars. Each Lender at its option may make any Loan by causing any domestic or foreign branch or Affiliate of such Lender to make such Loan (and in the case of an Affiliate, the provisions of Sections 2.14, 2.15, 2.16, 2.17 and 2.18 shall apply to such Affiliate to the same extent as to such Lender); provided that any exercise of such option shall not affect the obligation of the relevant Borrower to repay such Loan in accordance with the terms of this Agreement.

(c) At the commencement of each Interest Period for any Eurocurrency Revolving Borrowing, such Borrowing shall be in an aggregate amount that is an integral multiple of $1,000,000 (or, if such Borrowing is denominated in a Foreign Currency, 1,000,000 units of such currency) and not less than $2,000,000 (or, if such Borrowing is denominated in a Foreign Currency, 2,000,000 units of such currency). At the time that each ABR Revolving Borrowing **and/or RFR Borrowing** is made, such Borrowing shall be in an aggregate ~~amount~~**Dollar Amount** that is an integral multiple of $1,000,000 **(or, if such Borrowing is denominated in a Foreign Currency, 1,000,000 units of such currency)** and not less than $1,000,000 **(or, if such Borrowing is denominated in a Foreign Currency, 2,000,000 units of such currency)**; provided that an ABR Revolving **Borrowing or an RFR** Borrowing may be in an aggregate amount that is equal to the entire unused balance of the aggregate Revolving Commitments or that is required to finance the reimbursement of an LC Disbursement as contemplated by Section 2.06(e). Borrowings of more than one Type and Class may be outstanding at the same time; provided that there shall not at any time be more than a total of twelve (12) Eurocurrency Borrowings **or RFR Borrowings** outstanding.

(d) Notwithstanding any other provision of this Agreement, no Borrower shall be entitled to request, or to elect to convert or continue, (i) any Revolving Borrowing if the Interest

Period requested with respect thereto would end after the Revolving Credit Maturity Date or (ii) any Term Loan Borrowing if the Interest Period requested with respect thereto would end after the Term Loan Maturity Date.

(e) The initial borrowing from any Lender to any Dutch Borrower shall be provided by a Lender that is a Dutch Non-Public Lender.

SECTION 2.03. Requests for Borrowings. To request a Borrowing, the applicable Borrower, or the Company on behalf of the applicable Borrower, shall notify the Administrative Agent of such request (a) by irrevocable written notice (via a written Borrowing Request signed by the applicable Borrower, or the Company on behalf of the applicable Borrower~~, promptly followed by telephonic confirmation of such request~~) **(i**) in the case of a Eurocurrency Borrowing **denominated in Dollars**, not later than 11:00 a.m., ~~Local Time~~**New York City time**, three (3) Business Days before the date of the proposed Borrowing**, (ii) in the case of a Eurocurrency Borrowing denominated in euro, Pounds Sterling, Japanese Yen or Canadian Dollars, not later than 11:00 a.m., New York City time, four (4) Business Days before the date of the proposed Borrowing and (iii) in the case of an RFR Borrowing, not later than 11:00 a.m., New York City time, five (5) RFR Business Days before the date of the proposed Borrowing (or such shorter time as the Administrative Agent may agree in its reasonable discretion)** or (b) by irrevocable written notice (via a written Borrowing Request signed by the Borrower) in the case of an ABR Borrowing, not later than 11:00 a.m., New York City time, on the date of the proposed Borrowing. Each such Borrowing Request shall specify the following information in compliance with Section 2.02:

(i) the name of the applicable Borrower;

(ii) the aggregate principal amount of the requested Borrowing;

(iii) the date of such Borrowing, which shall be a Business Day;

(iv) whether such Borrowing is to be an ABR Borrowing~~ or~~**,** a Eurocurrency **Borrowing or an RFR** Borrowing and whether such Borrowing is a Revolving Borrowing or a Term Loan Borrowing;

(v) in the case of a Eurocurrency Borrowing, the Agreed Currency and initial Interest Period to be applicable thereto, which shall be a period contemplated by the definition of the term "Interest Period"; and

(vi) the location and number of the applicable Borrower's account to which funds are to be disbursed, which shall comply with the requirements of Section 2.07.

If no election as to the Type of Borrowing is specified, then, in the case of a Borrowing denominated in Dollars, the requested Borrowing shall be an ABR Borrowing. If no Interest Period is specified with respect to any requested Eurocurrency Borrowing, then the relevant Borrower shall be deemed to have selected an Interest Period of one month's duration. Promptly following receipt of a Borrowing Request in accordance with this Section, the Administrative Agent shall advise each Lender of the details thereof and of the amount of such Lender's Loan to be made as part of the requested Borrowing.

SECTION 2.04. Determination of Dollar Amounts. The Administrative Agent will determine the Dollar Amount of:

proving to be forged, fraudulent or invalid in any respect or any statement therein being untrue or inaccurate in any respect, (iii) any payment by an Issuing Bank under a Letter of Credit against presentation of a draft or other document that does not comply with the terms of such Letter of Credit, or (iv) any other event or circumstance whatsoever, whether or not similar to any of the foregoing, that might, but for the provisions of this Section, constitute a legal or equitable discharge of, or provide a right of setoff against, the Company's obligations hereunder. Neither the Administrative Agent, the Revolving Lenders nor any Issuing Bank, nor any of their respective Related Parties, shall have any liability or responsibility by reason of or in connection with the issuance or transfer of any Letter of Credit or any payment or failure to make any payment thereunder (irrespective of any of the circumstances referred to in the preceding sentence), or any error, omission, interruption, loss or delay in transmission or delivery of any draft, notice or other communication under or relating to any Letter of Credit (including any document required to make a drawing thereunder), any error in interpretation of technical terms or any consequence arising from causes beyond the control of the relevant Issuing Bank; provided that the foregoing shall not be construed to excuse any Issuing Bank from liability to the Company to the extent of any direct damages (as opposed to special, indirect, consequential or punitive damages, claims in respect of which are hereby waived by the Company to the extent permitted by applicable law) suffered by the Company that are caused by such Issuing Bank's failure to exercise care when determining whether drafts and other documents presented under a Letter of Credit comply with the terms thereof. The parties hereto expressly agree that, in the absence of gross negligence or willful misconduct on the part of any Issuing Bank (as finally determined by a court of competent jurisdiction), such Issuing Bank shall be deemed to have exercised care in each such determination. In furtherance of the foregoing and without limiting the generality thereof, the parties agree that, with respect to documents presented which appear on their face to be in substantial compliance with the terms of a Letter of Credit, each Issuing Bank may, in its sole discretion, either accept and make payment upon such documents without responsibility for further investigation, regardless of any notice or information to the contrary, or refuse to accept and make payment upon such documents if such documents are not in strict compliance with the terms of such Letter of Credit.

(g) Disbursement Procedures. Each Issuing Bank shall, promptly following its receipt thereof, examine all documents purporting to represent a demand for payment under a Letter of Credit. Each Issuing Bank shall promptly notify the Administrative Agent and the Company by telephone (confirmed by telecopy) of such demand for payment and whether such Issuing Bank has made or will make an LC Disbursement thereunder; provided that any failure to give or delay in giving such notice shall not relieve the Company of its obligation to reimburse such Issuing Bank and the Lenders with respect to any such LC Disbursement.

(h) Interim Interest. If any Issuing Bank shall make any LC Disbursement, then, unless the Company shall reimburse such LC Disbursement in full on the date such LC Disbursement is made, the unpaid amount thereof shall bear interest, for each day from and including the date such LC Disbursement is made to but excluding the date that the Company reimburses such LC Disbursement, at the rate per annum then applicable to ABR Revolving Loans (or in the case such LC Disbursement is denominated in a Foreign Currency, at the Overnight Foreign Currency Rate for such Agreed Currency plus the then effective Applicable Rate with respect to Eurocurrency Revolving Loans); provided that, if the Company fails to reimburse such LC Disbursement when due pursuant to paragraph (e) of this Section, then Section 2.13(~~c~~d) shall apply. Interest accrued pursuant to this paragraph shall be for the account of such Issuing Bank, except that interest accrued on and after the date of payment by any

(c) Each written Interest Election Request shall specify the following information in compliance with Section 2.02:

(i) the name of the applicable Borrower and the Borrowing to which such Interest Election Request applies and, if different options are being elected with respect to different portions thereof, the portions thereof to be allocated to each resulting Borrowing (in which case the information to be specified pursuant to clauses (iii) and (iv) below shall be specified for each resulting Borrowing);

(ii) the effective date of the election made pursuant to such Interest Election Request, which shall be a Business Day;

(iii) whether the resulting Borrowing is to be an ABR Borrowing or a Eurocurrency Borrowing; and

(iv) if the resulting Borrowing is a Eurocurrency Borrowing, the Interest Period and Agreed Currency to be applicable thereto after giving effect to such election, which Interest Period shall be a period contemplated by the definition of the term "Interest Period".

If any such Interest Election Request requests a Eurocurrency Borrowing but does not specify an Interest Period, then the applicable Borrower shall be deemed to have selected an Interest Period of one month's duration.

(d) Promptly following receipt of an Interest Election Request, the Administrative Agent shall advise each Lender of the details thereof and of such Lender's portion of each resulting Borrowing.

(e) If the relevant Borrower fails to deliver a timely Interest Election Request with respect to a Eurocurrency Borrowing prior to the end of the Interest Period applicable thereto, then, unless such Borrowing is repaid as provided herein, at the end of such Interest Period (i) in the case of a Borrowing denominated in Dollars, such Borrowing shall be converted to an ABR Borrowing and (ii) in the case of a Borrowing denominated in a ~~**Foreign Currency**~~**euro, Pounds Sterling, Japanese Yen or Canadian Dollars** in respect of which the applicable Borrower shall have failed to deliver an Interest Election Request prior to the third (3rd) Business Day preceding the end of such Interest Period, such Borrowing shall automatically continue as a Eurocurrency Borrowing in the same Agreed Currency with an Interest Period of one month unless such Eurocurrency Borrowing is or was repaid in accordance with Section 2.11. Notwithstanding any contrary provision hereof, if an Event of Default has occurred and is continuing and the Administrative Agent, at the request of the Required Lenders, so notifies the Company, then, so long as an Event of Default is continuing (i) no outstanding Borrowing denominated in Dollars may be converted to or continued as a Eurocurrency Borrowing, (ii) unless repaid, each Eurocurrency Borrowing denominated in Dollars shall be converted to an ABR Borrowing at the end of the Interest Period applicable thereto and (iii) unless repaid, each Eurocurrency Borrowing denominated in ~~**a Foreign Currency**~~**euro, Pounds Sterling, Japanese Yen or Canadian Dollars** shall automatically be continued as a Eurocurrency Borrowing with an Interest Period of one month.

SECTION 2.09. Termination and Reduction of Commitments. (a) Unless previously terminated, (1) the Term Loan Commitments shall terminate on the earliest of (x) the funding of all of the Term Loans hereunder, (y) 3:00 p.m. (New York City time) on the date on which the Initial Term Loan calendar quarters ending immediately after such ninth calendar quarter, 1.25% of the aggregate principal amount of the Term Loans actually funded under this Agreement prior to each such last day of such calendar quarter; and (iii) on the last day of the thirteenth calendar quarter ending following the Initial Term Loan Funding Date and on the last day of each calendar quarter ending after such thirteenth calendar quarter, 2.50% of the aggregate principal amount of the Term Loans actually funded under this Agreement prior to each such last day of such calendar quarter (in each of the foregoing cases, as adjusted from time to time pursuant to Section 2.11(a)). To the extent not previously repaid, all unpaid Term Loans shall be paid in full in Dollars by the Company on the Term Loan Maturity Date.

(b) Each Lender shall maintain in accordance with its usual practice an account or accounts evidencing the indebtedness of each Borrower to such Lender resulting from each Loan made by such Lender, including the amounts of principal and interest payable and paid to such Lender from time to time hereunder.

(c) The Administrative Agent shall maintain accounts in which it shall record (i) the amount of each Loan made hereunder, the Class, Agreed Currency and Type thereof and the Interest Period applicable thereto, (ii) the amount of any principal or interest due and payable or to become due and payable from each Borrower to each Lender hereunder and (iii) the amount of any sum received by the Administrative Agent hereunder for the account of the Lenders and each Lender's share thereof.

(d) The entries made in the accounts maintained pursuant to paragraph (b) or (c) of this Section shall be prima facie evidence of the existence and amounts of the obligations recorded therein; provided that the failure of any Lender or the Administrative Agent to maintain such accounts or any error therein shall not in any manner affect the obligation of any Borrower to repay the Loans in accordance with the terms of this Agreement.

(e) Any Lender may request that Loans made by it to any Borrower be evidenced by a promissory note. In such event, the relevant Borrower shall prepare, execute and deliver to such Lender a promissory note payable to such Lender (or, if requested by such Lender, to such Lender and its registered assigns) and in the form attached hereto as Exhibit I. Thereafter, the Loans evidenced by such promissory note and interest thereon shall at all times (including after assignment pursuant to Section 9.04) be represented by one or more promissory notes in such form.

SECTION 2.11. Prepayment of Loans.

(a) Any Borrower shall have the right at any time and from time to time to prepay any Borrowing in whole or in part, subject to prior notice in accordance with the provisions of this Section 2.11(a). The applicable Borrower, or the Company on behalf of the applicable Borrower, shall notify the Administrative Agent by telephone (confirmed by telecopy) of any prepayment hereunder (i) **(x)** in the case of prepayment of a Eurocurrency **Revolving** Borrowing **denominated in Dollars**, not later than 11:00 a.m., ~~Local Time, three (3)~~**New York City time, three (3) Business Days before the date of prepayment, (y) in the case of prepayment of a Eurocurrency Revolving Borrowing denominated in euro, Pounds Sterling, Japanese Yen or Canadian Dollars, four (4) Business Days before the date of prepayment and (z) in the case of prepayment of an RFR Borrowing, not later than 11:00 a.m., New York City Time, five (5) RFR** Business Days before the date of prepayment or (ii) in the case of prepayment of an ABR Borrowing, not later than 11:00 a.m., New York City time, on the date of prepayment.

(b) The Loans comprising each Eurocurrency Borrowing shall bear interest at the Adjusted LIBO Rate, the Adjusted EURIBO Rate or the Adjusted CDOR Rate, as applicable, for the Interest Period in effect for such Borrowing plus the Applicable Rate.

(c) Each RFR Loan shall bear interest at a rate per annum equal to the Daily Simple RFR plus the Applicable Rate.

(d) ~~(c)~~ Notwithstanding the foregoing, if any principal of or interest on any Loan or any fee or other amount payable by any Borrower hereunder is not paid when due, whether at stated maturity, upon acceleration or otherwise, such overdue amount shall bear interest, after as well as before judgment, at a rate per annum equal to (i) in the case of overdue principal of any Loan, 2% plus the rate otherwise applicable to such Loan as provided in the preceding paragraphs of this Section or (ii) in the case of any other amount, 2% plus the rate applicable to ABR Loans as provided in paragraph (a) of this Section.

(e) ~~(d)~~ Accrued interest on each Loan shall be payable in arrears on each Interest Payment Date for such Loan and, in the case of Revolving Loans, upon termination of the Revolving Commitments; provided that (i) interest accrued pursuant to paragraph (~~c~~**d**) of this Section shall be payable on demand, (ii) in the event of any repayment or prepayment of any Loan (other than a prepayment of an ABR Revolving Loan prior to the end of the Revolving Credit Availability Period), accrued interest on the principal amount repaid or prepaid shall be payable on the date of such repayment or prepayment and (iii) in the event of any conversion of any Eurocurrency Loan prior to the end of the current Interest Period therefor, accrued interest on such Loan shall be payable on the effective date of such conversion.

(f) ~~(e) All interest~~**Interest computed by reference to the LIBO Rate, the EURIBO Rate or Daily Simple RFR** hereunder shall be computed on the basis of a year of 360 days, except that ~~(i) (A) interest~~**interest for Borrowings denominated in Pounds Sterling shall be computed on the basis of a year of 365 days. Interest** computed by reference to **the CDOR Rate or** the Alternate Base Rate at times when the Alternate Base Rate is based on the Prime ~~Rate and (B) interest computed by reference to the CDOR~~ Rate shall be computed on the basis of a year of 365 days (or 366 days in a leap year) ~~and (ii) interest for Borrowings denominated in Pounds Sterling shall be computed on the basis of a year of 365 days, and in each case of the foregoing clauses (i) and (ii)~~**. In each case interest** shall be payable for the actual number of days elapsed (including the first day but excluding the last day). **All interest hereunder on any Loan shall be computed on a daily basis based upon the outstanding principal amount of such Loan as of the applicable date of determination.** The applicable Alternate Base Rate, Adjusted LIBO Rate ~~or~~**,** LIBO Rate**, Adjusted EURIBO Rate, EURIBO Rate, Adjusted CDOR Rate, CDOR Rate or Daily Simple RFR** shall be determined by the Administrative Agent, and such determination shall be conclusive absent manifest error.

(g) ~~(f)~~ For the purposes of the *Interest Act* (Canada) and disclosure thereunder, whenever any interest or any fee to be paid hereunder or in connection herewith by a Canadian Borrower is to be calculated on the basis of a 360-, 365- or 366-day year, the yearly rate of interest to which the rate used in such calculation is equivalent is the rate so used multiplied by the actual number of days in the calendar year in which the same is to be ascertained and divided by 360, 365 or 366, as applicable. The rates of interest under this Agreement are nominal rates, and not effective rates or yields. The principle of deemed reinvestment of interest does not apply to any interest calculation under this Agreement.

(h) ~~(g)~~ Each Canadian Borrower acknowledges and confirms that: (i) paragraph (f) of this Section above satisfies the requirements of Section 4 of the *Interest Act* (Canada) to the extent it applies to the expression or statement of any interest payable under any Loan Document; and (ii) each Canadian Borrower is able to calculate the yearly rate or percentage of interest payable under any Loan Document based upon the methodology set out in paragraph (f) of this Section.

(i) ~~(h)~~ Each Canadian Borrower agrees not to plead or assert, whether by way of defense or otherwise, in any proceeding relating to the Loan Documents, that the interest payable thereunder and the calculation thereof has not been adequately disclosed to it, whether pursuant to Section 4 of the *Interest Act* (Canada) or any other applicable law or legal principle.

(j) ~~(i)~~ If any provision of this Agreement would oblige a Canadian Borrower to make any payment of interest or other amount payable to any holder of Obligations in an amount or calculated at a rate which would be prohibited by law or would result in a receipt by that holder of Obligations of "interest" at a "criminal rate" (as such terms are construed under the *Criminal Code* (Canada)), then, notwithstanding such provision, such amount or rate shall be deemed to have been adjusted with retroactive effect to the maximum amount or rate of interest, as the case may be, as would not be so prohibited by applicable law or so result in a receipt by that holder of Obligations of "interest" at a "criminal rate", such adjustment to be effected, to the extent necessary (but only to the extent necessary), as follows:

(i) first, by reducing the amount or rate of interest; and

(ii) thereafter, by reducing any fees, commissions, costs, expenses, premiums and other amounts required to be paid which would constitute interest for purposes of section 347 of the *Criminal Code* (Canada).

(k) ~~(j)~~ Notwithstanding anything to the contrary herein or in any other Loan Document, each Foreign Subsidiary Borrower shall severally and not jointly pay interest on any Loans outstanding to it and no Foreign Subsidiary Borrower shall be responsible for any other Borrower's failure to pay any interest due hereunder.

SECTION 2.14. Alternate Rate of Interest.

~~(a) If at the time that the Administrative Agent shall seek to determine the applicable Screen Rate on the Quotation Day for any Interest Period for a Eurocurrency Borrowing the applicable Screen Rate shall not be available for such Interest Period and/or for the applicable currency with respect to such Eurocurrency Borrowing for any reason, and the Administrative Agent shall reasonably determine that it is not possible to determine the Interpolated Rate (which conclusion shall be conclusive and binding absent manifest error), then the Reference Bank Rate shall be the LIBO Rate (or the CDOR Rate, as applicable) for such Interest Period for such Eurocurrency Borrowing; provided that if the Reference Bank Rate shall be less than zero, such rate shall be deemed to be zero for purposes of this Agreement; provided, further, however, that if less than two Reference Banks shall supply a rate to the Administrative Agent for purposes of determining the LIBO Rate (or the CDOR Rate, as applicable) for such Eurocurrency Borrowing, (i) if such Borrowing shall be requested in Dollars, then such Borrowing shall be made as an ABR Borrowing at the Alternate Base Rate and (ii) if such Borrowing shall be requested in any Foreign Currency, the LIBO Rate shall be equal to the rate determined by the Administrative Agent in its reasonable discretion after consultation with the Company and~~

~~consented to in writing by the Required Lenders (any such rate, an "Alternative Rate"); provided, however, that (i) until such time as the applicable Alternative Rate shall be determined for the applicable Foreign Currency and so consented to by the Required Lenders, Borrowings shall not be available in such Foreign Currency and (ii) if the Alternative Rate shall be less than zero, such rate shall be deemed to be zero for purposes of this Agreement. It is hereby understood and agreed that, notwithstanding anything to the foregoing set forth in this Section 2.14(a), if at any time the conditions set forth in Section 2.14(c)(i) or (ii) are in effect, the provisions of this Section 2.14(a) shall no longer be applicable for any purpose of determining any alternative rate of interest under this Agreement and Section 2.14(c) shall instead be applicable for all purposes of determining any alternative rate of interest under this Agreement.~~

(a) **[Intentionally Omitted].**

(b) If ~~prior to the commencement of any Interest Period for a Eurocurrency Borrowing~~:

(i) the Administrative Agent determines (which determination shall be conclusive and binding absent manifest error) **(A) prior to the commencement of any Interest Period for a Eurocurrency Borrowing,** that adequate and reasonable means do not exist for ascertaining the Adjusted LIBO Rate, the LIBO Rate ~~or the~~**, the Adjusted EURIBO Rate, the EURIBO Rate, the CDOR Rate or the Adjusted** CDOR Rate, as applicable (including because the ~~applicable~~**LIBO** Screen Rate**, the EURIBO Screen Rate or the CDOR Screen Rate, as applicable,** is not available or published on a current basis), for **a Loan in** the applicable currency ~~and such~~**or for the applicable** Interest Period **or (B) at any time, that adequate and reasonable means do not exist for ascertaining the Daily Simple RFR or RFR for the applicable currency**; or

(ii) the Administrative Agent is advised by the Required Lenders that ~~the~~**(A) prior to the commencement of any Interest Period for a Eurocurrency Borrowing, the** Adjusted LIBO Rate, the LIBO Rate**, the Adjusted EURIBO Rate, the EURIBO Rate, the Adjusted CDOR Rate** or the CDOR Rate, as applicable, for **a Loan in** the applicable currency ~~and~~**or for the applicable Interest Period will not adequately and fairly reflect the cost to such Lenders of making or maintaining their Loans included in such Borrowing for** such Interest Period **or (B) at any time, the Daily Simple RFR or RFR for the applicable Agreed Currency** will not adequately and fairly reflect the cost to such Lenders of making or maintaining their Loans included in such Borrowing for the applicable currency and such Interest Period;

then the Administrative Agent shall give notice thereof to the applicable Borrower and the Lenders by telephone, telecopy or electronic mail as promptly as practicable thereafter and, until the Administrative Agent notifies the applicable Borrower and the Lenders that the circumstances giving rise to such notice no longer exist, (i) any Interest Election Request that requests the conversion of any Borrowing to, or continuation of any Borrowing as, a Eurocurrency Borrowing in the applicable currency or for the applicable Interest Period, as the case may be, shall be ineffective, (ii) if any Borrowing Request requests a Eurocurrency Borrowing in Dollars, such Borrowing shall be made as an ABR Borrowing and (iii) if any Borrowing Request requests a Eurocurrency Borrowing **or an RFR Borrowing for the relevant rate above** in a Foreign Currency, then ~~the LIBO Rate (or the CDOR Rate, as applicable) for such Eurocurrency Borrowing shall be the applicable Alternative Rate~~**such request shall be ineffective**;

provided that if the circumstances giving rise to such notice affect only one Type of Borrowings, then the other Type of Borrowings shall be permitted.

(c) Notwithstanding the foregoing, if at any time the Administrative Agent determines (which determination shall be conclusive absent manifest error) that (i) the circumstances set forth in Section 2.14(b)(i) have arisen and such circumstances are unlikely to be temporary or (ii) the circumstances set forth in Section 2.14(b)(i) have not arisen but (w) the supervisor for the administrator of the ~~applicable Screen~~**Relevant** Rate has made a public statement that the administrator of the ~~applicable Screen~~**Relevant** Rate is insolvent (and there is no successor administrator that will continue publication of the ~~applicable Screen~~**Relevant** Rate), (x) the administrator of the ~~applicable Screen~~**Relevant** Rate has made a public statement identifying a specific date after which ~~such Screen~~**the Relevant** Rate will permanently or indefinitely cease to be published by it (and there is no successor administrator that will continue publication of ~~such Screen~~**the Relevant** Rate), (y) the supervisor for the administrator of the ~~applicable Screen~~**Relevant** Rate has made a public statement identifying a specific date after which ~~such Screen~~**the Relevant** Rate will permanently or indefinitely cease to be published or

(z) the supervisor for the administrator of the ~~applicable Screen~~**Relevant** Rate or a Governmental Authority having jurisdiction over the Administrative Agent has made a public statement identifying a specific date after which the ~~such Screen~~**Relevant** Rate may no longer be used for determining interest rates for loans, then the Administrative Agent and the Company shall endeavor to establish an alternate rate of interest to the ~~LIBO~~**Relevant** Rate ~~(or the CDOR Rate, as applicable)~~ that gives due consideration to the then prevailing market convention for determining a rate of interest for syndicated loans in the United States at such time, and shall enter into an amendment to this Agreement to reflect such alternate rate of interest and such other related changes to this Agreement as may be applicable; provided that, if such alternate rate of interest as so determined would be less than zero, such rate shall be deemed to be zero for the purposes of this Agreement. Notwithstanding anything to the contrary in Section 9.02, such amendment shall become effective without any further action or consent of any other party to this Agreement so long as the Administrative Agent shall not have received, within five (5) Business Days of the date notice of such alternate rate of interest is provided to the Lenders (along with the amendment to this Agreement giving effect to the changes hereto in respect of such alternate rate of interest), a written notice from the Required Lenders stating that such Required Lenders object to such amendment. Until an alternate rate of interest shall be determined in accordance with this Section 2.14(c) (but, in the case of the circumstances described in clause (ii)(w), clause (ii)(x) or clause (ii)(y) of the first sentence of this Section 2.14(c), only to the extent the ~~applicable Screen~~**Relevant** Rate for the applicable currency and such Interest Period is not available or published at such time on a current basis), (x) any Interest Election Request that requests the conversion of any Borrowing to, or continuation of any Borrowing as, a Eurocurrency Borrowing in the applicable currency or for the applicable Interest Period, as the case may be, shall be ineffective, (y) if any Borrowing Request requests a Eurocurrency Borrowing in Dollars, such Borrowing shall be made as an ABR Borrowing and (z) if any Borrowing Request requests a Eurocurrency Borrowing **or an RFR Borrowing** in a Foreign Currency, then such request shall be ineffective.

SECTION 2.15. Increased Costs. (a) If any Change in Law shall:

(i) impose, modify or deem applicable any reserve, special deposit, liquidity or similar requirement (including any compulsory loan requirement, insurance charge or other assessment) against assets of, deposits with or for the account of, or credit extended by, any Lender (except any such reserve requirement reflected in the Adjusted LIBO

Rate**, the Adjusted EURIBO Rate or the Adjusted CDOR Rate, as applicable**) or any Issuing Bank;

(ii) impose on any Lender or any Issuing Bank or the London **or other applicable offshore** interbank market **for the applicable currency** any other condition, cost or expense (other than Taxes or UK Taxes) affecting this Agreement or Loans made by such Lender or any Letter of Credit or participation therein; or

(iii) subject any Recipient to any Taxes or UK Taxes on its loans, letters of credit, commitments, or other obligations, or its deposits, reserves, other liabilities or capital attributable thereto (other than (A) Indemnified Taxes, (B) Excluded Taxes, (C) Connection Income Taxes and (D) UK Taxes consisting of a Tax Deduction required by law to be made by a Borrower or compensated for by Section 2.18);

and the result of any of the foregoing shall be to increase the cost to such Lender or such other Recipient of making, continuing, converting or maintaining any Loan or of maintaining its obligation to make any such Loan or to increase the cost to such Lender, such Issuing Bank or such other Recipient of participating in, issuing or maintaining any Letter of Credit or to reduce the amount of any sum received or receivable by such Lender, such Issuing Bank or such other Recipient hereunder, whether of principal, interest or otherwise, then the applicable Borrower will pay to such Lender, such Issuing Bank or such other Recipient, as the case may be, such additional amount or amounts as will compensate such Lender, such Issuing Bank or such other Recipient, as the case may be, for such additional costs incurred or reduction suffered.

(b) If any Lender or any Issuing Bank determines that any Change in Law regarding capital or liquidity requirements has or would have the effect of reducing the rate of return on such Lender's or such Issuing Bank's capital or on the capital of such Lender's or such Issuing Bank's holding company, if any, as a consequence of this Agreement or the Loans made by, or participations in Letters of Credit held by, such Lender, or the Letters of Credit issued by such Issuing Bank, to a level below that which such Lender or such Issuing Bank or such Lender's or such Issuing Bank's holding company could have achieved but for such Change in Law (taking into consideration such Lender's or such Issuing Bank's policies and the policies of such Lender's or such Issuing Bank's holding company with respect to capital adequacy and liquidity), then from time to time the applicable Borrower will pay to such Lender or such Issuing Bank, as the case may be, such additional amount or amounts as will compensate such Lender or such Issuing Bank or such Lender's or such Issuing Bank's holding company for any such reduction suffered.

(c) A certificate of a Lender or an Issuing Bank setting forth the amount or amounts necessary to compensate such Lender or such Issuing Bank or its holding company, as the case may be, as specified in paragraph (a) or (b) of this Section shall be delivered to the Company and shall be conclusive absent manifest error. The Company shall pay, or cause the other Borrowers to pay, such Lender or such Issuing Bank, as the case may be, the amount shown as due on any such certificate within ten (10) days after receipt thereof.

(d) Failure or delay on the part of any Lender or any Issuing Bank to demand compensation pursuant to this Section shall not constitute a waiver of such Lender's or such Issuing Bank's right to demand such compensation; provided that the Company shall not be required to compensate a Lender or an Issuing Bank pursuant to this Section for any increased costs or reductions incurred more than 270 days prior to the date that such Lender or such Issuing Bank, as the case may be, notifies the Company of the Change in Law giving rise to such increased costs or reductions and of such Lender's or such Issuing Bank's intention to claim compensation therefor; provided further that, if the Change in Law giving rise to such increased costs or reductions is retroactive, then the 270-day period referred to above shall be extended to include the period of retroactive effect thereof.

SECTION 2.16. Break Funding Payments.

(a) ~~In~~**With respect to Loans that are not RFR Loans, in** the event of (~~a~~**i**) the payment of any principal of any Eurocurrency Loan other than on the last day of an Interest Period applicable thereto (including as a result of an Event of Default or as a result of any prepayment pursuant to Section 2.11), (~~b~~**ii**) the conversion of any Eurocurrency Loan other than on the last day of the Interest Period applicable thereto, (~~c~~**iii**) the failure to borrow, convert, continue or prepay any Eurocurrency Loan on the date specified in any notice delivered pursuant hereto (regardless of whether such notice may be revoked under Section 2.11(a) and is revoked in accordance therewith) or (~~d~~**iv**) the assignment of any Eurocurrency Loan other than on the last day of the Interest Period applicable thereto as a result of a request by the Company pursuant to Section 2.20, then, in any such event, the Borrowers shall compensate each Lender for the loss, cost and expense attributable to such event. Such loss, cost or expense to any Lender shall be deemed to include an amount determined by such Lender to be the excess, if any, of (~~i~~**x**) the amount of interest which would have accrued on the principal amount of such Loan had such event not occurred, at the Adjusted LIBO Rate**, the Adjusted EURIBO Rate or the Adjusted CDOR Rate, as applicable,** that would have been applicable to such Loan, for the period from the date of such event to the last day of the then current Interest Period therefor (or, in the case of a failure to borrow, convert or continue, for the period that would have been the Interest Period for such Loan), over (~~ii~~**y**) the amount of interest which would accrue on such principal amount for such period at the interest rate which such Lender would bid were it to bid, at the commencement of such period, for deposits in the relevant ~~currency~~**Agreed Currency** of a comparable amount and period from other banks in the ~~eurocurrency market or the Canadian bank market, as applicable~~**applicable offshore market for such Agreed Currency**. A certificate of any Lender setting forth any amount or amounts that such Lender is entitled to receive pursuant to this Section shall be delivered to the applicable Borrower and shall be conclusive absent manifest error. The applicable Borrower shall pay such Lender the amount shown as due on any such certificate within ten (10) days after receipt thereof.

(b) **With respect to RFR Loans, in the event of (i) the payment of any principal of any RFR Loan other than on the Interest Payment Date applicable thereto (including as a result of an Event of Default or as a result of any prepayment pursuant to Section 2.11), (ii) the failure to borrow or prepay any RFR Loan on the date specified in any notice delivered pursuant hereto (regardless of whether such notice may be revoked under Section 2.11(a) and is revoked in accordance therewith), or (iii) the assignment of any RFR Loan other than on the Interest Payment Date applicable thereto as a result of a request by the Company pursuant to Section 2.20 then, in any such event, the Borrowers shall compensate each Lender for the loss, cost and expense attributable to such event. Such loss, cost or expense to any Lender shall be deemed to include an amount determined by such Lender to be the excess, if any, of (x) the amount of interest which would have accrued on the principal amount of such Loan had such event not occurred, at the RFR that would have been applicable to such Loan, for the period from the date of such event to the last day of the then current Interest Period therefor (or, in the case of a failure to borrow, convert or continue, for the period that would have been the Interest Period for such Loan), over (y) the amount of interest which would accrue on such principal amount for such period at the interest rate which such Lender would bid were it to bid, at the commencement of such**

period, for deposits in Swiss Francs of a comparable amount and period from other banks in the applicable offshore market for Swiss Francs. A certificate of any Lender setting forth any amount or amounts that such Lender is entitled to receive pursuant to this Section shall be delivered to the applicable Borrower and shall be conclusive absent manifest error. The applicable Borrower shall pay such Lender the amount shown as due on any such certificate within ten (10) days after receipt thereof.

SECTION 2.17. Taxes. (a) Payments Free of Taxes. Any and all payments by or on account of any obligation of any Loan Party under any Loan Document shall be made without deduction or withholding for any Taxes, except as required by applicable law. If any applicable law (as determined in the good faith discretion of an applicable Withholding Agent) requires the deduction or withholding of any Tax from any such payment by a Withholding Agent, then the applicable Withholding Agent shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted or withheld to the relevant Governmental Authority in accordance with applicable law and, if such Tax is an Indemnified Tax, then the sum payable by the applicable Loan Party shall be increased as necessary so that after such deduction or withholding has been made (including such deductions and withholdings applicable to additional sums payable under this Section 2.17) the applicable Recipient receives an amount equal to the sum it would have received had no such deduction or withholding been made.

(b) Payment of Other Taxes by the Borrowers. The relevant Borrower shall timely pay to the relevant Governmental Authority in accordance with applicable law, or at the option of the Administrative Agent timely reimburse it for, Other Taxes.

(c) Evidence of Payments. As soon as practicable after any payment of Taxes by any Loan Party to a Governmental Authority pursuant to this Section 2.17, such Loan Party shall deliver to the Administrative Agent the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to the Administrative Agent.

(d) Indemnification by the Borrowers. The relevant Borrower shall indemnify each Recipient, within 10 days after demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under this Section) payable or paid by such Recipient or required to be withheld or deducted from a payment to such Recipient and any reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to the relevant Borrower by a Lender (with a copy to the Administrative Agent), or by the Administrative Agent on its own behalf or on behalf of a Lender, shall be conclusive absent manifest error.

(e) Indemnification by the Lenders. Each Lender shall severally indemnify the Administrative Agent, within 10 days after demand therefor, for (i) any Indemnified Taxes attributable to such Lender (but only to the extent that any Loan Party has not already indemnified the Administrative Agent for such Indemnified Taxes and without limiting the obligation of the Loan Parties to do so), (ii) any Taxes attributable to such Lender’s failure to comply with the provisions of Section 9.04(c) relating to the maintenance of a Participant Register and (iii) any Excluded Taxes attributable to such Lender, in each case, that are payable or paid by the Administrative Agent in connection with any Loan Document, and any reasonable expenses arising therefrom or with respect thereto, whether or not such Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to any Lender by the Administrative Agent shall be

SUBSIDIARIES OF AMETEK, INC.

AS OF DECEMBER 31, 2021

Exhibit 21

Name of Subsidiary and name under which it does business	State or other jurisdiction of incorporation or organization	Percentage of voting securities owned by its immediate parent*
Advanced Measurement Technology, Inc.	Delaware	100 %
Sunpower, Inc.	Delaware	100 %
AIP/MPM Funding, Inc.	Delaware	100 %
AIP/MPM Holdings, Inc.	Delaware	100 %
Micro-Poise Measurement Systems, LLC	Delaware	100 %
Akron Standard Bestry (Guangzhou) Measurement Equipment Co., Ltd.	China	50 %
Micro-Poise Industrial Equipment (Beijing) Ltd.	China	100 %
AMETEK (Bermuda), Ltd.	Bermuda	100 %
AMETEK Canada 2 ULC	Canada	100 %
AMETEK Creaform ULC	Delaware	99.90 %
AMETEK Canada 3 ULC	Canada	100.00 %
AMETEK Canada Limited Partnership	Canada	99.90 %
Creaform Inc.	Canada	100 %
Creaform Shanghai Ltd.	Canada	100 %
Creaform Software Inc.	Canada	100 %
Crank Software ULC	Canada	100 %
AMETEK DELCO, Inc.	Delaware	100 %
AMETEK Thermal Systems, Inc.	Delaware	100 %
AMETEK Arizona Instrument LLC	Arizona	100 %
Controls Southeast, Inc.	North Carolina	100 %
EDAX, LLC	Delaware	100 %
EMA Corp.	Delaware	98.43 %
AMETEK B.V.	Netherlands	100 %
Telular Corporation	Delaware	100 %
SkyBitz Tank Monitoring Corporation	Illinois	100 %
SkyBitz, Inc.	Delaware	100 %
SkyBitz Petroleum Logistics LLC	South Carolina	100 %
Amekai (BVI) Ltd.	British Virgin Islands	50 %
AMETEK Aerospace & Power Holdings, Inc.	Delaware	100 %
AMETEK Advanced Industries, Inc.	Delaware	100 %
AMETEK Aircraft Parts & Accessories, Inc.	Delaware	100 %
AMETEK Ameron, LLC	Delaware	100 %
AMETEK HSA, Inc.	Delaware	100 %
AMETEK MRO Florida, Inc.	Delaware	100 %
Drake Air, Inc.	Oklahoma	100 %
AMETEK Programmable Power, Inc.	Delaware	100 %
VTI Instruments Private Limited	India	99.999 %
VTI Integrated Systems Private Limited	India	99.89 %

SUBSIDIARIES OF AMETEK, INC.

AS OF DECEMBER 31, 2021

Name of Subsidiary and name under which it does business	State or other jurisdiction of incorporation or organization	Percentage of voting securities owned by its immediate parent*
Forza Silicon Corporation	California	100 %
Powervar, Inc.	Illinois	100 %
Powervar Deutschland GmbH	Germany	100 %
Powervar Mexico S.A. de C.V.	Mexico	99.998 %
Southern Aero Partners, Inc.	Oklahoma	100 %
AMETEK CTS US, Inc.	New York	100 %
AMETEK EMG Holdings, Inc.	Delaware	100 %
Avicenna Technology, Inc.	Minnesota	100 %
Coining, Inc.	Delaware	100 %
Dunkermotoren USA Inc.	Delaware	100 %
Hamilton Precision Metals, Inc.	Delaware	100 %
HCC Industries, Inc.	Delaware	100 %
Glasseal Products, Inc.	New Jersey	100 %
Sealtron, Inc.	Delaware	100 %
AMETEK Aegis, Inc.	Delaware	100 %
Hermetic Seal Corporation	Delaware	100 %
AMETEK SCP, Inc.	Rhode Island	100 %
AMETEK SCP (Barrow) Limited	United Kingdom	100 %
Technical Services for Electronics, Inc.	Minnesota	100 %
AMETEK Grundbesitz GmbH	Germany	100 %
AMETEK Haydon Kerk, Inc.	Delaware	100 %
Tritex Corporation	Delaware	100 %
Haydon Kerk Motion Solutions, Inc.	Massachusetts	100 %
AMETEK Holdings B.V., also registered as AMETEK Holdings B.V. Delaware Inc.[1]	Delaware	100 %
AMETEK Denmark A/S	Denmark	100 %
AMETEK European Holdings GmbH	Germany	100 %
AMETEK Italia S.r.l.	Italy	100 %
AMETEK Holdings de Mexico, S. de R.L.	Mexico	50 %
AMETEK Latin America Holding Company S.à r.l.	Luxembourg	100 %
AMETEK Customer Service S. de R. L. de C.v.	Mexico	100 %
AMETEK Mexico Holding Company, LLC	Delaware	100 %
AMETEK Lamb Motores de Mexico, S. de R.L. de C.V.	Mexico	99.99 %
AMETEK do Brasil Ltda.	Brazil	99 %
AMETEK Europe L.L.C.	Delaware	100 %
AMETEK (Barbados) SRL	Barbados	100 %
AMETEK European Holdings Limited	United Kingdom	100 %
AMETEK Aerospace & Defense Group UK Ltd	United Kingdom	100 %
AEM Limited	United Kingdom	100 %
AMETEK Airtechnology Group Limited.	United Kingdom	100 %
Airtechnology Pension Trustees Limited	United Kingdom	100 %
Muirhead Aerospace Limited	United Kingdom	100 %
AMETEK Co., Ltd.	Japan	100 %
AMETEK Elektromotory, s.r.o	Czech Republic	99.97 %

[1] This subsidiary is also registered in The Netherlands

SUBSIDIARIES OF AMETEK, INC.

AS OF DECEMBER 31, 2021

Name of Subsidiary and name under which it does business	State or other jurisdiction of incorporation or organization	Percentage of voting securities owned by its immediate parent*
AMETEK Instruments Group UK Limited	United Kingdom	100 %
Alphasense Limited	United Kingdom	100 %
Alphasense USA, Inc.	Delaware	100 %
Alphasense SV Limited	United Kingdom	100 %
AMETEK (GB) Limited	United Kingdom	100 %
Gatan U.K. Limited	United Kingdom	100 %
Taylor Hobson Limited	United Kingdom	100 %
Taylor Hobson Trustees Limited	United Kingdom	100 %
Solartron Metrology Limited	United Kingdom	100 %
AMETEK Material Analysis Holdings GmbH	Germany	100 %
Abaco Systems Holding Corp	Delaware	100 %
Abaco Systems, Inc.	Delaware	100 %
Abaco UK Holdco Limited	United Kingdom	100 %
4DSP LLC	Nevada	100 %
AMETEK Edinburgh Holdings LP	Scotland	99 %
EMA Finance 3, LLC	Delaware	100 %
AMETEK UK Finance Limited	United Kingdom	100 %
4DSP B.V.	The Netherlands	100 %
Abaco Systems Limited	United Kingdom	100 %
Foundation Technology Ltd	United Kingdom	100 %
Abaco Systems Technology Corp	New York	100 %
Abaco Systems PTY Limited	Australia	100 %
Abaco Systems S.R.L.	Italy	100 %
Abaco Systems Private Limited	India	100 %
Abaco Systems GK	Japan	100 %
AMETEK Holdings SARL	France	74 %
Antavia SAS	France	100 %
CAMECA SAS	France	96.15 %
AMETEK GmbH	Germany	31.99 %
AMETEK Nordic AB	Sweden	100 %
Zygo Germany GmbH	Germany	41.36 %
AMETEK Germany GmbH	Germany	100 %
AMETEK Korea Co., Ltd.	Korea	100 %
CAMECA Instruments, Inc.	New York	100 %
Direl Holding GmbH	Germany	100 %
Direl GmbH	Germany	100 %
Dunkermotoren GmbH	Germany	100 %
AMETEK d.o.o. Subotica.	Serbia	100 %
Dunkermotoren Taicang Co., Ltd.	China	100 %
EGS Automation GmbH	Germany	100 %
Motec GmbH	Germany	100 %
RETE Holding GmbH	Switzerland	100 %
AMETEK CTS GmbH	Switzerland	100 %
AMETEK CTS Europe GmbH	Germany	100 %
Frameflair Limited	United Kingdom	100 %
Milmega Limited	United Kingdom	100 %
SPECTRO Analytical Instruments GmbH	Germany	100 %

SUBSIDIARIES OF AMETEK, INC.

AS OF DECEMBER 31, 2021

Name of Subsidiary and name under which it does business	State or other jurisdiction of incorporation or organization	Percentage of voting securities owned by its immediate parent*
AMETEK Hong Kong Private Limited	Hong Kong	100 %
SPECTRO Analytical Instruments, Inc.	Delaware	100 %
SPECTRO Analytical Instruments (Pty) Ltd	South Africa	100 %
OOO “AMETEK”	Russia	99 %
EMA Finance 1 LLC	Delaware	100 %
EMA Finance 2 LLC	Delaware	100 %
Nu Instruments Limited	United Kingdom	100 %
Nu Instruments Asia Ltd.	Hong Kong	100 %
Taylor Hobson Inc.	Delaware	100 %
AMETEK S.A.S.	France	76.7 %
AMETEK Singapore Private Ltd.	Singapore	100 %
Amekai Singapore Private Ltd.	Singapore	50 %
Amekai Meter (Xiamen) Co., Ltd.	China	100 %
Amekai Taiwan Co., Ltd.	Taiwan	50 %
AMETEK Commercial Enterprise Shanghai	China	100 %
AMETEK Engineered Materials Sdn. Bhd.	Malaysia	100 %
AMETEK Instruments India Private Limited	India	100 %
AMETEK Motors Asia Pte. Ltd.	Singapore	100 %
AMETEK Industrial Technology (Shanghai) Co., Ltd.	China	100 %
Haydon Linear Motors (Changzhou) Co., Ltd.	China	100 %
AMETEK S.r.l.	Italy	70 %
EMA Holdings UK Limited	United Kingdom	100 %
Land Instruments International Ltd.	United Kingdom	100 %
AMETEK Global Tubes, LLC	Delaware	100 %
Tubes Holdco Limited	United Kingdom	100 %
AMESP USVI LLC	United States Virgin Islands	100 %
Fine Tubes Limited	United Kingdom	100 %
Superior Tube Company, Inc.	Pennsylvania	100 %
EMA MX, LLC	Delaware	100 %
AMETEK Finland Oy	Finland	100 %
AMETEK Magnetrol USA, LLC	Delaware	100 %
AMETEK PIP Holdings, Inc.	Delaware	100 %
AMETEK Land, Inc.	Delaware	100 %
AMETEK Precitech, Inc.	Delaware	100 %
AMETEK (Thailand) Co., Ltd.	Thailand	99.999 %
Creaform U.S.A. Inc.	Delaware	100 %
Crystal Engineering Corporation	California	100 %
NewAge Testing Instruments, Inc.	Pennsylvania	100 %
Patriot Sensors & Controls Corporation	Delaware	100 %
Reichert, Inc.	Delaware	100 %
SSH Non-Destructive Testing, Inc.	Delaware	100 %

SUBSIDIARIES OF AMETEK, INC.

AS OF DECEMBER 31, 2021

Name of Subsidiary and name under which it does business	State or other jurisdiction of incorporation or organization	Percentage of voting securities owned by its immediate parent*
Amptek, Inc.	Delaware	100 %
Technical Manufacturing Corporation	Delaware	100 %
Atlas Material Holdings Corporation	Delaware	100 %
Atlas Material Testing Technology L.L.C.	Delaware	100 %
Atlas Netherlands AcquisitionCo Coöperatief U.A.	Netherlands	99.99 %
Atlas Material Testing Technology GmbH	Germany	100 %
Atlas Material Testing Technology BV	Netherlands	100 %
Atlas Material Testing Technology (India) Private Limited	India	100 %
Chandler Instruments Company L.L.C.	Texas	100 %
Petrolab, L.L.C.	Delaware	100 %
EMA Holdings, LLC	Delaware	100 %
Magnetrol International N.V.	Belgium	100 %
MCG Acquisition Corporation	Minnesota	100 %
TPM Russia, Inc.	Delaware	100 %
Zygo Corporation	Delaware	100 %
AMETEK Taiwan Co. Ltd.	Taiwan	50.5 %
Six Brookside Drive Corporation.	Connecticut	100 %
Zemetrics, Inc.	Delaware	100 %
Zygo Pte Ltd.	Singapore	100 %
ZygoLamda Metrology Instrument (Shanghai) Co., Ltd.	China	100 %
Zygo Richmond Corporation	Delaware	100 %
FMH Intermediate LLC	Delaware	100 %
FMH Holdings Corp.	Delaware	100 %
FMH Aerospace Corp.	California	100 %
Gatan Inc.	Pennsylvania	100 %
Gatan Service Corporation	Pennsylvania	100 %
IntelliPower, Inc.	California	100 %
MOCON, Inc.	Minnesota	100 %
MOCON Europe A/S	Denmark	100 %
AMETEK Instrumentos, S.L.	Spain	100 %
Motec USA LLC	Delaware	100 %
NSI-MI Technologies, LLC	Delaware	100 %
Nearfield Systems, LLC	California	100 %
MI Technologies, LLC	Delaware	100 %
NSI-MI UK Limited	United Kingdom	100 %
OBCORP LLC.	Missouri	100 %
Universal Analyzers Inc.	Nevada	100 %
Pacific Design Technologies, Inc.	California	100 %
Rauland-Borg Corporation	Illinois	100 %
Modern Field Holdings, Inc.	British Virgin Islands	7.6 %
Rauland-Borg Corporation of Florida	Delaware	100 %
Responder Systems Corporation	California	100 %
Rotron Incorporated	New York	100 %
AMETEK Technical & Industrial Products, Inc.	Minnesota	51.9 %
Seiko EG&G Co. Ltd.	Japan	49 %
Solidstate Controls, LLC	Delaware	100 %

SUBSIDIARIES OF AMETEK, INC.

AS OF DECEMBER 31, 2021

Name of Subsidiary and name under which it does business	State or other jurisdiction of incorporation or organization	Percentage of voting securities owned by its immediate parent*
HDR Power Systems, LLC	Delaware	100 %
Solidstate Controls, Inc. de Argentina S.R.L.	Argentina	90 %
Solidstate Controls Mexico, S.A. de C.V.	Mexico	99.998 %
Sound Com Corporation	Ohio	100 %
Spectro International Holdings, Inc.	Delaware	100 %
Spectro Holdings, Inc.	Delaware	100 %
Spectro Scientific, Inc.	Massachusetts	100 %
Spectro, Inc.	Massachusetts	100 %
Vision Research, Inc.	Delaware	100 %
Vision Research Europe B.V.	Netherlands	100 %
Vision Research S.R.L.	Romania	100 %

(•) Exclusive of directors' qualifying shares and shares held by nominees as required by the laws of the jurisdiction of incorporation.

Exhibit 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-8 No. 333-173988) pertaining to the AMETEK, Inc. 2011 Omnibus Incentive Compensation Plan,

(2) Registration Statement (Form S-8 No. 333-87491) pertaining to the AMETEK Retirement and Savings Plan,

(3) Registration Statement (Form S-8 No. 333-91507) pertaining to the AMETEK, Inc. Deferred Compensation Plan,

(4) Registration Statement (Form S-8 No. 333-176068) pertaining to the Hamilton Precision Metals 401(k) Employee Savings Plan and Solidstate Controls, Inc. Hourly Employees' (CWA) Retirement Plan,

(5) Registration Statement (Form S-8 No. 333-214847) pertaining to the Superior Tube Company, Inc. Union 401(k) Plan,

(6) Registration Statement (Form S-3 No. 333-75892) of AMETEK, Inc. and,

(7) Registration Statement (Form S-8 No. 333-238099) pertaining to the AMETEK, Inc. 2020 Omnibus Incentive Compensation Plan.

of our reports dated February 22, 2022, with respect to the consolidated financial statements of AMETEK, Inc. and the effectiveness of internal control over financial reporting of AMETEK, Inc., included in this Annual Report (Form 10-K) of AMETEK, Inc. for the year ended December 31, 2021.

/s/ ERNST & YOUNG LLP

Philadelphia, Pennsylvania
February 22, 2022

Exhibit 31.1

CERTIFICATIONS

I, David A. Zapico, certify that:

1. I have reviewed this Annual Report on Form 10-K of AMETEK, Inc.(the “registrant”);

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 registrant’s board of directors (or persons performing the equivalent functions):

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

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

Date: February 22, 2022

/s/ DAVID A. ZAPICO

David A. Zapico

Chairman of the Board and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, William J. Burke, certify that:

1. I have reviewed this Annual Report on Form 10-K of AMETEK, Inc.(the "registrant");

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 registrant's board of directors (or persons performing the equivalent functions):

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

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

Date: February 22, 2022

/s/ WILLIAM J. BURKE
William J. Burke
Executive Vice President – Chief Financial Officer

Exhibit 32.1

AMETEK, Inc.

Certification Pursuant to
18 U.S.C. Section 1350,
as Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report of AMETEK, Inc. (the "Company") on Form 10-K for the year ended December 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David A. Zapico, Chairman of the Board and Chief Executive Officer of 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:

(a) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(b) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ DAVID A. ZAPICO
David A. Zapico
Chairman of the Board and Chief Executive Officer
Date: February 22, 2022

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

Exhibit 32.2

AMETEK, Inc.

Certification Pursuant to
18 U.S.C. Section 1350,
as Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report of AMETEK, Inc. (the “Company”) on Form 10-K for the year ended December 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, William J. Burke, Executive Vice President – Chief Financial Officer of 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:

(a) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(b) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ WILLIAM J. BURKE
William J. Burke
Executive Vice President – Chief Financial Officer
Date: February 22, 2022

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