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 September 30, 2022

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 001-33288

HAYNES INTERNATIONAL, INC.
(Exact name of registrant as specified in its charter)

Delaware	**06-1185400**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1020 West Park Avenue, Kokomo, Indiana	**46904-9013**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code **(765) 456-6000**

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value $0.001 per share	**HAYN**	**The NASDAQ Stock Market LLC**

Securities registered pursuant to section 12(g) of the Act: **None**.

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

☒ Yes ☐ No

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

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

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

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

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

As of March 31, 2022, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was $373,488,556 based on the closing sale price as reported on the NASDAQ Global Market. Shares of common stock held by each executive officer and director and by each person who owns 10% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination that any such person is an affiliate of the registrant and there may be other persons who are affiliates.

12,521,087 shares of Haynes International, Inc. common stock were outstanding as of November 14, 2022.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement to be delivered to stockholders in connection with the 2023 Annual Meeting of Stockholders have been incorporated by reference into Part III of this report.

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This Annual Report on Form 10-K contains statements that constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, each as amended. All statements other than statements of historical fact, including statements regarding market and industry prospects and future results of operations or financial position, made in this Annual Report on Form 10-K are forward-looking. In many cases, you can identify forward-looking statements by terminology, such as "may", "should", "expects", "intends", "plans", "anticipates", "believes", "estimates", "predicts", "potential" or "continue" or the negative of such terms and other comparable terminology. The forward-looking information may include, among other information, statements concerning the Company's outlook for fiscal year 2023 and beyond, overall volume and pricing trends, cost reduction strategies and their anticipated results, market and industry trends, capital expenditures, and dividends. There may also be other statements of expectations, beliefs, future plans and strategies, anticipated events or trends and similar expressions concerning matters that are not historical facts. Readers are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, including, without limitation, those risk factors set forth in Item 1A of this Annual Report on Form 10-K. Actual results may differ materially from those in the forward-looking statements as a result of various factors, risks and uncertainties many of which are beyond the Company's control.

The Company has based these forward-looking statements on its current expectations and projections about future events. Although the Company believes that the assumptions on which the forward-looking statements contained herein are based are reasonable, any of those assumptions could prove to be inaccurate. As a result, the forward-looking statements based upon those assumptions also could be incorrect.

The Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Part I

Item 1. Business

Overview

Haynes International, Inc. ("Haynes", "the Company", "we", "our" or "us") is one of the world's largest developers, producers, and distributors of technologically advanced high-performance nickel- and cobalt-based alloys. The Company's products, which are sold primarily into the aerospace, chemical processing and industrial gas turbine industries, consist of high-temperature resistant alloys, or ("HTA") products, and corrosion-resistant alloys, or ("CRA") products. HTA products are used by manufacturers of equipment that is subjected to extremely high temperatures, such as jet engines for the aerospace market, gas turbine engines used for power generation and industrial heating equipment. CRA products are used in applications that require resistance to very corrosive media found in chemical processing, power plant emissions control and waste treatment. Haynes high-performance alloy sales in sheet, coil and plate forms, in the aggregate, represented approximately 62% of net product revenues in fiscal 2022. The Company also produces its products as seamless and welded tubulars, which represented approximately 13% of fiscal 2022 net product revenues and in wire form, which represented approximately 7% of fiscal 2022 net product revenues. The Company also produces its products in slab, bar and billet form and sales of these forms, in the aggregate, represented approximately 18% of fiscal 2022 net product revenues.

The Company has manufacturing facilities in Kokomo, Indiana; Arcadia, Louisiana; and Mountain Home, North Carolina. The Kokomo facility specializes in flat products, the Arcadia facility specializes in tubular products, and the Mountain Home facility specializes in wire products. The Company's products are sold primarily through its direct sales organization, which includes 11 service and/or sales centers in the United States, Europe and Asia. All of these centers are Company-operated. In fiscal 2022, approximately 74% of the Company's net revenue was generated by its direct sales organization, and the remaining 26% was generated by a network of independent distributors, resellers and sales agents that supplement the Company's direct sales efforts primarily in the United States, Europe and Asia, some of whom have been associated with the Company for over 30 years.

A key strength of the Company is innovation through developing new alloys and developing new applications for its new and existing alloys. This strength combined with our unique business model that utilizes both the mill and Company-owned service centers provides exceptional customer service with short lead times, smaller quantities and value-add cutting operations. The Company has leveraged these strengths with a focused strategy of providing high-value differentiated products and services, and variable cost reductions. This has resulted in a 25% reduction in our volume breakeven point, which is providing incremental margin strength as volumes rise.

Available Information

The address of the Company's website is *www.haynesintl.com*. The Company provides a link to its reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 on its website as soon as reasonably practicable after filing with the U.S. Securities and Exchange Commission. The filings available on the Company's website date back to February 3, 2011. For all filings made prior to that date, the Company's website includes a link to the website of the U.S. Securities and Exchange Commission, where such filings are available. Information contained or referenced on the Company's website is not incorporated by reference into, and does not form a part of this Annual Report on Form 10-K. For a statement of the Company's profits and losses and total assets, please see the financial statements of the Company included in Item 8 of this Annual Report on Form 10-K.

Business Strategy

The Company's strategy is pursued within the overarching goal of safety, which continues to be the Company's core priority. Our approach to safety includes providing leadership on safety awareness, communication, accountability, and process change. In addition to our ongoing focus on safety, the Company, continues to improve our business performance, including providing high-value differentiated products and services along with relentlessly pursuing reduced variable costs, with the result being expansion of our gross margin percentage and a significant reduction in our breakeven point.

Our business metrics improved significantly in fiscal 2022, including a 25% reduction in our volume breakeven point from roughly 5 million pounds shipped to 3.7 million pounds shipped per quarter with the current product mix. This lower breakeven point has provided favorable incremental gross margin leverage with increasing volumes in the second half of fiscal 2022 and is anticipated to continue.

While maintaining this improvement focus, the Company continues to evaluate new opportunities and applications for its products, particularly in its core markets of aerospace, chemical processing and industrial gas turbines, but also in the areas of renewable clean energy sources and other developing technologies relating to environmental and climate change issues. These opportunities include new generation jet engines with better fuel efficiency and fewer emissions, as well as the use or consideration for use of HAYNES® alloys in advanced ultra-supercritical power plants, concentrated solar power, fuel cells, molten salt, nuclear reactors, waste-to-energy, hydrogen production, and use of supercritical-CO_2 power cycles for energy generation. Innovation is a foundational strength of the Company.

The following provides further discussion on certain focus initiatives that are core to this strategy.

- ***Ensure the Company is compensated for the high-value differentiated products and services it provides.*** The Company favorably adjusted pricing year-over-year; which is expected to continue as additional agreements are renewed. These price increases are in addition to raw material price increases and contribute to improving margins. The Company is also focused on price increases to offset inflationary increases in the Company's costs.

- ***Optimize processes to reduce costs.*** The Company is pursuing operational improvements, which include specific variable cost reduction projects. This ongoing pursuit includes initiatives in many different areas such as material management, productivity enhancements, yield and efficiency improvements and process optimization. These cost reductions are sustainable and expected to have a larger favorable impact with increasing volumes.

- ***Increase revenues by inventing new alloys, developing new applications and expanding into new markets.*** The Company believes it is an industry leader in inventing new alloys to meet the specialized and demanding requirements of the markets we serve. The Company continues to work closely with customers and end users of its products to identify opportunities to develop and manufacture new high-performance alloys. The Company's technical programs have yielded many new proprietary alloys with multiple applications, an accomplishment that the Company believes distinguishes it from its competitors.

  Developing new applications for its new and existing alloys is also a key strength and strategy of the Company. The Company leverages its technical expertise to develop unique applications for its products, especially proprietary and specialty alloys that can yield higher margins. These new applications, including use in unique special projects and new programs, are an important part of the Company's growth and profitability strategy.

  Through development of new alloys and new applications, the Company is seeking to participate in additional markets with new revenue streams beyond the core markets of aerospace, chemical processing and industrial gas turbines. The Company believes that medical/pharmaceutical, consumer electronics, petrochemical and emerging technologies such as renewable and clean energy, hydrogen production and next-generation nuclear power generation all present possible significant growth opportunities for its products.

- ***Increase revenues and provide additional product and service differentiation by providing value-added processing services and leveraging the Company's global distribution network.*** The Company believes that its network of Company-owned service and sales centers throughout the United States, Europe and Asia distinguishes it from its competitors, many of whom operate only mills. The Company's service and sales centers enable it to develop close customer relationships through direct interaction with customers and to respond to customer orders quickly, while also providing value-added cutting services such as laser, plasma and water-jet cutting. These services allow the Company's customers to minimize their processing costs and outsource non-core activities.

- ***Increasing market share by leveraging its unique business model.*** Haynes is both a mill and a service center. This business model focuses on superior customer service and allows for mill flexibility and value-added services for the customer as described above. The Company's strategy leverages this differentiator to grow market share, as reflected by its above-average growth rates.

- ***Continue to expand the Company's environmental, social, and governance (ESG) initiatives.*** The Company is committed to a culture of openness, trust and integrity in all aspects of its business. These high standards governing business conduct are for the good of the Company, its employees, its shareholders and its customers. The Company has a number of policies in place governing ethical conduct and believes that all people should be treated with respect in an inclusive and diverse environment. In addition, the Company has always been conscious of its environmental impact and is actively working to lighten its carbon footprint. As part of our environmental impact reduction efforts, we completed a solar power project at our North Carolina facility that is providing over 50% of the electricity needed to power that facility. Another important ESG consideration is the customers' use of the Company's products. Ever-increasing demand for more efficient, cleaner and renewable energy by businesses aligned with ESG principles has led to the development of several emerging technologies that require high-performance alloys for demanding operating conditions, making Haynes' products an integral part of many energy solutions designed to be more environmentally friendly.

- ***Capitalize on strategic equipment investment.*** The Company expects to continue to improve return on investment from capital invested in manufacturing facilities and equipment. Management believes that the Company's capital investments will enable it to continue to satisfy customer demand for value-added products.

- ***Increase profitability through strategic acquisitions and alliances.*** The Company intends to continue to examine opportunities that enable it to enhance shareholder value. These opportunities may include product line additions, market expansion opportunities or other commercial or cost synergies. The Company also plans to continue to evaluate strategic relationships in the industry in order to enhance its competitive position and relationships with customers.

- ***Focus on eliminating the U.S. Pension Liability.*** The Company also established strategies to de-risk the U.S. pension plan and strive to decrease and eventually eliminate the associated liability, which was the largest liability on its balance sheet two years ago. The U.S. Pension net liability was $105 million at the beginning of fiscal 2021 and decreased to $21 million at the end of fiscal 2022; a drop of $84 million over the two-year period. This strategy included a lump-sum contribution of $15 million into the plan in the fourth quarter of fiscal 2021 in addition to normal contributions of $6 million in fiscal 2021 and fiscal 2022. A glide path was adopted in fiscal 2021 to help secure funding improvements including a customized Liability-driven investing (LDI) strategy designed to reduce interest rate risk and equity risk. At the end of fiscal 2022, the plan's funding percentage was approximately 91%.

- ***Optimize its allocation of capital.*** The Company believes that its best use of capital can differ significantly in times when the markets that we serve are in a high growth period as opposed to when those markets are soft or in decline. We will focus on cash generation in times when the backlog is level or in decline and allocate that capital towards debt reduction, pension funding or share re-purchases. Conversely, in periods of high growth expected over the following year, capital is allocated towards inventory builds to support the growing backlog. The Company continues to reinvest in the business with capital expenditures as well as a consistent dividend returned to shareholders.

Products

The global specialty alloy market includes stainless steel, titanium alloys, general-purpose nickel alloys and high-performance nickel- and cobalt-based alloys. The Company believes that the high-performance alloy sector represents less than 10% of the total alloy market. The Company competes primarily in the high-performance nickel- and cobalt-based alloy sectors, which includes HTA products and CRA products. In each year of fiscal 2020, 2021 and 2022, HTA products accounted for approximately 81%, 75% and 79% of the Company's net revenues, and sales of the Company's CRA products accounted for approximately 19%, 25% and 21% of the Company's net revenues. These percentages are based on data which include revenue associated with sales by the Company to its foreign subsidiaries, but exclude revenue associated with sales by foreign subsidiaries to their customers. Management believes, however, that the effect of including revenue data associated with sales by its foreign subsidiaries would not materially change the percentages presented in this section.

High-temperature Resistant Alloys. HTA products are used primarily in manufacturing components for the hot sections of gas turbine engines. Stringent safety and performance standards in the aerospace industry result in development lead times typically as long as eight to ten years in the introduction of new aerospace-related market applications for HTA products. However, once a particular new alloy is shown to possess the properties required for a specific application in the aerospace market, it tends to remain in use for extended periods. HTA products are also used in gas turbine engines produced for use in applications such as naval and commercial vessels, electric power generation, power sources for offshore drilling platforms, gas pipeline booster stations and emergency standby power generators. Some of our HTA products offer excellent resistance to oxidation, sulfidation, metal dusting and other high-temperature degradation modes. The Company expects this area of the chemical and petrochemical industry to represent potential long-term growth opportunities for HTA products.

Corrosion-resistant Alloys. CRA products are used in a variety of applications, such as chemical and petrochemical processing, power plant emissions control, hazardous waste treatment, sour gas production and pharmaceutical vessels. Historically, the chemical processing market has represented the largest end-user sector for CRA products. Due to maintenance, safety and environmental considerations, the Company believes this market continues to represent an area of potential long-term growth. In addition to the use of CRA products in the chemical and petrochemical processing industry, the Company has seen an increased demand for some of these alloys in applications such as gas-to-liquid and synthetic gas operations. For improved efficiency within relevant applications, higher operating temperatures and harsher environmental conditions are required and, as a consequence, high-temperature, corrosion-resistant alloys are used. Unlike aerospace applications within the HTA product market, the development of new market applications for CRA products generally does not require long lead times.

Material Resources

Patents and Trademarks

The Company currently maintains a total of approximately 20 published U.S. patents and applications and approximately 272 foreign counterpart patents and applications targeted at countries with significant or potential markets for the patented products. Since fiscal 2003, the Company's technical programs have yielded nine new proprietary alloys. The alloys being commercialized saw significant further advancement in the process during fiscal 2020, 2021 and 2022. The Company will continue to actively promote its new alloys through customer engineering visits, technical presentations and papers.

In the aerospace, industrial gas turbine and high temperature markets, one of the alloys that has already seen significant commercial success is HAYNES® 282® alloy. This alloy has an excellent combination of high temperature strength, formability and fabricability. There have been a significant number of customer tests and evaluations of this product for the hot sections of gas turbines in the aerospace and industrial gas turbine markets, and for other high temperature applications. The alloy has already been specified into major aerospace and industrial gas turbine applications, as well as for certain high temperature components in the automotive and industrial applications. ASME code case for this alloy was recently approved, which will help further expand the use for pressure vessel and boiler applications requiring such approvals. Another new alloy for use in the aerospace and industrial gas turbine markets is HAYNES® 244® alloy. It combines high strength to 1400 degrees Fahrenheit with a low coefficient of thermal expansion. Commercialization is ongoing for this alloy, and it has been specified into certain aerospace engine programs and is being evaluated on others.

In the chemical processing industry and corrosion resistance markets, customers have found extensive applications for HASTELLOY® G-35® alloy, particularly in wet phosphoric acid production. Commercialization is also ongoing for HASTELLOY® HYBRID-BC1® alloy. HYBRID-BC1® alloy is a CRA product with applications in the chemical processing and petrochemical industries that has demonstrated resistance to hydrochloric and sulfuric acid as well as several organic acids. Most recently the alloy has found applications in agrichemical and refinery industries further expanding the use of the alloy. Management expects demand for these alloys will continue to grow in chemical processing and other markets.

In the oil and gas industry, HASTELLOY® C-22HS® alloy has found multiple applications. Commercialization of this alloy continues as is the testing, evaluation and promotion of this alloy with special emphasis on applications for this industry.

In addition to the successful commercialization of the above alloys, the Company continues to develop applications for four new alloys which are still being scaled up at the mill and are in the early stages of the commercialization process. HAYNES® NS-163® alloy is a nitride dispersion strengthened material that represents an entirely new metallurgical approach to achieving very high creep resistance at high temperatures. Technical process developments are still under investigation. HAYNES® HR-224® alloy is an HTA product with superior resistance to oxidation and excellent fabricability, and is being assessed in certain current and emerging technology applications. HAYNES® HR-235® alloy has excellent resistance to metal dusting in high temperature carbonaceous environments. Good progress in developing new applications for the alloy for petrochemical and syngas production applications has been made this past fiscal year. Most recently, HAYNES® 233™ alloy was introduced to provide excellent oxidation resistance coupled with superior creep strength at temperatures to 2100°F or higher. This combination of properties is believed not to have been achieved previously in a readily fabricable alloy. Commercialization for this alloy is ongoing and significant progress has been made over the past year in developing applications for this new alloy in aerospace, industrial gas turbines, and other high temperature applications.

Patents or other proprietary rights are an important element of the Company's business. The Company's strategy is to file patent applications in the U.S. and any other country that represents an important potential commercial market to the Company. In addition, the Company seeks to protect technology that is important to the development of the Company's business. The Company also relies upon trade secret rights to protect its technologies and its development of new processes, applications and alloys. The Company protects its trade secrets in part through confidentiality and proprietary information agreements with its customers and employees. Trademarks on the names of many of the Company's alloys have also been applied for or granted in the U.S. and certain foreign countries.

While the Company believes its patents are important to its competitive position, significant barriers to entry may exist beyond the expiration of any patent period. These barriers to entry include the unique equipment required to produce these materials and the exacting processes required to achieve the desired metallurgical properties. These processing requirements include optimal melting and thermo-mechanical processing parameters for each alloy. Management believes that the current alloy development programs and these barriers to entry reduce the impact of patent expirations on the Company.

Raw Materials

Raw materials represented an estimated 41% of cost of sales in fiscal 2022. Nickel, a major component of many of the Company's products, accounted for approximately 51% of raw material costs, or approximately 21% of total cost of sales in fiscal 2022. Other raw materials include cobalt, chromium, molybdenum and tungsten. Melt materials consist of virgin raw material, purchased scrap and internally produced scrap.

The average nickel prices per pound for cash buyers for the 30-day period ended on September 30, 2020, 2021 and 2022, as reported by the London Metals Exchange, were $6.74, $8.80 and $10.28 respectively. Prices for certain other raw materials that are significant in the manufacture of the Company's products, such as cobalt, chromium and molybdenum were higher in fiscal 2022 compared to fiscal 2021.

The Company's business model includes mill manufacturing and global distribution facilities, which create a long working capital cycle and contribute to a long position as it relates to commodity price risk, especially for product sold out of distribution facility inventory at spot prices. In addition, the type of high-performance products the Company produces require multiple production steps to create the final yielded product that is sold to the customer. These refining steps generate high revert scrap pounds that are recycled back through the melt at metal value. This scrap cycle also contributes to a long position as it relates to commodity price risk.

Although alternative sources of supply are available, the Company currently purchases nickel through an exclusive arrangement with a single supplier to ensure consistent quality and supply. The Company purchases raw materials through various arrangements including fixed-term contracts and spot purchases, which involve a variety of pricing mechanisms. In cases where the Company prices its products at the time of order placement, the Company attempts to establish selling prices with reference to known costs of materials, thereby reducing the risk associated with changes in the cost of raw materials. However, to the extent that the price of nickel fluctuates rapidly, there may be a favorable or unfavorable effect on the Company's gross profit margins. The Company periodically purchases material forward with certain suppliers in connection with fixed price agreements with customers.

The Company values inventory utilizing the first-in, first-out ("FIFO") inventory costing methodology. Under the FIFO inventory costing method, the cost of materials included in cost of sales may be different from the current market price at the time of sale of finished product due to the length of time from the acquisition of the raw material to the sale of the finished product. In a period of decreasing raw material costs, the FIFO inventory valuation method normally results in higher costs of sales as compared to the last-in, first out method. Conversely, in a period of rising raw material costs, the FIFO inventory valuation method normally results in lower costs of sales as compared to the last-in, first out method.

End Markets

The global specialty alloy market includes stainless steels, titanium alloys, general purpose nickel alloys and high-performance nickel- and cobalt-based alloys. Of this total market, the Company primarily competes in the high-performance nickel- and cobalt-based alloy sector, which demands diverse specialty alloys suitable for use in precision manufacturing. Given the technologically advanced nature of the products, strict requirements of the end users and higher-growth end markets, in general the Company believes the high-performance alloy sector provides greater growth potential, the opportunity for higher profit margins and greater opportunities for service, product and price differentiation as compared to the stainless steels and general-purpose nickel alloys markets. While stainless steel and general-purpose nickel alloys are generally sold in bulk through third-party distributors, the Company's products are sold in smaller-sized orders which are customized and typically handled on a direct-to-customer basis.

The Company believes it is an industry leader in developing new alloys to meet its customers' specialized and demanding requirements. The Company continues to work closely with customers and end users of its products to identify opportunities to develop and manufacture new high-performance alloys. The Company's technical programs have yielded many new proprietary alloys with multiple applications, an accomplishment that the Company believes distinguishes it from its competitors.

Developing new applications for its new and existing alloys is also a key strength and strategy of the Company. The Company leverages its technical expertise to develop unique applications for its products, especially proprietary and specialty alloys that can yield higher margins. These new applications, including use in unique special projects and new programs, are an important part of the Company's growth and profitability strategy.

Aerospace. The Company has manufactured HTA products for the aerospace market since the late 1930s and has developed numerous proprietary alloys for this market. Customers in the aerospace market tend to be the most demanding with respect to meeting specification requirements, precise tolerances and achieving new product performance standards. Stringent safety standards and continuous efforts to reduce equipment weight, reduce emissions, and develop more fuel-efficient designs require close coordination among the Company, the aero-engine OEM's, and their customers in the selection and development of HTA products. As a result, sales to aerospace customers tend to be made through the Company's direct sales force. Demand for the Company's products in the aerospace market is based on the new and replacement market for jet engines and the maintenance needs of operators of commercial and military aircraft. The Company's HTA products are used for static components in the hot sections of the aero-engine. The hot sections are subjected to substantial wear and tear and require periodic maintenance, repair and overhaul. The Company views the maintenance, repair and overhaul (MRO) business as an area of continuing long-term growth. Besides the commercial and military aircraft engine market, HTA products are also used in space technology applications. The company expects growth in this area as well.

Chemical Processing. The chemical processing market represents a large base of customers with diverse CRA and HTA applications driven by demand in key end-use markets such as automobiles, housing, health care, biopharmaceuticals, agriculture and metals production. Both CRA and HTA products supplied by the Company have been used in the chemical processing market since the early 1930s. Demand for the Company's products in this market is driven by the level of MRO and expansion requirements of existing chemical processing facilities, as well as the construction of new facilities. The expansion of manufacturing of chemicals from natural gas in North America is expected to be a driver of demand in this market. In addition, the Company believes the extensive worldwide network of Company-owned service and sales centers, as well as its network of independent distributors and sales agents who supplement the Company's direct sales efforts outside of the U.S., provide a competitive advantage in marketing its CRA and HTA products in the chemical processing market.

Industrial Gas Turbine. Demand for the Company's products in the industrial gas turbine market is driven primarily by utility-scale electricity generation, both for base load as well as for backup generation during times of peak power demand. The benefit of these turbines are their relatively low cost, high efficiency, rapid response and reliability, especially as weather-controlled renewables have become major sources of electricity. An additional demand consideration is the drive to lower emissions from coal-fired generating facilities, since natural gas has gained acceptance as a cleaner, lower-cost alternative to coal. Industrial gas turbines are also used for power and propulsion in certain classes of ships and ferries, most commonly as derivatives of popular aero turbine engines. Demand is also generated by mechanical drive units used for oil and gas production and pipeline transportation and for back-up sources of power generation for hospitals and shopping malls. The Company also has a strong presence in micro turbine applications, which provide decentralized power and thermal heating for many key markets. The Company's products have allowed turbines to operate with higher temperatures and efficiencies for much longer service intervals.

Other Markets. Other markets in which the Company sells its HTA products and CRA products include flue-gas desulfurization (FGD), oil and gas, waste incineration, industrial heat treating, automotive, thermocouples, sensors and instrumentation, biopharmaceuticals, solar and nuclear fuel. The FGD market has been driven by both legislated and self-imposed standards for lowering emissions from fossil fuel fired electric generating facilities. This market has softened and is expected to continue to soften in the U.S. if the trend to switch from coal to natural gas for power plants continues, but has continued potential in other regions of the world. The Company also sells its products for use in the oil and gas market, primarily in connection with sour gas production. In addition, incineration of municipal, biological, industrial and hazardous waste products typically produces very corrosive conditions that demand high performance alloys. The Company continues to look for opportunities to introduce and expand the use of its alloys in emerging technologies such as solar, fuel cells, ultra-supercritical steam and supercritical-CO_2 power plants, and molten salt nuclear reactor applications. Markets capable of providing growth are being driven by increasing performance, reliability and service life requirements for products used in these markets, which could provide further applications for the Company's products.

Through development of new alloys and new applications, the Company continues to seek to participate in additional markets with new revenue streams beyond the core markets of aerospace, chemical processing and industrial gas turbine industries. The Company believes that medical/pharmaceutical, consumer electronics, petrochemical and emerging technologies such as renewable and clean energy, hydrogen production, next-generation nuclear power generation and additive manufacturing all present possible significant growth opportunities for its products.

Sales and Marketing and Distribution

The Company sells its products primarily through its direct sales organization, which operates from 14 total locations in the U.S., Europe and Asia, 11 of which are service and/or sales centers. All of the Company's service and/or sales centers are operated either directly by the Company or through its direct or indirect wholly-owned subsidiaries. Approximately 74% of the Company's net revenue in fiscal 2022 was generated by the Company's direct sales organization. The remaining 26% of the Company's fiscal 2022 net revenues was generated by a network of independent distributors and sales agents who supplement the Company's direct sales in the U.S., Europe and Asia. Going forward, the Company expects its direct sales force to generate approximately 75% of its total net revenues.

Providing technical assistance to customers is an important part of the Company's marketing strategy. The Company provides performance analyses of its products and those of its competitors for its customers. These analyses enable the Company to evaluate the performance of its products enabling the products to be included as part of the technical specifications used in the production of customers' products. The Company's market development professionals are assisted by its engineering and technology staff in directing the sales force to new opportunities. Management believes the Company's combination of direct sales, technical marketing, engineering and customer support provides an advantage over other manufacturers in the high-performance alloy industry. This framework allows the Company to obtain direct insight into customers' alloy needs and to develop proprietary alloys that provide solutions to customers' demanding applications.

The Company continues to focus on growing its business in foreign markets, operating from service and sales centers in Asia and Europe (particularly the U.K.).

While the Company is making concentrated efforts to expand foreign sales, the majority of its revenue continues to be provided by sales to U.S. customers. The Company's domestic expansion effort includes, but is not limited to, the continued development of new high-performance alloys, the addition of equipment in U.S. service and sales centers to improve the Company's ability to provide a product closer to the form required by the customer and the continued effort, through the technical expertise of the Company, to find solutions to customer challenges.

The following table sets forth the approximate percentage of the Company's fiscal 2022 net revenues generated through each of the Company's distribution channels.

	From Domestic Locations	From Foreign Locations	Total
Company mill direct/service and sales centers	50 %	24 %	74 %
Independent distributors/sales agents	25 %	1 %	26 %
Total	75 %	25 %	100 %

The Company's top twenty customers accounted for approximately 43%, 34% and 39% of the Company's net revenues in fiscal 2020, 2021 and 2022, respectively. No customer or group of affiliated customers of the Company accounted for more than 10% of the Company's net revenues in fiscal 2020, 2021 or 2022.

Manufacturing Process

High performance alloys require an extensive knowledge of both the specific alloy systems, as well as the process parameters required to deliver a tightly controlled product to customer specifications. These products are tightly controlled from a chemistry standpoint, and require specialized equipment capable of delivering the physical and metallurgical properties that our customers require for their specialized applications. The number of process steps are typically more extensive for these high performance alloy systems as compared to what would be required for stainless or carbon steel products. This longer production cycle contributes to slower inventory turns. The Company manufactures its high-performance alloys in various forms, including sheet, coil, plate, billet/ingot, tubular, wire and other forms. The Company also performs value-added cutting services to supply certain customers with product cut to their specification.

At the Kokomo, Indiana facility, the manufacturing process begins with raw materials being combined, melted and refined in a precise manner to produce the chemical composition specified for each high-performance alloy. The Company's primary melt facility utilizes two different melting processes. The ARC/AOD process utilizes electric melting and gas refinement to remove carbon and other undesirable elements, thereby allowing more tightly-controlled chemistries, which in turn produce more consistent properties in the high-performance alloys. The other primary melt method utilizes vacuum induction melting, which involves the melting of raw materials through electromagnetic induction while under vacuum conditions to produce the desired tightly-controlled chemistry. The control systems allow for statistical process control monitoring in real time to improve product quality. For most high-performance alloys, this molten material is cast into electrodes and additionally refined through electroslag remelting. The resulting ingots are then forged or rolled to an intermediate shape and size depending upon the intended final product form. Intermediate shapes destined for flat products are then sent through a series of hot and cold rolling, annealing, pickling, leveling and shearing operations before being cut to final size.

The Company has a four-high Steckel rolling mill for use in hot rolling high-performance alloys, created specifically for that purpose. The four-high Steckel rolling mill was installed in 1982 and is one of the most powerful four-high Steckel rolling mills in the world. The mill is capable of generating over 12.0 million pounds of separating force and rolling a plate up to 72 inches wide. The mill includes integrated computer controls (with automatic gap control and programmed rolling schedules), two coiling Steckel furnaces and seven heating furnaces. Computer-controlled rolling schedules for each of the hundreds of combinations of product shapes and sizes the Company produces allow the mill to roll numerous widths and gauges to exact specifications without stoppages or changeovers.

The Company also operates a three-high hot rolling mill and a two-high hot rolling mill, each of which is capable of custom processing much smaller quantities of material than the four-high Steckel rolling mill. These mills provide the Company with significant flexibility in running smaller batches of varied products in response to customer requirements. The Company believes the flexibility provided by the three-high and two-high mills provides the Company with an advantage over its major competitors in obtaining smaller specialty orders.

The coil and sheet operation includes the ability to cold roll to tight tolerances, bright anneal, oxidize anneal and pickle, along with finishing processes that slit and cut to size. In recent years, the Company has invested and successfully brought on-line additional cold rolling capability, as well as annealing capacity to support the added rolling capacity. This added annealing capacity gives the Company the ability to offer either bright annealed finish or anneal and pickled finish that will be determined by specifications, application or type of alloy.

The Company also produces bar and billet product through a series of bar mills and a forge press operation that is located at the Kokomo, Indiana facility.

The Arcadia, Louisiana facility uses nickel feedstock produced at the Kokomo facility to manufacture welded and seamless nickel alloy pipe, tubing and fittings, and purchases titanium extruded tube hollows to produce seamless titanium tubing. The manufacturing processes at Arcadia require cold pilger mills, weld mills, annealing furnaces, pickling facilities, and various finishing lines. The Company has also invested in specialized ultrasonic testing and eddy current testing equipment, including its own testing laboratory.

The Mountain Home, North Carolina facility manufactures high-performance alloy wire and small diameter bar products. Finished wire, bar, and powder products are also warehoused at this facility for quick delivery. The facility has recently made an investment in a 1MW Solar Array to produce 50% of the facility's electrical needs from the sun.

Backlog

The Company defines backlog to include firm commitments from customers for delivery of product at established prices. At any given time, approximately 50% of the orders in the backlog include prices that are subject to adjustment based on changes in raw material costs. Historically, approximately 70% of the Company's backlog orders have shipped within six months and approximately 90% have shipped within 12 months. The backlog figures do not typically reflect that portion of the Company's business conducted at its service and sales centers on a spot or "just-in-time" basis. For additional discussion of backlog, see Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations contained in this Annual Report on Form 10-K.

Consolidated Backlog at Fiscal Quarter End

	2018	2019	2020	2021	2022
			(in millions)		
1st quarter	$ 205.7	$ 237.8	$ 237.6	$ 145.1	$ 217.5
2nd quarter	212.3	253.0	204.7	140.9	280.7
3rd quarter	220.6	254.9	174.6	150.9	338.2
4th quarter	216.0	235.2	153.3	175.3	373.7

Research and Technical Support

The Company's technology facilities are located at the Kokomo headquarters and consist of 19,000 square feet of offices and laboratories, as well as an additional 90,000 square feet of paved storage area. The Company has six fully equipped technology testing laboratories, including a mechanical and wear test lab, a metallographic lab, an electron microscopy lab, a corrosion lab, a high-temperature lab and a welding lab. These facilities also contain a reduced scale, fully equipped melt shop and process lab. As of September 30, 2022, the technology, engineering and technological testing staff consisted of 26 persons, 13 of whom have engineering or science degrees, including 7 with doctoral degrees, with the majority of degrees in the field of metallurgical engineering or materials science.

During fiscal 2022, research and development projects were focused on new alloy development, new product form development, process modeling, supportive data generation, and new alloy concept validation, relating to products for the aerospace, industrial gas turbine, chemical processing and oil and gas industries. In addition, significant projects were conducted to generate technical data in support of major market application opportunities in areas such as renewable energy, fuel cell systems, biotechnology (including toxic waste incineration and pharmaceutical manufacturing) and power generation.

Competition

The high-performance alloy market is a highly competitive market in which eight to ten major producers participate in various product forms. The Company's primary competitors in flat rolled products include Special Metals Corporation, a subsidiary of Precision Castparts Corp., Allegheny Technologies, Inc. and VDM Metals GmbH, a subsidiary of Acerinox, S.A. The Company faces strong competition from domestic and foreign manufacturers of both high-performance alloys (similar to those the Company produces) and other competing metals. The Company may face additional competition in the future to the extent new materials are developed, such as plastics, ceramics or additive manufacturing that may be substituted for the Company's products. The Company also believes that it will face increased competition from non-U.S. entities in the next few years, especially from competitors located in Eastern Europe and Asia. Additionally, in past years, the Company's domestic business has been challenged by a strong U.S. dollar, which makes the goods of foreign competitors less expensive to import into the U.S and makes the Company's products more expensive to export outside the U.S.

In past years, the Company experienced strong price competition from competitors which requires the Company to price its products competitively. The Company continues to respond to this competition through alloy and application development, increasing emphasis on service centers, offering value-added services, improving its cost structure and striving to improve delivery times and reliability.

Human Capital Resources

The Company values its workforce as one of its most important assets. Accordingly, the Company has adopted and maintains a number of programs and practices designed to attract and retain the best available personnel.

Succession and Recruitment

The Company has an organizational development and succession planning process in place for human capital strategic planning. The strategic development process is continually updated and often consists of multi-year succession and development plans for individuals. Such succession plans have been utilized throughout the Company to prepare employees for future roles and leadership opportunities.

The Company attempts to promote from within when opportunities occur, given employee growth and progression. The Company also utilizes outside recruiters due to the challenging and competitive hiring environment. In order to encourage development of a future workforce for the Company, the Company continues to sponsor a Ph.D. candidate and Senior Metallurgical Engineers Research Project from Purdue University, as well as providing internships in various departments and locations throughout the Company.

Retirement and Exit Programs

The Company also utilizes exit interviews and on-boarding interviews to provide feedback regarding turnover and employee desires for growth and development. These interviews are also utilized to identify drivers of voluntary turnover and departures from the Company. Employee turnover rate and reasons, including voluntary and involuntary departures, are monitored annually. The global turnover rate in fiscal 2021 was 14%, compared to 13% in fiscal 2022. Both voluntary and involuntary terminations, including retirements, are used to calculate the turnover rate.

Compensation Equity

The Company conducts inflation-adjusted compensation analysis to promote competitive compensation. This analysis takes into account ranges for the geographical area, education level and job title under consideration. The Company's Human Resources Department develops offers for new salaried employees and also develops and administers promotions to maintain the internal integrity of the compensation levels for comparable positions. The Company works with managers to ensure that high potential employees and those individuals with unique talents are appropriately developed and compensated. For example, the Board of Directors authorized a pool of restricted stock that can be used to compensate high potential employees and for retention purposes. Further, bonus programs have been implemented at the LaPorte and Mountain Home facilities, as well as those in Europe and Asia, for retention and recognition purposes, and all salaried employees who are not eligible to participate in the Management Incentive Plan were given bonuses in fiscal 2022. The Compensation Committee, with the approval of the full Board in the case of incentive compensation, determines annual salaries and other elements of compensation of the Company's executive management team, taking into account similarly situated executives employed by a peer group of companies while also considering input of the Compensation Committee's independent compensation consultant.

Diversity and Inclusion

The Company considers diversity as a criterion evaluated as a part of the attributes and qualifications a candidate possesses. The Company construes the notion of diversity broadly, considering differences in viewpoint, professional experience, education, skills and other individual qualities, in addition to race, gender, age, ethnicity and cultural backgrounds as elements that contribute to a diverse Company.

Management also considers similar broad concepts of diversity in its selection of vendors, contractors and other service providers. As a federal government subcontractor, the Company follows applicable federal rules and regulations relating to diversity and other matters, including reporting requirements.

Company Culture

The Company has controls in place relating to compliance with the Company's Code of Business Conduct and Ethics, including a requirement for annual employee certification of that code as well as an established whistleblower hotline and related procedures. In addition, human capital management, and more specifically employee hiring and retention, are included within the Company's Enterprise Risk Management program, which is subject to Board oversight through regular reporting.

Community Involvement

The Company has used internships and partnerships with universities to enrich recruiting efforts, particularly for technical roles such as research, alloy development and engineering. The Company has also utilized outreach and partnerships with local community resources at all major locations such as community and technical colleges, workforce development agencies, industry groups and other entities to strengthen the Company's hiring process and expand the future workforce candidate pool.

Employee Engagement and Wellness

The Company has a long-standing tuition reimbursement program to assist employees with the continuation of their education. In addition, Company-sponsored employee assistance programs offer counseling for emotional, financial and family issues. Continuing financial planning education is provided by the Company's 401(k) plan administrator to assist employees in financial and retirement planning. For many years, the Company's investment in human capital has involved commitments to worker training, apprenticeship programs and funding college scholarships.

Management and Board Oversight

Management is engaged in the Company's efforts regarding management of human capital resources at all levels through regular informational meetings, the Company's Enterprise Risk Management program and organized succession planning. The Board oversees these activities through regular reports by senior management regarding new or altered programs and as part of the Enterprise Risk Management process. In addition, the Corporate Governance and Nominating Committee of the Board is actively engaged in monitoring and encouraging diversity at the Board level while the Compensation Committee also focuses on achieving and maintaining internal and external pay equity for the executive team and the Board members while overseeing incentive compensation more broadly throughout the organization. In promoting pay equity, the Board and the Compensation Committee make use of peer comparisons and benchmarking measures.

Employee Statistics

As of September 30, 2022, the Company employed 1,223 full-time employees and 32 part-time employees worldwide. All eligible hourly employees at the Kokomo, Indiana and Arcadia, Louisiana plants (637 in the aggregate) are covered by two collective bargaining agreements.

On July 1, 2018, the Company entered into a five-year collective bargaining agreement with the United Steelworkers of America Local 2958, which covers eligible hourly employees at the Kokomo, Indiana plant. This agreement will expire in June 2023.

On December 21, 2020, the Company entered into a collective bargaining agreement with the United Steelworkers of America Local 1505, which covers eligible hourly employees at the Company's Arcadia, Louisiana plant. This agreement will expire in December 2025.

Management believes that current relations with the union are satisfactory.

Environmental Compliance

The Company has an enterprise level environmental policy, which focuses on fostering a safe workplace, offering high quality products while protecting the environment, compliance with law and health and safety management systems, utilization of all available resources to improve the quality, environmental, health and safety management systems and setting, implementing and reviewing quality, environmental, health and safety objectives and targets. This policy is communicated to contractors and vendors who provide services on site, and the Company periodically audits selected suppliers from an environmental compliance perspective. The Company maintains an environmental management system certified to ISO 14001 standards and, for its Kokomo operations, ISO 50001 standards. The Company maintains multiple policies designed to comply with the Occupational Safety and Health Administration standards and has ISO 45001 certification.

The Company's facilities and operations are subject to various foreign, federal, state and local laws and regulations relating to the protection of human health and the environment, including those governing the discharge of pollutants into the environment and the storage, handling, use, treatment and disposal of hazardous substances and wastes. In the U.S., such laws include, without limitation, the Occupational Safety and Health Act, the Clean Air Act, the Clean Water Act, the Toxic Substances Control Act and the Resource Conservation and Recovery Act. As environmental laws and regulations continue to evolve, it is likely the Company will be subject to increasingly stringent environmental standards in the future, particularly under air quality and water quality laws and standards related to climate change issues, such as reporting of greenhouse gas emissions. Violations of these laws and regulations can result in the imposition of substantial penalties and can require facility improvements. Expenses related to environmental compliance, which are primarily included in Cost of sales on the Consolidated Statements of Operations, were approximately $3.1 million for fiscal 2022 and are currently expected to be approximately $2.9 million for fiscal 2023.

The Company's facilities are subject to periodic inspection by various regulatory authorities, who from time to time have issued findings of violations of governing laws, regulations and permits. In the past five years, the Company has paid administrative fines, none of which have had a material effect on the Company's financial condition, for alleged violations relating to environmental matters, requirements relating to its Title V Air Permit and alleged violations of record keeping and notification requirements relating to industrial wastewater discharge. Capital expenditures of approximately $2.4 million were made for pollution control improvements during fiscal 2022, with additional expenditures of approximately $3.8 million for similar improvements planned for fiscal 2023.

The Company has received permits from the Indiana Department of Environmental Management and the North Carolina Department of Environment and Natural Resources to close and provide post-closure environmental monitoring and care for certain areas of its Kokomo and Mountain Home, North Carolina facilities, respectively.

The Company is required among other things to monitor groundwater and to continue post-closure maintenance of the former disposal areas at each site. As a result, the Company is aware of elevated levels of certain contaminants in the groundwater on the Company's property. These levels are stable or decreasing, but additional testing and corrective action by the Company could be required. The Company is unable to estimate the costs of any further corrective action at these sites, if required. Accordingly, the Company cannot assure that the costs of any future corrective action at these or any other current or former sites would not have a material effect on the Company's financial condition, results of operations or liquidity.

The Company may also incur liability for alleged environmental damages associated with the off-site transportation and disposal of hazardous substances. Generators of hazardous substances which are transported to disposal sites where environmental problems are alleged to exist are subject to claims under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, or CERCLA, and state counterparts. CERCLA imposes strict, joint and several liabilities for investigatory and cleanup costs upon hazardous substance generators, site owners and operators and other potentially responsible parties. The Company is currently named as a potentially responsible party at one site. There can be no assurance that the Company will not be named as a potentially responsible party at other sites in the future or that the costs associated with those sites would not have a material adverse effect on the Company's financial condition, results of operations or liquidity.

Legal Compliance

In addition to environmental laws and regulations, the Company must comply with a wide variety of other laws and regulations, including, without limitation, federal and state securities laws, Delaware corporate law and safety laws and regulations. The Company continues to engage in collaboration with key stakeholders, such as customers and regulators, to adapt to changing regulatory expectations. Compliance with law and government regulations is not expected to have a material effect upon capital expenditures, earnings or the competitive position of the Company.

Environmental, Social and Governance Matters

In addition to the information set forth below, further information regarding the Company's environmental, social and governance activities can be found under the Sustainability tab on the Company's website at www.haynesintl.com/company-information/sustainability.

Governance and Social Matters

The Company is committed to a culture of openness, trust and integrity in all aspects of its business. It is critical that all employees, vendors and customers understand and accept that, in everything it does, the Company will conduct itself from the perspective of "doing the right thing for the right reason" at all times.

The Company has a number of policies in place governing social and ethical issues, including, without limitation:

- Code of Business Conduct and Ethics
- Anti-Harassment Policy
- Human Rights Policy
- Human Trafficking Policy
- Anti-Corruption Policy
- Conflict Minerals Policy
- Gift Policy
- Supplier Code of Conduct

All Company employees must certify compliance with the Code of Business Conduct and Ethics annually, and regular training is provided to employees regarding these and other policies. In addition, the Company maintains a whistleblower hotline with access available on an anonymous basis online or by telephone.

Environmental Matters

At the end of fiscal 2022, the Company completed the installation of a 1MW solar fixed ground mount array system at its wire facility located in Mountain Home, North Carolina which helps the Company to reduce its dependence on nonrenewable energy sources. This solar system is expected to provide over 50% of the electricity needs for that facility.

In addition, since fiscal year 2010, the Company has invested more than $2.0 million in energy conservation programs covering all of its facilities, and as a result, the Company now saves approximately $1.5 million in energy costs per year. The Company has specific targets in place for reducing electricity and natural gas consumption in its energy conservation programs.

The Company is conscious of its environmental impact and is actively working to lighten its carbon footprint including projects to measure greenhouse gas emissions and develop goals of reduction. The ever-increasing demand for clean energy generation has led to the development of several emerging technologies that require high-temperature alloys for demanding operating conditions.

Since the invention of HASTELLOY® X alloy in 1954, the Company's alloys have made it possible for aerospace engines to run at high temperatures for long periods of time. This has been further enhanced with alloys used in new generation engines such as HAYNES 282®. Engines being placed in service today reportedly consume 15% less fuel, produce 50% less pollutants and reduce the noise footprint near airports compared to the previous generation of airplane engines. The environmental related improvements stem in part from the increased use of alloys, such as HASTELLOY® X, HAYNES® 188, 230®, 282®, 242®, 244® and other Haynes-invented alloys.

In addition to the Company's alloys for energy production and powering modern aircraft in a more environmentally friendly manner, the Company's alloys are used in chemical plants that produce ecologically safe agrichemicals which help to feed the world's growing population. Company-invented HASTELLOY® G-35®, HYBRID-BC1® and C-276 alloys are commonly used in these applications. In addition, HASTELLOY® C-22®, C-2000® and B-3® alloys are used by the pharmaceutical companies for production of chemicals.

Renewable power generation offers the promise of producing power from nature's resources, such as wind, sun, rivers and oceans, with minimal depletion to the Earth's resources and damage to the environment. Many renewable energy technologies require the capture of energy at very high temperatures in extreme environments for which the Company's alloys are well suited. For example, the Company's materials withstand intense heat in concentrated solar power plants to facilitate storable thermal power to generate electricity after the sun sets.

Safety Matters

Safety is the Company's top priority. Listed below are certain improvement efforts the Company has implemented in order to reduce occurrences of injuries, occupational diseases and work-related fatalities.

- Each year, employees receive emergency preparedness training, and the Company conducts severe weather and fire drills periodically.

- Employees attend refresher training annually. This training includes coverage of the following items: Lock Out Tag Out, Confined Spaces, First Aid and Blood borne Pathogens, Fire Prevention and Emergency Action Plan, Hearing Conservation, Hand Safety, Personal Protective Equipment requirements, Working Around Mobile Equipment and Walking and Working Surfaces.

- All of the Company's manufacturing sites have a volunteer Emergency Response Team (ERT). The ERT members are state-certified trained in first aid and HAZMAT response.

- Company supervisors receive OSHA-10 Hour and Incident Investigation training.

- The Company conducts routine departmental safety audits.

The Company extends its health and safety policies to suppliers, visitors and contractors. When suppliers, visitors and contractors come on site, they receive safety training. The training includes a review of relevant policies, required personal protection equipment, emergency procedures and specific hazards that may be encountered.

Information about our Executive Officers

The following table sets forth certain information concerning the persons who serve as executive officers of the Company as of September 30, 2022. Except as indicated in the following paragraphs, the principal occupations of these persons have not changed during the past five years.

Name	Age	Position with Haynes International, Inc.
Michael L. Shor	63	President and Chief Executive Officer
Daniel W. Maudlin	56	Vice President—Finance, Treasurer and Chief Financial Officer
Venkat R. Ishwar	70	Vice President—Marketing & Technology
Marlin C. Losch	62	Vice President—Sales & Distribution
Scott R. Pinkham	55	Vice President—Tube & Wire Products
David L. Strobel	61	Vice President—Operations
Gregory W. Tipton	61	Vice President & Chief Information Officer
David S. Van Bibber	51	Controller and Chief Accounting Officer

Mr. Shor was elected President and Chief Executive Officer of the Company in September 2018. Prior to that, he served as interim President and Chief Executive Officer of the Company from May 2018 through September 2018 and Chairman of the Board of the Company from February 2017 through September 2018. Mr. Shor has been a director since 2012.

Mr. Maudlin has served as the Vice President-Finance, Treasurer and Chief Financial Officer of the Company since December 2012.

Dr. Ishwar has served as Vice President—Marketing & Technology of the Company since January 2010.

Mr. Losch has served as Vice President—Sales & Distribution of the Company since January 2010.

Mr. Pinkham has served as Vice President—Tube and Wire Products of the Company since September 2018. Prior to that, he served as Vice President—Manufacturing of the Company since March 2008.

Mr. Strobel has served as Vice President—Operations of the Company since September 2018. Prior to that, he was a consultant to manufacturing companies through his company Silver Eagle Consulting after leaving Carpenter Technology Corporation in August 2016.

Mr. Tipton has served as Vice President and Chief Information Officer of the Company since January 2019. Prior to that, he served as Chief Information Officer Americas for Dometic from August 2016 to December 2018 and as Director of Information Technology for Dometic from December 2012 to October 2016.

Mr. Van Bibber has served as Controller and Chief Accounting Officer of the Company since December 2012.

Item 1A. Risk Factors

The following risk factors should be considered carefully in addition to the other information contained in this filing.

The risks and uncertainties described below are not the only ones we face and represent risks that our management believes are material to investors regarding an investment in our Company and our business. Additional risks and uncertainties not presently known to us or that we currently deem not material may also harm our business. If any of the following risks actually occur, our business, financial condition or results of operations could be harmed.

Risks Related to Our Markets

Our revenues may fluctuate based upon changes in demand for our customers' products.

Demand for our products is dependent upon and derived from the level of demand for the machinery, parts and equipment produced by our customers, which are principally manufacturers and fabricators of machinery, parts and equipment for highly specialized applications. Historically, certain markets in which we compete have experienced unpredictable, wide demand fluctuations. Because of the comparatively high level of fixed costs associated with our manufacturing processes, significant declines in our markets have had, and may continue to have, a disproportionately adverse impact on our operating results.

We have, in several instances, experienced substantial year-to-year declines in net revenues, primarily as a result of decreases in demand in the industries to which our products are sold. We have, in several instances, experienced substantial year-to-year declines in net revenues, primarily as a result of decreases in demand in the industries to which our products are sold. For example, in fiscal 2009, 2010, 2013, 2016, 2020 and 2021, our net revenues, when compared to the immediately preceding year, declined by approximately 31.1%, 13.0%, 16.7%, 16.6%, 22.4% and 11.3%, respectively. We may experience similar fluctuations in our net revenues in the future. Additionally, demand is likely to continue to be subject to substantial year-to-year fluctuations as a consequence of industry cyclicality, as well as other factors such as global economic uncertainty, and such fluctuations may have a material adverse effect on our business.

Profitability in the high-performance alloy industry is highly sensitive to changes in sales volumes.

The high-performance alloy industry is characterized by high capital investment and high fixed costs. The cost of raw materials is the primary variable cost in the manufacture of our high-performance alloys and, in fiscal 2022, represented approximately 41% of our total cost of sales. Other manufacturing costs, such as labor, energy, maintenance and supplies, often thought of as variable, have a significant fixed element. Profitability is, therefore, very sensitive to changes in volume, and relatively small changes in volume can result in significant variations in earnings. Our ability to effectively utilize our manufacturing assets depends greatly upon continuing demand in our markets, market share gains, and continued acceptance of our new products into the marketplace.

We operate in cyclical markets.

A significant portion of our revenues is derived from the cyclical aerospace, power generation and chemical processing markets. Our sales to the aerospace industry constituted 46.9% of our total sales in fiscal 2022. Our chemical processing and industrial gas turbine sales each constituted 18.7% of our total sales in fiscal 2022.

The commercial aerospace industry is historically driven by demand from commercial airlines for new aircraft. Demand for commercial aircraft is influenced by industry profitability, trends in airline passenger traffic, the state of U.S. and world economies, the ability of participants within the supply chain to access the necessary levels of staffing required to meet industry demand and the ability of aircraft purchasers to obtain required financing and numerous other factors, including the effects of terrorism and health and safety concerns. Supply chain disruptions in this or any of our other markets could materially and adversely affect our results of operations and financial condition.

The military aerospace cycle is highly dependent on U.S. and foreign government funding which is driven by, among other factors, the effects of terrorism, a changing global political environment, U.S. foreign policy, military conflicts around the world and the retirement of older aircraft and technological improvements to new engines that increase reliability. Accordingly, the timing, duration and magnitude of cyclical upturns and downturns cannot be forecasted with certainty. Downturns or reductions in demand for our products sold into the aerospace market could have a material adverse effect on our business.

The industrial gas turbine market is also cyclical in nature. Demand for power generation products is global and is affected by the state of the U.S. and world economies, the availability of financing to power generation project sponsors, the increase in renewable energy and the political environments of numerous countries. The availability of fuels and related prices also have a large impact on demand. Decreased demand for our products in the industrial gas turbine industry may have a material adverse effect on our business.

We also sell products into the chemical processing industry, which is also cyclical in nature. Customer demand for our products in this market may fluctuate widely depending on U.S. and world economic conditions, the availability and price of natural gas, the availability of financing, and the general economic strength of the end use customers in this market. Cyclical declines or sustained weakness in this market could have a material adverse effect on our business.

Our business depends, in part, on the success of commercial aircraft programs and our ability to accelerate production levels to timely match order increases in new or existing programs.

The success of our business will depend, in part, on the success of new and existing commercial aircraft programs. We are currently under contract to supply components for a number of commercial aircraft programs. Cancellations, reductions or delays of orders or contracts in any of these programs, or regulatory or certification-related groundings which impact the production schedules for any aircraft programs could have a material adverse effect on our business.

The competitive nature of our business could result in pressure for price concessions to our customers and increased pressure to reduce costs.

We are subject to competition in all of the markets we serve. As a result, we may make price concessions to our customers in the aerospace, chemical processing and power generation markets from time to time, and customer pressure for further price concessions may occur. Maintenance of our market share will depend, in part, on our ability to sustain a cost structure that enables us to be cost-competitive. If we are unable to adjust our costs relative to our pricing and inflation, our profitability could suffer. Our effectiveness in managing our cost structure and pricing for the value provided will be a key determinant of future profitability and competitiveness.

Aerospace demand is primarily dependent on two manufacturers.

A significant portion of our aerospace products are sold to fabricators and are ultimately used in the production of new commercial aircraft. There are only two primary manufacturers of large commercial aircraft in the world, The Boeing Company and Airbus. A significant portion of our aerospace sales are dependent on the number of new aircraft built by these two manufacturers, which is in turn dependent on a number of factors over which we have little or no control. Those factors include demand for new aircraft from around the globe, utilization levels of commercial and military aircraft, success of new commercial and military aircraft programs and factors that impact manufacturing capabilities, such as the availability of raw materials and manufactured components, changes in highly exacting performance requirements and product specifications, U.S. and world economic conditions, changes in the regulatory environment and labor relations between the aircraft manufacturers and their work forces. Significant interruptions and slowdowns in the number of new aircraft built by the aircraft manufacturers has and may continue to have a material adverse effect on our business. Additionally, as growth in airline travel is less concentrated in international flights, demand for new aircraft will be more weighted towards single aisle aircraft, as opposed to double aisle aircraft, which utilizes a smaller proportion of our material.

During periods of lower demand in other alloy markets, some of our competitors may use their available capacity to produce higher volumes of high-performance alloys, which leads to increased competition in the high-performance alloy market.

We have experienced increased competition from competitors who produce both stainless steel and high-performance alloys. As a result of the competition in our markets, we have made price concessions to our customers from time to time, typically on higher volume of more commodity type orders. Maintenance of our market share will depend, in part, on our ability to sustain a cost structure that enables us to be cost-competitive. If we are unable to adjust our costs relative to our pricing, inflation and raw material costs, our profitability will suffer. Our effectiveness in managing our cost structure through changing circumstances will be a key determinant of future profitability and competitiveness.

Periods of reduced demand and excess supply as well as the availability of substitute lower-cost materials can adversely affect our ability to price and sell our products at the profitability levels we require to be successful.

Additional worldwide capacity and reduced demand for our products could significantly impact future worldwide pricing, which would adversely impact our business. In addition, the potential availability of substitute materials may also cause significant fluctuations in future results as our customers opt for a lower-cost alternative.

We change prices on our products as we deem necessary. In addition to the above general competitive impact, other market conditions and various economic factors beyond our control can adversely affect the timing of our pricing actions. The effects of any pricing actions may be delayed due to long manufacturing lead times or the terms of existing contracts. There is no guarantee that the pricing actions we implement will be effective in maintaining our profit margin levels.

Risks Related to Raw Materials

Rapid fluctuations in the prices of nickel, cobalt and other raw materials may materially adversely affect our business.

To the extent that we are unable to adjust to rapid fluctuations in the price of nickel, cobalt and other raw materials that we use in large quantities, there may be a negative effect on our gross profit margins. Additionally, increases in value added premiums charged by our commodity vendors, particularly nickel, could adversely impact our gross profit margins if those costs cannot be timely included in changes to selling prices. In fiscal 2022, nickel, a major component of many of our products, accounted for approximately 51% of our raw material costs, or approximately 21% of our total cost of sales. We enter into several different types of sales contracts with our customers, some of which allow us to pass on increases in nickel or other raw material prices to our customers. In other cases, we fix the nickel or other raw materials component of our prices for a period of time through the life of a long-term contract. In yet other cases, we price our products at the time of order, which allows us to establish prices with reference to known costs of our raw material inventory, but which does not allow us to offset an unexpected rise in the price of raw materials. We may not be able to successfully offset rapid changes in the price of nickel, cobalt or other raw materials in the future. In the event that raw material price increases occur that we are unable to pass on to our customers, our cash flows or results of operations could be materially adversely affected.

Our business cycle is long, involving multiple steps. These refining steps generate high revert scrap pounds that are recycled back through the melt at metal value. This scrap cycle also contributes to a long position as it relates to commodity price risk.

Our results of operations may also be negatively impacted if both customer demand and raw material prices rapidly fall at the same time. Because we value our inventory utilizing the first-in, first-out inventory costing methodology, a rapid decrease in raw material costs has a negative effect on our operating results. In those circumstances, we recognize higher material cost in cost of sales relative to lower raw material market prices that drive the sales price.

In addition, we periodically enter into forward purchase agreements for our raw material supply. If we enter into a forward purchase agreement in which the quantity purchased does not match in a timely manner to the quantity sold in one or more customer contracts with fixed raw material prices (including vendor premiums), a rapid or prolonged decrease in the price of significant raw materials could adversely impact our business.

Our business is dependent on a number of raw materials that may not be available.

We use a number of raw materials in our products which are found in only a few parts of the world and are available from a limited number of suppliers. The availability of these materials may be influenced by private or government cartels, changes in world politics, trade sanctions as a result of geopolitical events such as war, additional regulation, labor relations between the materials producers and their work force, unstable governments in exporting nations, inflation, general economic conditions and export quotas imposed by governments in nations with rare earth element supplies. The ability of key material suppliers to meet quality and delivery requirements or to provide materials on terms acceptable to us is beyond our control and can also impact our ability to meet commitments to customers. The COVID-19 pandemic has adversely affected the availability of certain raw materials through its effects on the labor market, availability of transportation for materials and other factors. Future shortages or price fluctuations in raw materials could result in decreased sales as well as decreased margins, or otherwise adversely affect our business. The enactment of new or increased import duties on raw materials imported by us could also decrease availability, thereby adversely affecting our business. The implementation of trade sanctions could result in reduced availability of certain raw materials or result in the need for us to find alternative sources of supply at a higher cost.

If suppliers are unable to meet our demands, we may not have alternative sources of supply. In some cases, we have entered into exclusive supply agreements with respect to raw materials, which could adversely affect our business if the exclusive supplier cannot meet quality and delivery requirements to provide materials on terms acceptable to us.

The manufacturing of the majority of our products is a complex process and requires long lead times. We may experience delays or shortages in the supply of raw materials. If we are unable to obtain adequate and timely deliveries of required raw materials, we may be unable to timely manufacture sufficient quantities of products, which could cause us to lose sales, incur additional costs, delay new product introductions or suffer harm to our reputation.

Risks Related to Our Production and Operations

Our operations are dependent on production levels at our Kokomo facility.

Our principal assets are located at our primary integrated production facility in Kokomo, Indiana and at our production facilities in Arcadia, Louisiana and in Mountain Home, North Carolina. The Arcadia and Mountain Home plants, as well as all of the domestic and foreign service centers, rely to a significant extent upon feedstock produced at the Kokomo facility. We have also been affected by shortages of labor, transportation and other services and raw materials in our Kokomo and other production facilities as a result of the COVID-19 pandemic. Any further production failures, shutdowns or other significant problems at the Kokomo facility could have a material adverse effect on our financial condition and results of operations. We maintain property damage insurance to provide for reconstruction of damaged equipment, as well as business interruption insurance to mitigate losses resulting from any production shutdown caused by an insured loss. Although we believe that our insurance is adequate to cover any such losses, that may not be the case. Additionally, our insurance policies include deductibles that would require us to incur losses that could have an adverse effect on our financial results in the event a significant interruption occurs. One or more significant uninsured losses at our Kokomo facility may have a material adverse effect on our business.

In addition, from time to time we schedule planned outages on the equipment at our Kokomo facility for maintenance and upgrades. These projects are subject to a variety of risks and uncertainties, including a variety of market, operational and labor-related factors, many of which may be beyond our control. The COVID-19 pandemic made it necessary for us to shut down portions of our operations in fiscal 2020. The pandemic, and its effect on our markets and our business, has also required us to temporarily or permanently lay off certain personnel. Certain portions of our operations continue to be affected by personnel shortages. Should a planned or unplanned shut down on a significant piece of equipment, or a significant decrease in personnel or lack of necessary new personnel, last substantially longer than originally planned, there could be a material adverse effect on our business.

Our production may be interrupted due to equipment failures, energy or personnel shortages, lack of critical spares, or other events affecting our factories.

Our manufacturing processes depend on certain sophisticated and high-value equipment, some of which has been in operation for a long period of time for which there may be only limited or no production alternatives. Failures of this equipment, possible significant unplanned delays in equipment upgrades, or the lack of critical spares or skilled personnel to timely repair this equipment, could result in production delays, revenue loss and significant repair costs. In addition, our factories rely on the availability of electrical power and natural gas, transportation for raw materials and finished products and employee access to our workplace that are subject to interruption in the event of severe weather conditions or other natural or manmade events. While we maintain backup resources to the extent practicable, a severe or prolonged equipment outage, failure or other interruptive event affecting areas where we have significant manufacturing operations may result in loss of manufacturing or shipping days, which could have a material adverse effect on our business. Natural or manmade events that interrupt significant manufacturing operations of our customers also have had, and could continue to have a material adverse effect on our business.

Issues related to our agreements with Titanium Metals Corporation could require us to make significant payments and could disrupt our operations and materially affect our financial results.

We entered into a Conversion Services Agreement and an Access and Security Agreement with Titanium Metals Corporation (TIMET) in November 2006 that provide for the performance of certain titanium conversion services through November 2026. In 2012, TIMET was acquired by Precision Castparts Corp. which owns Special Metals Corporation, a direct competitor of ours. Events of default under the Conversion Services Agreement include (a) a change in control in which the successor does not assume the agreement, (b) a violation by us of certain non-compete obligations relating to the manufacture and conversion of titanium and (c) failure to meet agreed-upon delivery and quality requirements. If an event of default under the Conversion Services Agreement occurs, TIMET could require us to repay the unearned portion of the $50.0 million fee paid to us by TIMET when the agreement was signed, plus liquidated damages of $25.0 million. Our obligations to pay these amounts to TIMET are secured by a security interest in our four-high Steckel rolling mill, through which we process a substantial amount of our products. In addition, the Access and Security Agreement with TIMET includes, among other terms, an access right that would allow TIMET to use certain of our operating assets, including the four-high mill, to perform titanium conversion services in the event of our bankruptcy or the acceleration of our indebtedness. Exercise by TIMET of its rights under its security interest following a default and non-payment of the amounts provided in the Conversion Services Agreement or exercise of the access rights under the Access and Security Agreement could cause significant disruption in our Kokomo operations, which would have a material adverse effect on our business.

In addition, the Conversion Services Agreement contains a requirement that we reserve a significant amount of capacity exclusively for TIMET. That agreement does not contain a volume commitment on TIMET's part. The agreement also severely limits our ability to manufacture titanium, using the 4 high rolling mill, for any customer other than TIMET. Our levels of business with TIMET have fluctuated. Should TIMET underutilize its reserved capacity, we would not be able to reallocate that capacity during the life of this contract, which could negatively impact our business.

Our operations could result in injury to our workers or third parties.

Our manufacturing operations could result in harm to our workers or third parties in our facilities. Our manufacturing processes involve the use of heavy equipment, vehicles and chemicals, among other matters, that could lead to harm, injury, death or illness. In addition to harm to individuals, any such occurrences could result in reputational harm, adverse effects on employee morale, litigation and other costs, any of which could materially and adversely affect our business.

Although collective bargaining agreements are in place for certain employees, union or labor disputes could still disrupt the manufacturing process.

Our operations rely heavily on our skilled employees. Any labor shortage, disruption or stoppage caused by any deterioration in employee relations or difficulties in the renegotiation of labor contracts could reduce our operating margins and income. Approximately 57% of our full-time U.S. employees are affiliated with unions or covered by collective bargaining agreements. The Company entered into two collective bargaining agreements with the United Steel Workers of America which cover eligible hourly employees at the Company's Arcadia, Louisiana and Kokomo, Indiana facilities. The bargaining agreement which covers eligible hourly employees in the Kokomo, Indiana operations will expire on June 30, 2023. Failure to negotiate new labor agreements when required could result in a work stoppage at one or more of our facilities. In addition, other Company facilities could be subject to union organizing activity. Although we believe that our labor relations have generally been satisfactory, it is possible that we could become subject to additional work rules imposed by agreements with labor unions, or that work stoppages or other labor disturbances could occur in the future, any of which could reduce our operating margins and income and place us at a disadvantage relative to non-union competitors.

Product liability and product warranty risks could adversely affect our operating results.

We produce many critical products for commercial and military aircraft, industrial gas turbines, chemical processing plants and pharmaceutical production facilities. Failure of our products could give rise to potential substantial product liability and other damage claims as well as reputational harm. We maintain insurance addressing this risk, but our insurance coverage may not be adequate or insurance may not continue to be available on terms acceptable to us.

Additionally, we manufacture our products to strict contractually-established specifications using complex manufacturing processes. If we fail to meet the contractual requirements for a product, we may be subject to warranty costs to repair or replace the product itself and additional costs related to customers' damages or the investigation and inspection of non-complying products. These costs are generally not insured.

Risks Related to our Research and Technology Activities

Failure to successfully develop, commercialize, market and sell new applications and new products could adversely affect our business.

We believe that our proprietary alloys, technology, applications development, technical services and metallurgical manufacturing expertise provide us with a competitive advantage over other high-performance alloy producers. Our ability to maintain this competitive advantage depends on our ability to continue to offer products and technical services that have equal or better performance characteristics than competing products at competitive prices. Our future growth will depend, in part, on our ability to address the increasingly demanding needs of our customers by inventing new alloys, enhancing the properties of our existing alloys, timely developing new applications for our existing and new alloys, and timely developing, commercializing, marketing and selling new alloys and products. If we are not successful in these efforts, or if our new alloys/products and product enhancements do not adequately meet the requirements of the marketplace and achieve market acceptance, our business could be negatively affected.

Failure to protect our intellectual property rights could adversely affect our business.

We rely on a combination of confidentiality, invention assignment and other types of agreements and trade secret, trademark and patent law to establish, maintain, protect and enforce our intellectual property rights. Our efforts in regard to these measures may be inadequate, however, to prevent others from misappropriating our intellectual property rights. In addition, laws in some non-U.S. countries affecting intellectual property are uncertain in their application, which can affect the scope or enforceability of our intellectual property rights. Any of these events or factors could diminish or cause us to lose the competitive advantages associated with our intellectual property, which could have a material adverse effect on our business.

Risks Related to Our Cybersecurity Activities

We are subject to risks relating to our cybersecurity measures and to misappropriation of information generally.

We have put in place a number of systems, processes and practices designed to protect against intentional or unintentional misappropriation or corruption of our systems and information or disruption of our operations including unauthorized access to our networks, servers and data, encryption of network access and the introduction of malware. Despite our cybersecurity efforts, we could be subject to breaches of security systems which may result in unauthorized access, misappropriation, corruption or disruption of the information we are trying to protect, in which case we could suffer material harm. For example, access to our proprietary information regarding new alloy formulations would allow our competitors to use that information in the development of competing products. Current employees have, and former employees may have, access to a significant amount of information regarding our Company which could be disclosed to our competitors or otherwise used to harm us. Any misappropriation or corruption of our systems and information or disruption of our operations could have a material adverse effect on our business.

Our information technology systems could be subject to attack.

Our information technology systems could be subject to sabotage by employees or third parties, including attacks in which the systems could be shut down with a demand for payment of "ransom", which could slow or stop production or otherwise adversely affect our business. Additionally, outside service providers could be subject to attack which could inhibit those providers' abilities to provide necessary services to us. Any such attack could disrupt our operations and could have a material adverse effect on our business.

We depend on our information technology infrastructure to support the current and future information requirements of our operations which exposes us to risk.

Management relies on our information technology infrastructure, including hardware, network, software, people and processes, to provide useful information to support assessments and conclusions about operating performance. Our inability to produce relevant or reliable measures of operating performance in an efficient, cost-effective and well-controlled fashion may have significant negative impacts on our business. We continue to evaluate options to further upgrade our systems, including an implementation to a new enterprise resource planning (ERP) system. A transition to a critical system could result in disruptions which could have a significant adverse impact on our business.

Risks Related to Our Finance Activities

We value our inventory using the FIFO method, which could put pressure on our margins.

The cost of our inventories is determined using the first-in, first-out (FIFO) method. Under the FIFO inventory costing method, the cost of materials included in cost of sales may be different than the current market price at the time of sale of finished product due to the length of time from the acquisition of raw material to the sale of the finished product. In a period of decreasing raw material costs, the FIFO inventory valuation normally results in higher costs of sales as compared to the last-in, first-out method. This could result in compression of the gross margin on our product sales.

Changes in tax rules and regulations, or interpretations thereof, may adversely affect our effective tax rates.

We are a U.S. based company with customers and suppliers in foreign countries. We import various raw materials used in our production processes, and we export goods to our foreign customers. The United States, the European Commission, countries in the EU, including the United Kingdom, and other countries where we do business may change relevant tax, border tax, accounting and other laws, regulations and interpretations, that may unfavorably impact our effective tax rate or result in other costs to us. In addition, the Company has deferred tax assets on its balance sheet which could be subjected to unfavorable impacts if tax rates are reduced, such as those that occurred at the end of calendar year 2017.

We could be required to make additional contributions to our defined benefit pension plans or recognize higher related expense in our statement of operations as a result of adverse changes in interest rates and the capital markets.

Our estimates of liabilities and expenses for pension benefits incorporate significant assumptions, including the rate used to discount the future estimated liability, the long-term rate of return on plan assets and several assumptions relating to the employee workforce (salary increases, retirement age and mortality). We currently expect that we will be required to make future minimum contributions to our defined benefit pension plans. Many domestic and international competitors do not provide defined benefit plans and/or retiree health plans (which we do provide), and those competitors may have a resulting cost advantage. A decline in the value of plan investments in the future, an increase in costs or liabilities, including those caused by the lowering of the rate used to discount future payouts, or unfavorable changes in laws or regulations that govern pension plan funding could materially change the timing and amount of required pension funding or the amount of related expense recognized in our statement of operations. The Company mitigates this risk with a glide path strategy that utilized liability driven investing (LDI) which shifts a greater concentration towards fixed income securities as the funding percentage increases. The LDI approach is designed to match the duration and risk of the fixed income securities within the U.S. pension plan with that of the US pension benefit obligation. Our mitigation strategies may not be successful, in which case we may be required to fund additional contributions to the plan. A requirement to fund any deficit created in the future could have a material adverse effect on our business.

The carrying value of goodwill and other intangible assets may not be recoverable.

Goodwill and other intangible assets are recorded at fair value on the date of acquisition. We review these assets at least annually for impairment. Impairment may result from, among other things, deterioration in performance, adverse market conditions, adverse changes in applicable laws or regulations and a variety of other factors. A sustained downturn may result in the carrying value of our goodwill or other intangible assets exceeding their fair value, which may require us to recognize impairment to those assets. Any future impairment of goodwill or other intangible assets could have a material adverse effect on our business.

We may not be able to obtain financing on terms that are acceptable to us, or at all.

The strength of the global economy can have a significant impact on the availability of financing from capital markets. Terms for borrowers could become significantly less favorable. As a result of this and other issues, we may not be able to obtain needed financing on terms that are acceptable to us, or at all. Because we rely on financing to fund our working capital requirements, higher finance costs or an inability to obtain financing could negatively impact our business and financial results.

Our working capital requirements may negatively affect our liquidity and capital resources.

Our working capital requirements can vary significantly, depending in part on the timing of our delivery obligations under various customer contracts and the payment terms with our customers and suppliers. In the past year, the Company experienced a significant increase in order entry and production lead times have been extended which has increased the length of time from the time that we accept a customer order to the time that cash is collected from the sale of material. If our working capital needs exceed our cash flows from operations, we would look to our cash balances and availability for borrowings under our existing credit facility to satisfy those needs, as well as potential sources of additional capital, which may not be available on satisfactory terms and in adequate amounts, if at all.

Risks Related to Our Global Operations

Political and social turmoil including global war could adversely affect our business.

Political and social turmoil as well as war, could put pressure on economic conditions in the United States and worldwide. These political, social and economic conditions could make it difficult for us, our suppliers and our customers to forecast accurately and plan future business activities, and could adversely affect the financial condition of our suppliers and customers and affect customer decisions as to the amount and timing of purchases from us. The Russian invasion of Ukraine has let to concerns of energy and food shortages that could severely disrupt the economy in the regions that we engage in business. As a result, our business could be materially adversely affected.

We are subject to risks associated with global trade matters

We are subject to macroeconomic downturns and geopolitical events in the United States and abroad that may affect the general economic climate, our performance and the demand of our customers. The Russian invasion of Ukraine had resulted in trade restrictions with companies operating in Russia which forces us and other companies to source raw materials from other countries which can lead to insufficient supply or higher prices for us. Transportation and logistics resources, including shipping and transportation services, have been in short supply, which has had, and may continue to have, an adverse effect on our business. Further, any global trade wars or similar economic turmoil, including new or existing tariffs, could adversely affect our business. In past years, the U.S. and China have imposed tariffs on large amounts of products imported into each of the countries from one another. A “trade war” or other governmental action related to tariffs or international trade agreements or policies has the potential to adversely impact demand for our products, our costs, customers, suppliers and/or the U.S. economy or certain sections thereof, and, thus, adversely affect our business.

Our competitors outside of the United States may not be subject to these tariffs or other measures, and therefore, could have a significant competitive advantage over us in that respect.

A global recession or disruption in global financial markets could adversely affect us.

A global recession or disruption in the global financial markets, including any significant tariff impositions or trade wars, presents risks and uncertainties that we cannot predict. During recessionary economic conditions or financial market disruptions, we face risks that may include:

- declines in revenues and profitability from reduced or delayed orders by our customers;

- reductions in credit availability due to governmental regulations on banking institutions and other concerns; and

- increases in corporate tax rates to finance government spending programs.

The risks inherent in our international operations may adversely impact our revenues, results of operations and financial condition.

We anticipate that we will continue to derive a significant portion of our revenues from operations in international markets. As we continue to expand internationally, we will need to hire, train and retain qualified personnel for our direct sales efforts and retain distributors and train their personnel in countries where language, cultural or regulatory impediments may exist. Distributors, regulators or government agencies may not continue to accept our products, services and business practices, and costs related to international trade have increased and may continue to increase. In addition, we purchase raw materials on the international market. The sale and shipment of our products and services across international borders, as well as the purchase of raw materials from international sources, subject us to the trade regulations of various jurisdictions, including tariffs and other possible punitive measures. The Russian invasion of Ukraine led us to cease voluntarily the procurement of nickel from Russia. Compliance with such regulations is costly. Any failure to comply with applicable legal and regulatory obligations could impact us in a variety of ways that include, but are not limited to, significant criminal, civil and administrative penalties, including imprisonment of individuals, fines and penalties, denial of export privileges, seizure of shipments and restrictions on certain business activities. Failure to comply with applicable legal and regulatory obligations could result in the disruption of our shipping, sales and service activities. Our international sales operations expose us and our representatives, agents and distributors to risks inherent in operating in foreign jurisdictions, any one or more of which may adversely affect our business, including:

- our ability to obtain, and the costs associated with obtaining, U.S. export licenses and other required export or import licenses or approvals;

- changes in duties and tariffs, quotas, taxes, trade restrictions, license obligations and other non-tariff barriers to trade;

- policy changes affecting the market for our products;

- burdens of complying with the Foreign Corrupt Practices Act and a wide variety of foreign laws and regulations;

- business practices or laws favoring local companies;

- fluctuations in foreign currencies;

- restrictive trade policies of foreign governments;

- longer payment cycles and difficulties collecting receivables through foreign legal systems;

- difficulties in enforcing or defending agreements and intellectual property rights; and
- foreign political or economic conditions.

Any material decrease in our international revenues or inability to expand our international operations as a result of these or other factors would adversely impact our business.

Export sales could present risks to our business.

Export sales account for a significant percentage of our revenues, and we believe this will continue to be the case in the future. Risks associated with export sales include: political and economic instability, including weak conditions in the world's economies; accounts receivable collection; export controls; changes in legal and regulatory requirements; policy changes affecting the markets for our products; changes in tax laws and tariffs; trade duties; and exchange rate fluctuations (which may affect sales to international customers and the value of profits earned on export sales when converted into dollars). Any of these factors could materially adversely affect our business.

Risks Related to Our Legal and Environmental Activities

We may be adversely impacted by costs related to environmental, health and safety laws, regulations, and other liabilities.

We are subject to various foreign, federal, state and local environmental, health and safety laws and regulations, including those governing the discharge of pollutants into the environment, the storage, handling, use, treatment and disposal of hazardous substances and wastes and the health and safety of our employees. Under these laws and regulations, we may be held liable for all costs arising out of any release of hazardous substances on, under or from any of our current or former properties or any off-site location to which we sent or arranged to be sent wastes for disposal or treatment, and such costs may be material. We could also be held liable for any and all consequences arising out of human exposure to such substances or other hazardous substances that may be attributable to our products or other environmental damage. In addition, some of these laws and regulations require our facilities to operate under permits that are subject to renewal or modification. These laws, regulations and permits can require expensive pollution control equipment or operational changes to limit actual or potential impacts to the environment. Violations of these laws, regulations or permits can also result in the imposition of substantial penalties, permit revocations and/or facility shutdowns.

We have received permits from the environmental regulatory authorities in Indiana and North Carolina to close and to provide post-closure monitoring and care for certain areas of our Kokomo and Mountain Home facilities that were used for the storage and disposal of wastes, some of which are classified as hazardous under applicable regulations. We are required to monitor groundwater and to continue post-closure maintenance of the former disposal areas at each site. As a result, we are aware of elevated levels of certain contaminants in the groundwater and additional corrective action could be required. Additionally, it is possible that we could be required to undertake other corrective action for any other solid waste management unit or other conditions existing or determined to exist at our facilities. We are unable to estimate the costs of any further corrective action, if required. However, the costs of future corrective action at these or any other current or former sites could have a material adverse effect on our business.

We may also incur liability for alleged environmental damages associated with the off-site transportation and disposal of hazardous substances. Our operations generate hazardous substances, many of which we accumulate at our facilities for subsequent transportation and disposal or recycling by third parties off-site. Generators of hazardous substances which are transported to disposal sites where environmental problems are alleged to exist are subject to liability under CERCLA and state counterparts. In addition, we may have generated hazardous substances disposed of at sites which are subject to CERCLA or equivalent state law remedial action. We have been named as a potentially responsible party at one site. CERCLA imposes strict, joint and several liabilities for investigatory and cleanup costs upon hazardous substance generators, site owners and operators and other potentially responsible parties regardless of fault. If we are named as a potentially responsible party at other sites in the future, the costs associated with those future sites could have a material adverse effect on our business.

Environmental laws are complex, change frequently and have tended to become increasingly stringent over time, including those relating to greenhouse gases. While we have budgeted for future capital and operating expenditures to comply with environmental laws, changes in any environmental law may directly or indirectly increase our costs of compliance and liabilities arising from any past or future releases of, or exposure to, hazardous substances and may materially adversely affect our business. See "Business—Environmental Matters."

Government regulation is increasing and if we fail to comply with such increased regulation, we could be subject to fines, penalties and expenditures.

The United States Congress has adopted several significant pieces of legislation, such as the Sarbanes-Oxley Act of 2002 and the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, including conflict minerals regulations, that affect our operation as well as those of other publicly traded companies. In addition, regulations relating to data protection and privacy law have become increasingly stringent. Failure to comply with such regulations could result in fines, penalties or expenditures which could have a material adverse effect on our business.

Our business is affected by federal rules, regulations and orders applicable to some of our customers who are government contractors.

A number of our products are manufactured and sold to customers who are parties to U.S. government contracts or subcontracts. Consequently, we are indirectly subject to various federal rules, regulations and orders applicable to government contractors. From time to time, we are also subject to government inquiries and investigations of our business practices due to our participation in government programs. These inquiries and investigations are costly and consume a substantial amount of internal resources, and costs are expected to increase. Violations of applicable government rules and regulations could result in civil liability, in cancellation or suspension of existing contracts or in ineligibility for future contracts or subcontracts funded in whole or in part with federal funds, any of which could have a material adverse effect on our business.

Our business could be materially and adversely affected by climate change and related matters.

We analyze climate change risks in two separate categories: transition risks and physical risks. Transition risks are those risks relating to the transition of the global economy to a focus on more climate-friendly technologies. This transition could have adverse financial impacts on us in several ways. For instance, more stringent environmental policies or regulations could lead to increased expenses relating to green-house gas emissions or other emissions that could increase our operating costs. Enhanced emissions-reporting or shifting technology could require us to write off or impair assets or retire existing assets early. Increased environmental mandates could also increase our exposure to litigation. We could be required to incur increased costs and significant capital investment to transition to lower emissions technology. In addition, overall market shifts could increase costs of our raw materials and cause unexpected shifts in energy costs. Market shifts could also bring a prompt change in our overall revenue mix and sources, resulting in reduced demand in alloys and a decrease in revenues. Focus on sustainability has increased, and the entire industry could be stigmatized as not friendly to the environment, which could adversely affect our reputation and our business, including due to difficulties in employee hiring and retention and our ability to access capital. Any of these matters could materially and adversely affect our business, financial condition or results of operations.

Physical risks from climate change that could affect our business include acute weather events such as floods, tornadoes or other severe weather and ongoing changes such as rising temperatures or extreme variability in weather patterns. These events could lead to increased capital costs from damage to our facilities, increased insurance premiums or reduced revenue from decreased production capacity based on supply chain interruptions. Any of these events could have a material adverse effect on our business, financial condition or results of operations.

Our business subjects us to risk of litigation claims, including those that might not be covered by insurance.

Litigation claims may relate to the conduct of our business, including claims pertaining to product liability, commercial disputes, employment actions, employee benefits, compliance with domestic and federal laws and personal injury. Due to the uncertainties of litigation, we might not prevail on claims made against us in the lawsuits that we currently face, and additional claims may be made against us in the future. The outcome of litigation cannot be predicted with certainty, and some of these lawsuits, claims or proceedings may be determined adversely to us. The resolution in any reporting period of one or more of these matters could have a material adverse effect on our business, particularly in the event that adverse outcomes are not covered by insurance.

Our insurance may not provide enough coverage or may not be available on terms that are acceptable to us.

We maintain various forms of insurance, including insurance covering claims related to our properties and risks associated with our operations. Our existing property and liability insurance coverages contain exclusions and limitations on coverage. From time-to-time, in connection with renewals of insurance, we have experienced additional exclusions and limitations on coverage, larger self-insured retentions and deductibles and significantly higher premiums. In the future, our insurance coverage may not cover claims to the extent that it has in the past and the costs that we incur to procure insurance may increase significantly, either of which could have an adverse effect on our business. Furthermore, the insurance industry, or our carriers specifically, may continue to alter their business models in manners that are unfavorable to us, resulting in insufficient or more costly coverage, which could adversely affect our business.

General Risk Factors

Our results of operations, financial condition and cash flows have been and may be adversely affected by pandemics, epidemics or other public health emergencies.

Our business, results of operations, financial condition, cash flows and stock price have been, and may be in the future, adversely affected by pandemics, epidemics or other public health emergencies, such as the global outbreak of COVID-19, and the responses of governmental authorities to those emergencies. In March 2020, the World Health Organization characterized COVID-19 as a pandemic, and the President of the United States declared the COVID-19 outbreak a national emergency. The outbreak resulted in governments around the world implementing increasingly stringent measures to help control the spread of the virus, including quarantines, “shelter in place” and “stay at home” orders, travel restrictions, business curtailments, school closures, and other measures. In addition, governments and central banks in several parts of the world have enacted fiscal and monetary stimulus measures to counteract the impacts of COVID-19.

An interruption in energy services may cause manufacturing curtailments or shutdowns.

We rely upon third parties for our supply of energy resources consumed in the manufacture of our products. The potential for curtailment of certain energy resources exists which could have a material adverse effect on our business. The prices for and availability of electricity, natural gas, hydrogen, oil and other energy resources are subject to volatile market conditions. These market conditions often are affected by political and economic factors, weather issues and other factors, which may be beyond our control. Disruptions in the supply of energy resources could impair our ability to manufacture products for customers. Further, increases in energy costs, which are outside of our control, or changes in costs relative to energy costs paid by competitors, has and may continue to adversely affect our business. To the extent that these uncertainties cause suppliers and customers to be more cost sensitive, increased energy prices may have an adverse effect on our business.

If we are unable to recruit, hire and retain skilled and experienced personnel, our ability to effectively manage and expand our business will be harmed.

Our success largely depends on the skills, experience and efforts of our officers and other key employees who may terminate their employment at any time. The loss of any of our senior management team could harm our business. Our ability to retain our skilled workforce and our success in attracting and hiring new skilled employees will be a critical factor in determining whether we will be successful in the future. We face challenges in hiring, training, managing and retaining employees in certain areas including metallurgical researchers, equipment technicians and sales and marketing staff as well as production and maintenance employees. We also face hiring challenges relating to the location of our business. If we are unable to recruit, hire and retain skilled employees, our new product and alloy development and commercialization could be delayed and our marketing and sales efforts could be hindered, which would adversely impact our business.

Healthcare costs, including those related to healthcare legislation, have and may continue to impact our business.

The Patient Protection and Affordable Care Act and other legislation relating to healthcare have increased our annual employee healthcare cost obligations. In addition, costs associated with healthcare generally, including our retiree healthcare plans, are expected to continue to increase. We cannot predict the effect that healthcare legislation or regulation, and the costs of healthcare in general, will ultimately have on our business. However, each year as opportunities arise, programs are being implemented that are intended to drive savings and improve the health status of our population. The current project involves the transition to a new Third Party Administrator (TPA), with added support elements, which will become effective January 1, 2023.

Any significant delay or problems in any future upgrades of our operations could materially adversely affect our business, financial condition and results of operations.

We have undertaken, and may continue to undertake, significant capital projects in order to enhance, expand and/or upgrade our facilities and operational capabilities, including rebuilding the A&K line and 4-HI rolling system upgrades. Our ability to achieve the anticipated increased revenues or otherwise realize acceptable returns on these investments or other strategic capital projects that we may undertake is subject to a number of risks, many of which are beyond our control, including the ability of management to ensure the necessary resources are in place to properly execute these projects on time and in accordance with planned costs, the ability of key suppliers to deliver the necessary equipment according to schedule, customer demand (which fluctuates as a result of the cyclical markets in which we operate, as well as other factors) and our ability to implement these projects with minimal impact to our existing operations. In addition, the cost to implement any given strategic capital project ultimately may prove to be greater than originally anticipated. If we are not able to achieve the anticipated results from the implementation of any of our strategic capital projects, or if we incur unanticipated implementation costs or delays, our business may be materially adversely affected.

We consider acquisitions, joint ventures and other business combination opportunities, as well as possible business unit dispositions, as part of our overall business strategy, which involve uncertainties and potential risks that we cannot predict or anticipate fully.

We intend to continue to strategically position our businesses in order to improve our ability to compete. Strategies we may employ include seeking new or expanding existing specialty market niches for our products, expanding our global presence, acquiring businesses complementary to existing strengths and continually evaluating the performance and strategic fit of our existing business units. From time to time, management of the Company holds discussions with management of other companies to explore acquisitions, joint ventures and other business combination. As a result, the relative makeup of our business is subject to change. Acquisitions, joint ventures and other business combinations involve various inherent risks, such as: assessing accurately the value, strengths, weaknesses, contingent and other liabilities and potential profitability of acquisition or other transaction candidates; the potential loss of key personnel of an acquired business; integration of technological systems; our ability to achieve identified financial and operating synergies anticipated to result from an acquisition or other transaction; diversion of the attention of certain management personnel from their day-to-day duties; and unanticipated changes in business and economic conditions affecting an acquisition or other transaction. International acquisitions or business combinations could be affected by many additional factors, including, without limitation, export controls, exchange rate fluctuations, domestic and foreign political conditions and deterioration in domestic and foreign economic conditions.

Our stock price is subject to fluctuations that may not be related to our performance as a result of being traded on a public exchange.

The stock market can be highly volatile. The market price of our common stock is likely to be similarly volatile, and investors in our common stock may experience a decrease in the value of their stock, including decreases unrelated to our operating performance or our prospective outlook of our business. The price of our common stock could be subject to wide fluctuations in response to a number of factors, including, but not limited to, those described elsewhere in this "Risk Factors" section and those listed below:

- fluctuations in the market price of nickel (or other raw materials, such as cobalt, molybdenum or ferrochrome) or energy as well as increases in value added vendor premiums;
- market conditions in the end markets into which our customers sell their products, principally aerospace, power generation and chemical processing;
- implementation of barriers to free trade between the United States and other countries;
- announcements of technological innovations or new products and services by us or our competitors;
- the operating and stock price performance of other companies that investors may deem comparable to us;
- announcements by us of acquisitions, alliances, joint development efforts or corporate partnerships in the high-temperature resistant alloy and corrosion-resistant alloy markets;
- market conditions in the technology, manufacturing or other growth sectors
- financial performance of our competitors; and
- rumors relating to us or our competitors.

We may not continue to pay dividends at the current rate or at all.

Any future payment of dividends, including the timing and amount thereof, will depend upon our Board of Director's assessment of the economic environment, our operations, financial condition, projected liabilities, compliance with contractual restrictions in our credit agreement and restrictions imposed by applicable law and other factors.

Provisions of our certificate of incorporation and by-laws could discourage potential acquisition proposals and could deter or prevent a change in control.

Some provisions in our certificate of incorporation and by-laws, as well as Delaware statutes, may have the effect of delaying, deterring or preventing a change in control. These provisions, including those regulating the nomination of directors and those allowing the Board of Directors to issue shares of preferred stock without stockholder approval, may make it more difficult for other persons, without the approval of our Board of Directors, to launch takeover attempts that a stockholder might consider to be in his or her best interest. These provisions could limit the price that some investors might be willing to pay in the future for shares of our common stock.

Our business could be adversely affected by actions of proxy advisory firms, large institutional shareholders and activist shareholders in response to Environmental, Social and Governance (ESG) matters.

An organization's reputation is built on its relationship with employees, customers, suppliers, investors and the community they operate within. Companies across a variety of industries, including the metals industry, are experiencing an increase in shareholder activism, particularly shareholder proposals regarding environmental sustainability, diversity and inclusion, and governance matters. . If we are required to respond to shareholder proposals (including the implementation of any proposals), proxy contents or other actions by activist shareholder, we could incur significant expense, disruptions to our operations and diversion of the attention of management and our employees. Perceived uncertainties as to our future direction, strategy or leadership as a consequence of activist shareholders initiatives may result in reputational damage, which could negatively impact relationships with customers and strategic partners, impair our ability to attract and retain employees, and cause volatility in our stock price.

In addition, both Institutional Shareholder Services and Glass Lewis, two primary proxy advisory firms, as well as large institutional investors, have emphasized the importance of disclosure regarding the environmental, social and governance actions taken by publicly traded companies. If we are unable to achieve acceptable scores relating to these matters, our stock price and reputation may be affected.

Item 1B. Unresolved Staff Comments

There are no unresolved comments by the staff of the U.S. Securities and Exchange Commission.

Item 2. Properties

Manufacturing Facilities. The Company owns manufacturing facilities in the following locations:

- Kokomo, Indiana—manufactures and sells all product forms, other than tubular and wire goods;
- Arcadia, Louisiana—manufactures and sells welded and seamless tubular goods; and
- Mountain Home, North Carolina—manufactures and sells high-performance alloy wire and small diameter bar.

The Kokomo plant, the Company's primary production facility, is located on approximately 180 acres of industrial property and includes over 1.0 million square feet of building space. There are three sites consisting of (1) a headquarters and research laboratory; (2) primary and secondary melting, forge press and several smaller hot mills; and (3) the Company's four-high Steckel rolling mill and sheet product cold working equipment, including two cold rolling mills and three annealing furnaces. All alloys and product forms other than tubular and wire goods are produced in Kokomo.

The Arcadia plant is located on approximately 42 acres of land and includes 202,500 square feet of buildings on a single site. Arcadia uses feedstock produced in Kokomo to fabricate welded and seamless high-performance alloy pipe and tubing and purchases extruded tube hollows to produce seamless titanium tubing. Manufacturing processes at Arcadia require cold pilger mills, weld mills, draw benches, annealing furnaces and pickling facilities.

The Mountain Home plant is located on approximately 29 acres of land and includes approximately 100,000 square feet of building space. The Mountain Home facility is primarily used to manufacture finished high-performance alloy wire. Finished wire products are also warehoused at this facility.

The owned facilities located in the United States are subject to a negative pledge which secures the Company's obligations under its U.S. revolving credit facility with a group of lenders led by JPMorgan Chase Bank, N.A. The credit agreement provides that no liens can encumber the owned real property other than certain permitted encumbrances. For more information, see Note 8 to the Consolidated Financial Statements included in this Annual Report on Form 10-K.

Service and Sales Centers. The service and sales centers, which stock and sell all product forms, contain equipment capable of precision laser and water jet processing services to cut and shape products to customers' precise specifications. The Company owns service and sales centers in the following locations:

- Openshaw, England
- Lenzburg, Switzerland

The Openshaw plant, located near Manchester, England, consists of approximately 5 acres of land and over 85,000 square feet of buildings on a single site.

In addition, the Company leases service and sales centers, which stock and sell all product forms, in the following locations:

- LaPorte, Indiana
- La Mirada, California
- Houston, Texas
- Windsor, Connecticut
- Shanghai, China

Sales Centers. The Company leases sales centers, which sell all product forms, in the following locations:

- Paris, France
- Singapore
- Milan, Italy
- Tokyo, Japan

On January 1, 2015, the Company entered into a finance lease agreement for the building that houses the assets and operations of LaPorte Custom Metal Processing (LCMP). The finance asset and obligation are recorded at the present value of the minimum lease payments. The asset is included in Property, plant and equipment, net on the Consolidated Balance Sheet and is depreciated over the 20 year lease term. The long-term component of the finance lease obligation is included in Long-term obligations (See Note 18. Long-term Obligations).

All owned and leased service and sales centers not described in detail above are single site locations and are less than 100,000 square feet, except for the LaPorte service center which is approximately 230,000 square feet.

Item 3. Legal Proceedings

The Company is subject to extensive federal, state and local laws and regulations. Future developments and increasingly stringent regulations could require the Company to make additional unforeseen expenditures for these matters. The Company is regularly involved in litigation, both as a plaintiff and as a defendant, relating to its business and operations. Such litigation includes, without limitation, federal and state EEOC administrative and judicial actions, litigation of commercial matters, asbestos litigation and litigation and administrative actions relating to environmental matters. For more information, see "Item 1. Business—Environmental Matters." Litigation and administrative actions may result in substantial costs and may divert management's attention and resources, and the level of future expenditures for legal matters cannot be determined with any degree of certainty.

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 Company’s common stock is listed on the NASDAQ Global Market (“NASDAQ”) and traded under the symbol “HAYN”.

As of November 1, 2022, there were approximately 54 holders of record of the Company’s common stock.

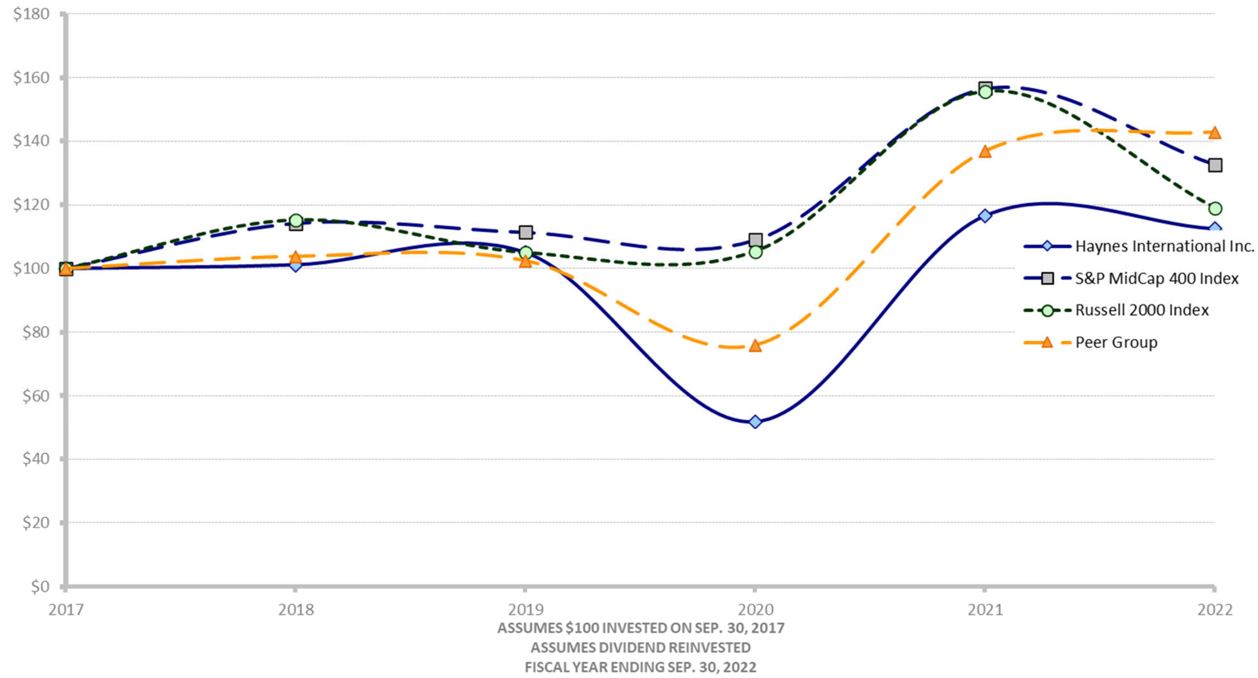
The Company has historically paid quarterly cash dividends. Any decision to pay future cash dividends will be made by the Company’s Board of Directors and will depend upon the Company’s earnings, financial condition, cash position and other factors. The Company may pay quarterly cash dividends up to $3.5 million per fiscal quarter so long as the Company is not in default under its existing credit facility.

Set forth below is information regarding the Company’s stock repurchases during the fourth quarter of fiscal 2022, comprising shares repurchased by the Company from employees to satisfy tax withholding obligations with respect to share-based compensation.

Period	Total Number of Shares (or Units) Purchased	Average Price Paid per Share (or Unit	Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value[000's]) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
July 1-31, 2022	—	$ —	—	$ —
August 1-31, 2022	50	43.90	—	—
September 1-30, 2022	11,538	38.68	—	—
Total	11,588	$ 38.70	—	

Cumulative Total Stockholder Return

The graph below compares the cumulative total stockholder return on the Company’s common stock to the cumulative total return of the Russell 2000 Index, S&P MidCap 400 Index, and Peer Groups for each of the last five fiscal years ended September 30. The cumulative total return assumes an investment of $100 on September 30, 2017 and the reinvestment of any dividends during the period. The Russell 2000 is a broad-based index that includes smaller market capitalization stocks. The S&P MidCap 400 Index is the most widely used index for mid-sized companies. Management believes that the S&P MidCap 400 is representative of companies with similar market and economic characteristics to Haynes. Furthermore, management also believes the Russell 2000 Index is representative of the Company’s current market capitalization status and this index is also provided on a comparable basis. The companies included in the Peer Group Index: Allegheny Technologies, Inc., Howmet Aerospace Inc.(formerly Arconic, Inc)., Carpenter Technology Corp., Commercial Metals, Inc., Insteel Industries, Inc., Kaiser Aluminum Corporation, Materion Corporation, Olympic Steel, Inc., and Universal Stainless & Alloy Products, Inc. Management believes that the companies included in the Peer Groups, taken as a whole, provide a meaningful comparison in terms of competition, product offerings and other relevant factors. The total stockholder return for the peer groups is weighted according to the respective issuer’s stock market capitalization at the beginning of each period.



	2017	2018	2019	2020	2021	2022
Haynes International, Inc.	100.00	101.16	105.00	51.90	116.57	112.43
Russell 2000	100.00	115.24	104.99	105.40	155.66	119.08
S&P MidCap 400	100.00	114.21	111.36	108.96	156.55	132.68
Peer Group	100.00	103.80	102.46	76.02	136.85	142.88

Item 6. Reserved

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

Please refer to page 2 of this Annual Report on Form 10-K for a cautionary statement regarding forward-looking information.

Overview of Business

The Company is one of the world's largest producers of high-performance nickel- and cobalt-based alloys in flat product form, such as sheet, coil and plate. The Company is focused on developing, manufacturing, marketing and distributing technologically advanced, high-performance alloys, which are used primarily in the aerospace, chemical processing and industrial gas turbine industries. The global specialty alloy market includes stainless steel, titanium alloys, general-purpose nickel alloys and high-performance nickel- and cobalt-based alloys. The Company competes primarily in the high-performance nickel- and cobalt-based alloy sector, which includes high-temperature resistant alloys, or HTA products, and corrosion-resistant alloys, or CRA products. The Company believes it is one of the principal producers of high-performance alloy flat products in sheet, coil and plate forms. The Company also produces its products as seamless and welded tubulars and in bar, billet and wire forms.

The Company has manufacturing facilities in Kokomo, Indiana; Arcadia, Louisiana; and Mountain Home, North Carolina. The Kokomo facility specializes in flat products, the Arcadia facility specializes in tubular products and the Mountain Home facility specializes in wire and small-diameter bar products. The Company distributes its products primarily through its direct sales organization, which includes 11 service and/or sales centers in the United States, Europe and Asia. All of these centers are Company-operated.

Financial Data Trends

The following table shows certain financial information of the Company for each year in the five-year period ending September 30, 2022. This information should be read in conjunction with the consolidated financial statements and related notes thereto included elsewhere in this Annual Report on Form 10-K. Amounts below are in thousands, except backlog, which is in millions, share and per share information and average nickel price.

	Year Ended September 30,				
	2018	2019	2020	2021	2022
Statement of Operations Data:					
Net revenues	$ 435,326	$ 490,215	$ 380,530	$ 337,661	$ 490,461
Cost of sales	379,491	424,712	335,898	297,931	384,128
Selling, general and administrative expense	47,030	44,195	40,307	43,470	47,089
Research and technical expense	3,785	3,592	3,713	3,403	3,822
Operating income (loss)	5,020	17,716	612	(7,143)	55,422
Nonoperating retirement benefit expense	8,238	3,446	6,822	1,470	(4,655)
Interest expense (income), net	836	900	1,288	1,170	2,463
Provision for (benefit from) income taxes	17,697	3,625	(1,020)	(1,100)	12,527
Net income (loss)	$ (21,751)	$ 9,745	$ (6,478)	$ (8,683)	$ 45,087
Net income (loss) per share:					
Basic	$ (1.75)	$ 0.78	$ (0.53)	$ (0.71)	$ 3.62
Diluted	$ (1.75)	$ 0.78	$ (0.53)	$ (0.71)	$ 3.57
Dividends declared per common share	$ 0.88	$ 0.88	$ 0.88	$ 0.88	$ 0.88
Weighted average shares outstanding:					
Basic	12,419,564	12,445,212	12,470,664	12,499,609	12,346,025
Diluted	12,419,564	12,480,908	12,470,664	12,499,609	12,505,500

	September 30,				
	2018	2019	2020	2021	2022
Balance Sheet Data:					
Working capital	$ 304,151	$ 311,793	$ 313,320	$ 287,393	$ 383,543
Property, plant and equipment, net	179,400	169,966	159,819	147,248	142,772
Total assets	588,694	593,800	560,724	546,455	632,295
Total debt and other finance obligations	8,127	7,979	7,809	7,613	82,105
Long-term portion of debt and other finance obligations	7,980	7,809	7,614	7,385	81,839
Accrued pension and postretirement benefits(1)	170,180	215,741	199,223	109,722	85,222
Stockholders' equity	333,220	296,275	301,501	343,321	375,488
Cash dividends paid	11,013	11,011	11,058	11,175	11,072

(1) Significant volatility in the pension and postretirement benefits liability has occurred due to many factors such as changes in the discount rate used to value the future liability, variation in the return on assets and trends of postretirement health care expenses incurred by the Company. These changes have been reflected in the Pension and Postretirement Benefits Liability and a corresponding change to the accumulated other comprehensive loss account. During fiscal 2021 as a part of a broader capital allocation strategy, the U.S. pension asset allocation was changed to 30% equity and 70% fixed income as a part of a customized liability driven investment (LDI) strategy designed to secure the improved funding percentage and reduce interest rate and equity risk. In addition, a lump sum funding of $15 million occurred in the fourth quarter of fiscal 2021. During fiscal 2022, the pension asset allocation was further changed to 14% equity and 86% fixed income in accordance with the Company's customized LDI strategy.

Overview of Markets

The following table includes a breakdown of net revenues, shipments and average selling prices to the markets served by the Company for the periods shown.

	Year Ended September 30,									
	2018		2019		2020		2021		2022	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
Net Revenues (dollars in millions)										
Aerospace	$ 226.9	52.1 %	$ 258.1	52.7 %	$ 192.0	50.5 %	$ 128.1	37.9 %	$ 230.0	46.9 %
Chemical processing	79.2	18.2	89.7	18.3	63.1	16.6	63.1	18.7	91.7	18.7
Industrial gas turbine	52.4	12.0	59.4	12.1	56.6	14.9	66.8	19.8	91.9	18.7
Other markets	53.4	12.3	57.9	11.8	45.1	11.8	58.1	17.2	53.7	11.0
Total product	411.9	94.6	465.1	94.9	356.8	93.8	316.1	93.6	467.3	95.3
Other revenue(1)	23.4	5.4	25.1	5.1	23.7	6.2	21.6	6.4	23.2	4.7
Net revenues	$ 435.3	100.0 %	$ 490.2	100.0 %	$ 380.5	100.0 %	$ 337.7	100.0 %	$ 490.5	100.0 %
U.S.	$ 258.3	59.3 %	$ 300.7	61.3 %	$ 230.8	60.7 %	$ 179.1	53.0 %	$ 278.5	56.8 %
Foreign	$ 177.0	40.7 %	$ 189.5	38.7 %	$ 149.7	39.3 %	$ 158.6	47.0 %	$ 212.0	43.2 %
Shipments by Market (millions of pounds)										
Aerospace	9.8	53.3 %	10.3	51.5 %	7.2	49.3 %	5.0	35.7 %	8.2	46.6 %
Chemical processing	3.9	21.2	4.3	21.5	2.8	19.2	2.8	20.0	3.5	19.9
Industrial gas turbine	2.9	15.8	3.4	17.0	3.3	22.6	4.2	30.0	4.5	25.6
Other markets	1.8	9.8	2.0	10.0	1.3	8.9	2.0	14.3	1.4	7.9
Total Shipments	18.4	100.0 %	20.0	100.0 %	14.6	100.0 %	14.0	100.0 %	17.6	100.0 %
Average Selling Price Per Pound										
Aerospace	$ 23.05		$ 25.11		$ 26.56		$ 25.81		$ 27.99	
Chemical processing	20.54		20.80		22.21		22.40		26.44	
Industrial gas turbine	18.27		17.44		16.96		15.95		20.21	
Other markets	29.14		28.35		35.85		28.46		38.12	
Total product(2)	22.38		23.21		24.33		22.56		26.49	
Total average selling price	23.66		24.46		25.95		24.10		27.81	

(1) Other revenue consists of toll conversion, royalty income, scrap sales and revenue recognized from the TIMET agreement (see Note 15 in the Notes to the Consolidated Financial Statements). Other revenue does not include associated shipment pounds.

(2) Total product price per pound excludes “Other Revenue”.

Aerospace demand was favorably impacted by the transition to new engine platforms that is driven by a desire for more fuel-efficiency and lower emissions. Fiscal 2018 aerospace volume hit record levels, and revenue in that market increased 17.9% in that year. Growth continued in fiscal 2019, with further traction of the new generation engine platforms in spite of the grounding of the Boeing 737 MAX aircraft. One of the Company’s core focus initiatives was to be compensated for value provided, which contributed to the revenue increase. Fiscal 2019 sales into the aerospace market represented a new record year in both volume and revenue. Sales in the first half of fiscal 2020 were reduced with the continued grounding and subsequent production halt of the Boeing 737 MAX aircraft. Sales in the second half of fiscal 2020 were further severely impacted by the global COVID-19 pandemic causing significant reductions in air travel, which impacted both new plane builds and aftermarket sales. Sales into the aerospace market were also negatively affected by high inventory levels of metal in the supply chain, which take time to work through the inventory and slows order volume to the Company. Volume shipped into the aerospace market declined 30.1% in fiscal 2020 compared to the prior year. Volumes continued to decline in the first quarter of fiscal year 2021 as sales in fiscal year 2021 were 50% of the fiscal year 2019 levels, then began to increase by the end of fiscal 2021. Growth continued as the number of people flying and announced aircraft build rates have significantly increased. Single-aisle aircraft build rates announced in the industry show significant growth expectations in both 2022 and 2023 and double-aisle build rate increases are expected to follow one to two years later. Net sales to the aerospace industry increased over $100 million from fiscal year 2021 to 2022. The

Company expects volume levels in fiscal year 2023 to be back to 2019 levels with 2023 revenue exceeding 2019 due to price increases implemented.

Chemical processing revenue grew double digits from fiscal year 2018 to 2019. The main driver of demand in this market is capital spending in the chemical processing sector, driven by end-user demand for housing, automotive, energy and agricultural products. The chemical processing market is sensitive to oil prices, currency fluctuations and fiscal policies as well as world economic conditions and GDP growth. Additional drivers of demand in this market include the increase in North American production of natural gas liquids and the further downstream processing of chemicals that may utilize equipment that requires high-performance alloys. Increased sales to the chemical processing industry in fiscal 2018 and 2019 were related to improvement in global spending in the chemical processing sector combined with the Company's focus initiatives aimed at improving volumes. Fiscal 2020 and 2021 volume and sales were significantly impacted by the global COVID-19 pandemic. Volume shipped into the chemical processing industry market declined 34.9% in fiscal 2020 compared to the prior year and generally remained at that level across fiscal year 2021. Fiscal year 2022 volumes increased 23.0% combined with a higher value mix driving a 45.2% revenue increase. Higher oil prices are fueling additional capital expenditures in the chemical industry.

Industrial gas turbines are beneficial in electricity generating facilities due to low capital cost at installation, fewer emissions than traditional fossil fuel-fired facilities and relative favorable natural gas prices in the U.S. provided by availability of non-conventional (shale) gas supplies. Sales to the industrial gas turbine market declined in years leading up to fiscal 2018, and fiscal 2018 volumes represented less than half the volume of fiscal 2012 peak levels. Reported significant overcapacity in large-frame turbines primarily used for electrical power generation combined with growth in renewable energy facilities had taken a toll on demand for large-frame gas turbines. Sales and volume began to recover in fiscal 2019 and the first half of fiscal 2020. The recovery included a market share gain for the Company which began to gain traction in fiscal 2020. The global COVID-19 pandemic negatively affected this market, however sales declines were mitigated by the Company's market share gains as well as restocking beginning to occur in the supply chain. Sales declined only 4.7% in fiscal 2020 compared to the prior year, then increased 18.0% in fiscal 2021 and 37.6% in fiscal 2022 as the market share gain showed its full impact. The Company's strategy includes efforts to further increase market share going forward.

Other markets represent certain traditional businesses of oil and gas, flue-gas desulfurization, automotive and heat treating as well as new emerging technologies such as ultra-supercritical CO2, next-generation nuclear, fuel cells and other alternative energy applications. The industries in the other markets category focus on upgrading overall product quality, improving product performance through increased efficiency, prolonging product life and lowering long-term costs. Companies in these industries are looking to achieve these goals through the use of "advanced materials" which support the increased use of high-performance alloys in an expanding number of applications. Sales into the other markets category improved in both fiscal 2018 and 2019. Sales in fiscal 2020 were significantly impacted by the global COVID-19 pandemic. Sales in fiscal year 2021 increased 28.8% as the Company strategically sought increased mill volumes especially in the flue-gas desulphurization (FGD) industry to help improve fixed costs absorption challenges in the overall low volume environment in early fiscal year 2021. In fiscal year 2022, as overall volumes improved, the Company reallocated capacity to higher value markets such as aerospace and de-emphasized certain low-value commodity grade alloys such as those going into the FGD industry. The Company continues to evaluate new opportunities and applications for its products, particularly in the areas of renewable clean energy sources and other developing technologies relating to environmental and climate change issues.

Other revenue consists primarily of toll conversion, but also includes royalty income, scrap sales and revenue recognized from the TIMET agreement. The demand for toll conversion includes TIMET conversion demand completed on the Company's four-high Steckel hot rolling mill in Kokomo, Indiana, as well as conversion work completed through LaPorte Custom Metal Products. Other revenue demand levels vary year-to-year based upon demand drivers in the respective markets of the Company's tolling customers. The global COVID-19 pandemic impacted tolling revenue, particularly revenue from those tolling customers that sell into the aerospace market. In fiscal 2022, other revenue represented 4.7% of net sales. Other revenue does not include associated shipment pounds because the metal is not owned by the Company.

Valuation of the Pension Plan and the Retiree Healthcare Plan

The actuarial valuation of the U.S. pension and retiree healthcare plans on September 30, 2022 included a favorable increase in the discount rates used to measure the plan liabilities along with continued favorable retiree health care spending. The U.S. defined benefit pension net liabilities decreased $5.5 million from $26.1 million at the beginning of the year to $20.7 million at September 30, 2022. The funding percentage of plan assets compared to benefit obligation was 90.8% as of September 30, 2022. This funding percentage has held relatively steady even through significant market turmoil as the Company had previously implemented a glide path which includes a customized liability driven investment strategy designed to secure this funding percentage. In addition, the post-retirement health care liability, which is unfunded, declined $19.0 million during fiscal 2022 from $83.0 million at September 30, 2021 to $64.0 million at September 30, 2022 driven by the higher discount rates. These amounts do not include the United Kingdom pension plan which is a $7.7 million net asset (shown in other assets on the consolidated balance sheet) or two small nonqualified pension plans with a liability of $0.5 million.

Volumes and Pricing

Prior to the pandemic, the Company shipped 20.0 million pounds in fiscal 2019. Subsequent to fiscal 2019, in the first half of fiscal 2020, volumes were negatively impacted by the grounding and subsequent production halt of the Boeing 737 MAX aircraft. The second half of fiscal 2020 was then significantly additionally impacted by the global COVID-19 pandemic, which dramatically lowered volumes for fiscal 2020 to 14.6 million pounds and fiscal 2021 to 14.0 million pounds. During fiscal year 2022 volumes progressively improved for a total of 17.6 million pounds with the fourth quarter of fiscal 2022 at 4.9 million pounds, a run rate near the pre-pandemic levels.

Solid increases in volume and average selling price per pound were achieved in all three major markets in fiscal 2022. Fiscal 2022 aerospace volume increased 65.5% along with an 8.4% increase in aerospace average selling price resulting in a 79.6% or $101.9 million aerospace revenue increase compared to the prior year. This increase is primarily driven by the single-aisle aircraft recovery with the double-aisle aircraft recovery expected to be delayed over fiscal 2023 and 2024. Volumes in the chemical processing industry (CPI) increased 23.0% along with an 18.0% increase in the CPI average selling price resulting in a 45.2% or $28.5 million CPI revenue increase compared to the prior year. Industrial gas turbine (IGT) volumes were up 8.6% along with a 26.7% increase in the IGT average selling price resulting in a 37.6% or $25.1 million IGT revenue increase compared to the prior year.

The product average selling price per pound in fiscal 2022 was $26.49, which is a 17.4% increase over last fiscal year. This increase is driven by higher raw material costs as well as price increases, partially offset by a lower-value product mix.

Gross Profit Margin Trend Performance

The following tables show net revenue, gross profit margin and gross profit margin percentage for fiscal 2021 and fiscal 2022.

	Trend of Gross Profit Margin and Gross Profit Margin Percentage for Fiscal 2021			
	Quarter Ended			
	December 31	March 31	June 30	September 30
Net revenues	$ 72,177	$ 82,063	$ 88,143	$ 95,278
Gross Profit Margin	987	8,385	13,658	16,700
Gross Profit Margin %	1.4%	10.2%	15.5%	17.5%

	Trend of Gross Profit Margin and Gross Profit Margin Percentage for Fiscal 2022			
	Quarter Ended			
	December 31	March 31	June 30	September 30
Net revenues	$ 99,430	$ 117,056	$ 130,165	$ 143,810
Gross Profit Margin	17,777	23,413	33,222	31,921
Gross Profit Margin %	17.9%	20.0%	25.5%	22.2%

A significant strategic effort to improve gross margins has occurred over the past few years. This effort was beginning to gain traction with gross margins as a percent of revenue hitting approximately 18% in the months preceding the pandemic. The significant drop in volumes resulting from the COVID-19 pandemic compressed margins significantly through fiscal 2021, especially in the first half of the fiscal year. These low volume levels created a significant fixed cost absorption headwind which required a direct charge to cost of goods sold for excess fixed overhead per pound incurred due to abnormally low production levels that could not be capitalized into inventory. In fiscal 2021, the direct charges each quarter were $5.9 million, $2.8 million, $2.0 million and $0.8 million, respectively. As volumes began the recovery, no direct charges were necessary in fiscal 2022 and margins strengthened across fiscal 2022 compared to the prior year.

As a result of this strategy, the Company reduced the volume breakeven point by over 25%. The Company previously struggled to be profitable at roughly 5.0 million pounds. Now, with the current product mix, the Company can generate profits at lower volumes as first demonstrated in the third quarter of fiscal 2021, producing a positive net income at only 3.7 million pounds shipped. As volume continued to rise during 2022, incremental profitability leverage helped improve gross margins significantly. Rising raw material costs, which resulted in increased revenue from certain customer contracts with raw material cost adjustments also contributed to the improving gross margin percentages, although excluding this estimated impact, gross margins remained above 21% in the third and fourth quarters of fiscal 2022.

The improving gross margin as a percentage of sales along with rising sales levels, provides a compounding effect on the gross margin dollars generated in fiscal 2022 compared to the prior year with gross margin dollars increasing $66.6 million or an improvement of 167.6%.

Controllable Working Capital

Controllable working capital, which includes accounts receivable, inventory, accounts payable and accrued expenses, was $378.3 million at September 30, 2022, an increase of $139.6 million or 58.5% from $238.7 million at September 30, 2021. The increase resulted primarily from inventory increasing by $109.1 million and accounts receivable increasing by $37.0 million during fiscal 2022, partially offset by accounts payable and accrued expenses increasing by $6.4 million during the same period. Approximately 60% of the increase in inventory was attributable to a higher cost of inventory, primarily due to higher commodity prices, with the remaining increase due to a higher quantity of inventory. The Company continued to build work-in-process inventory during fiscal 2022 in response to the rapidly growing backlog.

Dividends Declared

On November 17, 2022, the Company announced that the Board of Directors declared a regular quarterly cash dividend of $0.22 per outstanding share of the Company’s common stock. The dividend is payable December 19, 2022 to stockholders of record at the close of business on December 5, 2022. The aggregate cash payout based on current shares outstanding will be approximately $2.7 million, or approximately $11.0 million on an annualized basis if current dividend levels are maintained.

Backlog

Set forth below is information relating to the Company's backlog and the 30-day average nickel price per pound as reported by the London Metals Exchange.

	2018	2019	2020	2021	2022
Consolidated Backlog at Fiscal Quarter End[(1)]:					
1st quarter	$ 205.7	$ 237.8	$ 237.6	$ 145.1	$ 217.5
2nd quarter	212.3	253.0	204.7	140.9	280.7
3rd quarter	220.6	254.9	174.6	150.9	338.2
4th quarter	216.0	235.2	153.3	175.3	373.7

	Year Ended September 30,				
	2018	2019	2020	2021	2022
Average nickel price per pound[(2)]	$ 5.68	$ 8.02	$ 6.74	$8.80	$10.28

(1) The Company defines backlog to include firm commitments from customers for delivery of product at established prices. There are orders in the backlog at any given time which include prices that are subject to adjustment based on changes in raw material costs, which can vary but is roughly 50% of the orders. Historically, approximately 70% of the backlog orders have shipped within six months and approximately 90% have shipped within 12 months. The backlog figures do not typically reflect that portion of the business conducted at service and sales centers on a spot or "just-in-time" basis.

(2) Represents the average price for a cash buyer as reported by the London Metals Exchange for the 30 days ending on the last day of the period presented.

	Quarter Ended				Quarter Ended			
	December 31, 2020	March 31, 2021	June 30, 2021	September 30, 2021	December 31, 2021	March 31, 2022	June 30, 2022	September 30, 2022
Backlog								
Dollars (in thousands)	$ 145,143	$ 140,892	$ 150,915	$ 175,299	$ 217,477	$ 280,687	$ 338,178	$ 373,736
Pounds (in thousands)	5,607	5,622	6,642	7,084	8,931	10,654	12,125	12,798
Average selling price per pound	$ 25.89	$ 25.06	$ 22.72	$ 24.75	$ 24.35	$ 26.35	$ 27.89	$ 29.20
Average nickel price per pound								
London Metals Exchange[(1)]	$ 7.62	$ 7.47	$ 8.14	$ 8.80	$ 9.10	$ 15.47	$ 11.71	$ 10.28

(1) Represents the average price for a cash buyer as reported by the London Metals Exchange for the 30 days ending on the last day of the period presented.

The backlog dollars increased during the fourth quarter of fiscal 2022 due to a 5.6% increase in backlog pounds combined with a 4.7% increase in backlog average selling price. The average selling price increase was due to a higher-value product mix.

The backlog increase from September 30, 2021 to September 30, 2022 was due to an 80.7% increase in backlog pounds combined with an 18.0% increase in backlog average selling price. The increase in backlog pounds was primarily driven by increases in demand across all markets, especially aerospace. The increase in average selling price was due to a higher-value product mix in the backlog, along with higher raw material prices and higher prices for value provided.

Revenues by geographic area

Net revenues in fiscal 2020, 2021 and 2022 were generated primarily by the Company's U.S. operations. Sales to domestic customers comprised approximately 61%, 53% and 57% of the Company's net revenues in fiscal 2020, 2021 and 2022, respectively. In addition, the majority of the Company's operating costs are incurred in the U.S., as all of its manufacturing facilities are located in the U.S. It is expected that net revenues will continue to be highly dependent on the Company's domestic sales and manufacturing facilities in the U.S.

The Company's foreign and export sales were approximately $149.8 million, $158.6 million and $212.0 million for fiscal 2020, 2021 and 2022, respectively. Additional information concerning foreign operations and export sales is set forth in Note 13 to the Consolidated Financial Statements included in this Annual Report on Form 10-K.

Quarterly Market Information

	Quarter Ended				Quarter Ended			
	December 31, 2020	**March 31, 2021**	**June 30, 2021**	**September 30, 2021**	**December 31, 2021**	**March 31, 2022**	**June 30, 2022**	**September 30, 2022**
Net revenues (in thousands)								
Aerospace	$ 24,555	$ 30,601	$ 33,950	$ 38,966	$ 48,455	$ 52,918	$ 60,981	$ 67,647
Chemical processing	15,256	15,068	17,010	15,813	17,450	22,850	24,180	27,185
Industrial gas turbine	13,967	16,436	17,835	18,534	14,598	24,788	23,991	28,501
Other markets	12,779	15,546	13,709	16,056	14,487	9,755	14,518	14,946
Total product revenue	66,557	77,651	82,504	89,369	94,990	110,311	123,670	138,279
Other revenue	5,620	4,412	5,639	5,909	4,440	6,745	6,495	5,531
Net revenues	$ 72,177	$ 82,063	$ 88,143	$ 95,278	$ 99,430	$ 117,056	$ 130,165	$ 143,810
Shipments by markets (in thousands of pounds)								
Aerospace	904	1,177	1,354	1,528	1,864	1,808	2,142	2,402
Chemical processing	601	682	814	722	794	870	882	921
Industrial gas turbine	798	1,064	1,147	1,178	799	1,416	1,090	1,242
Other markets	489	599	415	538	420	244	427	318
Total shipments	2,792	3,522	3,730	3,966	3,877	4,338	4,541	4,883
Average selling price per pound								
Aerospace	$ 27.16	$ 26.00	$ 25.07	$ 25.50	$ 26.00	$ 29.27	$ 28.47	$ 28.16
Chemical processing	25.38	22.09	20.90	21.90	21.98	26.26	27.41	29.52
Industrial gas turbine	17.50	15.45	15.55	15.73	18.27	17.51	22.01	22.95
Other markets	26.13	25.95	33.03	29.84	34.49	39.98	34.00	47.00
Total average selling price (product only; excluding other revenue)	23.84	22.05	22.12	22.53	24.50	25.43	27.23	28.32
Total average selling price (including other revenue)	25.85	23.30	23.63	24.02	25.65	26.98	28.66	29.45

Results of Operations

This section of this Form 10-K generally discusses 2022 and 2021 items and year-to-year comparisons between 2022 and 2021. For discussion related to 2020 items and year-to-year comparisons between 2021 and 2020 that are not included in this Form 10-K, please refer to Part II, Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations* in our 2021 Form 10-K, filed with the United States Securities and Exchange Commission on November 18, 2021.

Year Ended September 30, 2022 Compared to Year Ended September 30, 2021

($ in thousands, except per share figures)

	Year Ended September 30,				Change	
	2021		2022		Amount	%
Net revenues	$ 337,661	100.0 %	$ 490,461	100.0 %	$ 152,800	45.3 %
Cost of sales	297,931	88.2 %	384,128	78.3 %	86,197	28.9 %
Gross profit	39,730	11.8 %	106,333	21.7 %	66,603	167.6 %
Selling, general and administrative expense	43,470	12.9 %	47,089	9.6 %	3,619	8.3 %
Research and technical expense	3,403	1.0 %	3,822	0.8 %	419	12.3 %
Operating income (loss)	(7,143)	(2.1)%	55,422	11.3 %	62,565	(875.9)%
Nonoperating retirement benefit expense (income)	1,470	0.4 %	(4,655)	(0.9)%	(6,125)	(416.7)%
Interest income	(16)	(0.0)%	(18)	(0.0)%	(2)	12.5 %
Interest expense	1,186	0.4 %	2,481	0.5 %	1,295	109.2 %
Income (loss) before income taxes	(9,783)	(2.9)%	57,614	11.7 %	67,397	(688.9)%
Provision for (benefit from) income taxes	(1,100)	(0.3)%	12,527	2.6 %	13,627	(1,238.8)%
Net income (loss)	$ (8,683)	(2.6)%	$ 45,087	9.2 %	$ 53,770	(619.3)%

The following table includes a breakdown of net revenues, shipments and average selling prices to the markets served by the Company for the periods shown.

By market

	Year Ended September 30,		Change	
	2021	2022	Amount	%
Net revenues (dollars in thousands)				
Aerospace	$ 128,072	$ 230,001	$ 101,929	79.6 %
Chemical processing	63,147	91,665	28,518	45.2 %
Industrial gas turbine	66,772	91,878	25,106	37.6 %
Other markets	58,090	53,706	(4,384)	(7.5)%
Total product revenue	316,081	467,250	151,169	47.8 %
Other revenue	21,580	23,211	1,631	7.6 %
Net revenues	$ 337,661	$ 490,461	$ 152,800	45.3 %
Pounds by market (in thousands)				
Aerospace	4,963	8,216	3,253	65.5 %
Chemical processing	2,819	3,467	648	23.0 %
Industrial gas turbine	4,187	4,547	360	8.6 %
Other markets	2,041	1,409	(632)	(31.0)%
Total shipments	14,010	17,639	3,629	25.9 %
Average selling price per pound				
Aerospace	$ 25.81	$ 27.99	$ 2.18	8.4 %
Chemical processing	22.40	26.44	4.04	18.0 %
Industrial gas turbine	15.95	20.21	4.26	26.7 %
Other markets	28.46	38.12	9.66	33.9 %
Total product (excluding other revenue)	22.56	26.49	3.93	17.4 %
Total average selling price (including other revenue)	$ 24.10	$ 27.81	$ 3.71	15.4 %

Net Revenues. Net revenues were $490.5 million in fiscal 2022, an increase of 45.3% from $337.7 million in fiscal 2021 due to increases in volume in key markets and average selling price per pound increases in all markets. The 25.9% increase in pounds sold is due to the demand recovery and strong sales in the aerospace market as well as the chemical processing and industrial gas turbine markets as compared to fiscal 2021. The product average selling price was $26.49 in fiscal 2022, an increase of 17.4% from $22.56 per pound in fiscal 2021. The increase in product average selling price per pound in fiscal 2022 largely reflects higher market prices of raw materials, which increased average selling price per pound by approximately $2.31, and price increases and other sales factors, which increased average selling price per pound by approximately $1.70, partially offset by a lower-value product mix, which decreased average selling price per pound by $0.08.

The aerospace market has experienced increased demand as inventory throughout the aerospace supply chain continues to be replenished in response to the expected increase in engine build rates. Additionally, demand in fiscal 2021 was depressed by the COVID-19 pandemic that decreased demand for air travel resulting in decreased demand for new planes and maintenance parts. The increase in average selling price per pound largely reflects higher market prices of raw materials, which increased average selling price per pound by approximately $2.26, and price increases and other sales factors, which increased average selling price per pound by approximately $1.58, partially offset by a lower-value product mix, which decreased average selling price per pound by $1.66.

Volume to the chemical processing market was higher as industrial activity increased with economies continuing to reopen from pandemic shutdowns as well as increases in oil prices resulting in expanded capital expenditures in the sector. The increase in average selling price per pound reflects higher market prices of raw materials, which increased average selling price per pound by approximately $2.28, and price increases and other sales factors, which increased average selling price per pound by approximately $2.00, partially offset by a lower-value product mix, which decreased average selling price per pound by $0.24.

The higher volume to the industrial gas turbine market was a result of overall increased demand in the market. The increase in average selling price per pound reflects higher market prices of raw materials, which increased average selling price per pound by approximately $2.27, price increases and other sales factors, which increased average selling price per pound by approximately $1.65 and a higher-value product mix, which increased average selling price per pound by $0.34.

The decrease in volume to other markets was primarily attributable to lower shipments into the flue-gas desulphurization market which also contributed to an improved product mix. The average selling price per pound increase reflects higher market prices of raw materials, which increased average selling price per pound by approximately $2.83 as well as a higher-value product mix and other pricing factors, which increased average selling price per pound by approximately $6.83.

Other Revenue. The 7.6% increase in other revenue was primarily due to increased sales of scrap material.

Cost of Sales. The decrease in cost of sales as a percentage of revenues was primarily attributable to variable cost saving measures that enable the Company mitigate the increase in costs in periods of higher net revenues. Additionally, higher volumes sold during fiscal 2022 eliminated the need for fixed costs to be directly expensed, as was the case in fiscal 2021, when $11.5 million of costs were directly expensed to cost of sales.

Gross Profit. As a result of the above factors, gross profit was $106.3 million in fiscal 2022, an increase of $66.6 million from fiscal 2021. Gross profit as a percentage of net revenue increased to 21.7% in fiscal 2022 as compared to 11.8% in fiscal 2021 which continued to be impacted by the COVID-19 pandemic.

Selling, General and Administrative Expense. The decrease in selling, general and administrative expense as a percentage of net revenues was largely driven by a 45.3% increase in net revenues. Higher foreign exchange losses as well as general inflation were the primary drivers of the increased expense during fiscal 2022. Additionally, some temporary cost containment initiatives that were in place during the first quarter of fiscal 2021, in response to the COVID-19 pandemic, were subsequently ended, which contributed to higher expense in fiscal 2022 as compared to fiscal 2021.

Nonoperating retirement benefit expense. The $6.1 million difference in nonoperating retirement benefit expense (income) was primarily driven by a favorable actuarial valuation of the U.S. pension plan liability as of September 30, 2021 caused by a higher-than-expected return on plan assets coupled with a higher discount rate. The amortization of this favorable valuation is recorded as a benefit to nonoperating retirement benefit expense (income).

Income Taxes. The $13.6 million difference in income tax expense was driven primarily by a difference in income (loss) before income taxes of $67.4 million.

Liquidity and Capital Resources

Comparative cash flow analysis (2021 to 2022)

The Company had cash and cash equivalents of $8.4 million at September 30, 2022, inclusive of $7.4 million that was held by foreign subsidiaries in various currencies, compared to $47.7 million at September 30, 2021. Additionally, the Company had $74.7 million of borrowings against the line of credit outstanding as of September 30, 2022.

Net cash used in operating activities during fiscal 2022 was $79.5 million compared to net cash provided by operating activities of $23.3 million during fiscal 2021, a difference of $102.7 million. Cash used in operating activities in fiscal 2022 was driven by an increase in inventory of $116.8 million as compared to relatively flat inventory during fiscal 2021, and an increase in accounts receivable of $42.7 million during fiscal 2022 as compared to an increase in accounts receivable of $6.2 million during fiscal 2021. This was partially offset by net income of $45.1 million in fiscal 2022 as compared to net loss of $(8.7) million during fiscal 2021.

Net cash used in investing activities was $15.1 million in fiscal 2022, which was higher than cash used in investing activities of $5.9 million during fiscal 2021 due to higher additions to property, plant and equipment. Capital spending in fiscal 2022 approached a more normal level of investment; however, below the rate of depreciation, after lower than historical levels of investment in fiscal 2021.

Net cash provided by financing activities was $56.6 million in fiscal 2022, a difference of $74.0 million from cash used in financing activities of $17.4 million during fiscal 2021. This difference was primarily driven by a net borrowing of $74.7 million against the revolving line of credit during fiscal 2022, partially offset by share repurchases of $7.2 million in fiscal 2022 as compared to $5.0 million during fiscal 2021. Dividends paid of $11.1 million during fiscal 2022 were $0.1 million lower than dividends paid of $11.2 million during fiscal 2021 due to fewer shares outstanding following the Company's share repurchases.

Future sources of liquidity

The Company's sources of liquidity for the next twelve months are expected to consist primarily of cash generated from operations, cash on-hand and borrowings under the U.S. revolving credit facility, the terms of which are described in Note 8 to the Company's Consolidated Financial Statements provided pursuant to Item 8 of this Annual Report on Form 10-K. At September 30, 2022, the Company had cash of $8.4 million, an outstanding balance of $74.7 million on the U.S. revolving credit facility with access to an additional $25.3 million, subject to a borrowing base formula and certain reserves. On October 7, 2022, the maximum availability under the U.S. revolving credit facility was increased from $100.0 million to $160.0 million to provide the Company with additional liquidity. Management believes that the resources described above will be sufficient to fund planned capital expenditures, any regular quarterly dividends declared and working capital requirements over the next twelve months.

The Company's primary uses of cash over the next twelve months are expected to consist of expenditures related to:

- Funding operations, including raw material purchases, labor costs, insurance, utilities, equipment maintenance;

- Capital spending, including for purchases of new plant and equipment;

- Dividends to stockholders; and
- Pension and postretirement plan contributions, including an anticipated contribution to the U.S. pension plan of $6 million during fiscal 2023.

Capital investment in fiscal 2022 was $15.1 million, and the capital spending in fiscal 2023 is planned to be between $20.0 million and $24.0 million.

Contractual Obligations

The following table sets forth the Company's contractual obligations for the periods indicated, as of September 30, 2022. Management believes cash from operations, cash on hand and borrowings under the U.S. Credit Facility will be sufficient to meet these obligations as they come due.

	Payments Due by Period				
Contractual Obligations	**Total**	**Less than 1 year**	**1-3 Years**	**3-5 Years**	**More than 5 years**
			(in thousands)		
Credit facility[1]	$ 81,282	$ 4,254	$ 77,028	$ —	$ —
Operating lease obligations[2]	3,387	2,126	1,071	190	—
Finance lease obligations[3]	13,594	1,024	2,069	2,093	8,408
Raw material contracts[4]	40,230	40,230	—	—	—
Capital projects and other commitments	5,442	4,799	643	—	—
Pension plan[5]	20,655	6,000	12,000	2,655	—
Non-qualified pension plans	530	95	190	190	55
Other postretirement benefits[6]	64,037	3,276	9,113	8,046	43,602
Environmental post-closure monitoring	407	66	156	143	42
Total	$ 229,564	$ 61,870	$ 102,270	$ 13,317	$ 52,107

(1) As of September 30, 2022, the revolver balance was $74,721 which expires on April 19, 2024 (See Note 8. Debt). Additionally, future unused line fees and interest expense are estimated assuming current borrowings on the revolving credit facility and no extension of terms beyond the current maturity date.

(2) Represents multi-year obligation for all operating leases for certain land and buildings, plant equipment, vehicles, office and computer equipment, including short term lease obligations. Typically, lease obligations on real estate are renewed upon expiration and lease obligations on equipment are replaced with new leases unless the Company makes a decision to purchase new equipment.

(3) Represents payments for finance lease obligations of real property that are intended to be held for a long time.

(4) Raw material purchase obligations consist primarily of commitments to purchase commodities, primarily nickel, cobalt, chromium or molybdenum as well as scrap alloys. We believe the minimum required purchase quantities are lower than our current requirements for these metals. Additionally, changes in the market price of these commodities along with changes in the Company's production volumes will determine if future requirements beyond these commitments will differ from the current levels.

(5) The Company has a funding obligation to contribute $20,655 to the domestic pension plan. These payments will be tax deductible. All benefit payments under the domestic pension plan will come from the plan and not the Company.

(6) Represents expected other postretirement benefits based upon anticipated timing of payments.

Inflation or Deflation

The Company may be favorably or unfavorably impacted by inflation or deflation, resulting in a material impact on its operating results. The Company attempts to pass onto customers both increases in consumable costs and material costs because of the value-added contribution the material makes to the final product, however, the Company may not be able to successfully offset a rapid increase in raw material costs adjustments to customer selling prices. In the event of raw material price declines, the Company's customers may delay order placement, resulting in lower volumes. In the event of raw material price increases that the Company is unable to pass on to its customers, the Company's cash flows or results of operations could be materially adversely affected.

Critical Accounting Policies and Estimates

Overview

Management's Discussion and Analysis of Financial Condition and Results of Operations discusses the Company's consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, management evaluates its estimates and judgments, including those related to credit losses, inventories, income taxes, asset impairments, retirement benefits, matters related to product liability and other lawsuits and environmental matters. The process of determining significant estimates is fact specific and takes into account factors such as historical experience, current and expected economic conditions, product mix, pension asset mix and, in some cases, actuarial techniques and various other factors that are believed to be reasonable under the circumstances. The results of this process form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. The Company routinely reevaluates these significant factors and makes adjustments where facts and circumstances dictate. Actual results may differ from these estimates under different assumptions or conditions.

The Company's accounting policies are more fully described in Note 2 in the Notes to the Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K. The Company has identified certain critical accounting policies, which are described below. The following listing of policies is not intended to be a comprehensive list of all of the Company's accounting policies. In many cases, the accounting treatment of a particular transaction is specifically dictated by generally accepted accounting principles, with no need for management's judgment in their application. There are also areas in which management's judgment in selecting any available alternative would not produce a materially different result.

Pension and Postretirement Benefits

The Company has defined benefit pension and postretirement plans covering most of its current and former employees. Significant elements in determining the assets or liabilities and related income or expense for these plans are the expected return on plan assets (if any), the discount rate used to value future payment streams, expected trends in health care costs and other actuarial assumptions. Annually, the Company evaluates the significant assumptions to be used to value its pension and postretirement plan assets and liabilities based on current market conditions and expectations of future costs. If actual results are less favorable than those projected by management, additional expense may be required in future periods.

The selection of the U.S. pension plan's (the Plan) assumption for the expected long-term rate of return on plan assets is based upon the Plan's target allocation. The return on assets is based on fair value of the plan assets and their investment allocation at the beginning of the fiscal year. The Company also realizes that historical performance is no guarantee of future performance.

In the short term, substantial decreases in plan assets will result in higher plan funding contribution levels and higher pension expenses. A decrease of 25 basis points in the expected long-term rate of return on plan assets would result in an increase in annual pension expense of about $0.5 million. To the extent that the actual return on plan assets during the year exceeds or falls short of the assumed long-term rate of return, an asset gain or loss is created. For funding purposes, gains and losses are generally amortized over a 6-year period.

Decreases in discount rates used to value future payment streams will result in higher liabilities for pension and postretirement plans. A decrease of 25 basis points would result in $5.8 million higher liability for the U.S. pension plan and $2.2 million higher liability for the postretirement plan. This increase in liability would also increase the accumulated other comprehensive loss that would be amortized as higher pension and postretirement expense over an amortization period of approximately 6.0 and 10.7 years, respectively.

Salaried employees hired after December 31, 2005 and hourly employees hired after June 30, 2007 are not covered by the pension plan; however, they are eligible for an enhanced matching program of the defined contribution plan (401(k)). Effective December 31, 2007, the U.S. pension plan was amended to freeze benefits for all non-union employees in the U.S. Effective September 30, 2009, the U.K. pension plan was amended to freeze benefits for employees in the plan.

Income Taxes

The Company accounts for deferred tax assets and liabilities using enacted tax rates for the effect of temporary differences between book and tax basis of recorded assets and liabilities. A valuation allowance is required if it is more likely than not that some portion or all of the deferred tax assets will not be realized. The determination of whether or not a valuation allowance is needed is based upon an evaluation of both positive and negative evidence.

In the process of completing an assessment of the need for a valuation allowance, we make judgements and estimates with respect to future operating results, feasible tax planning strategies, timing of the reversal of deferred tax assets and current market and industry factors. In order to determine the effective tax rate to apply to interim periods, estimates and judgements are made (by taxable jurisdiction) as to the amount of taxable income that may be generated, the availability of deductions and credits expected and the availability of net operating loss carryforwards or other tax attributes to offset taxable income.

The ultimate amount of deferred tax assets realized could be different from those recorded, as influenced by potential changes in enacted tax laws and the availability of future taxable income. A change in our effective tax rate by 1% would have had an impact of approximately $0.6 million to Net income (loss) for the fiscal year ended September 30, 2022.

Recently Issued Accounting Pronouncements

See Note 2—Summary of Significant Accounting Policies of Notes to Consolidated Financial Statements for information regarding New Accounting Standards.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market risk is the potential loss arising from adverse changes in market rates and prices. The Company is exposed to various market risks, including changes in interest rates, foreign currency exchange rates, the price of raw materials, particularly nickel and cobalt, as well as the costs of supplies.

Changes in interest rates affect the Company's interest expense on variable rate debt. All of the Company's revolver availability was at a variable rate at September 30, 2021 and 2022. The Company's outstanding variable rate debt was zero at September 30, 2021 and $74.7 million at September 30, 2022. The Company has not entered into any derivative instruments to hedge the effects of changes in interest rates.

The foreign currency exchange risk exists primarily because the Company's foreign subsidiaries maintain receivables and payables denominated in currencies other than their functional currency. Foreign currency forward contracts are entered into as a means to partially offset the impact of cash transactions occurring at the foreign affiliates in currencies other than the entities' functional currency. The U.S. operations transact their foreign sales in U.S. dollars, thereby avoiding fluctuations in foreign exchange rates. The Company is not party to any currency contracts as of September 30, 2022.

Fluctuations in the price of nickel and cobalt, subject the Company to commodity price risk. The Company manages its exposure to this market risk through internally established policies and procedures, including negotiating raw material escalators within product sales agreements and continually monitoring and revising customer quote amounts to reflect the fluctuations in market prices for nickel. The Company does not presently use derivative instruments to manage this market risk but may in the future. The Company monitors its underlying market risk exposure from a rapid change in nickel prices on an ongoing basis and believes that it can modify or adapt its strategies as necessary. The Company periodically purchases raw material forward with certain suppliers. However, there is a risk that the Company may not be able to successfully offset a rapid increase or decrease in the cost of raw material in the future.

Item 8. Financial Statements and Supplementary Data

HAYNES INTERNATIONAL, INC. AND SUBSIDIARIES

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Audited Consolidated Financial Statements of Haynes International, Inc. and Subsidiaries as of September 30, 2021 and 2022 and for the years ended September 30, 2020, September 30, 2021 and September 30, 2022

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Haynes International, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Haynes International, Inc. and subsidiaries (the "Company") as of September 30, 2022 and 2021, the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended September 30, 2022, and the related notes (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of September 30, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of September 30, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended September 30, 2022, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of September 30, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

Basis for Opinions

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (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.

Critical Audit Matter

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

U.S. Pension and Postretirement Plans – Discount Rate - Refer to Notes 2 and 9 to the financial statements

Critical Audit Matter Description

The Company has a defined benefit pension plan ("pension") and postretirement health care benefits ("OPEB") in the U.S. covering most of its current and former employees. As of September 30, 2022, the pension projected benefit obligation was $223.9 million and the OPEB projected benefit obligation was $64.0 million. The actuarial determination of the pension and OPEB projected benefit obligations on an annual basis requires management to make significant assumptions related to the selection of the discount rates used in the calculation of the net present value of future pension and OPEB benefits. The Company establishes the discount rates assumption for the U.S. pension and OPEB plans utilizing the FTSE Pension Discount Curve and projected benefit payments.

Given the significance of the U.S. pension and OPEB projected benefit obligations and their sensitivity to a change in the discount rates, management was required to make significant assumptions related to the selection of the discount rates. Therefore, performing audit procedures to evaluate the reasonableness of the discount rates selected by management for the U.S. pension and OPEB plans required a high degree of auditor judgment and an increased extent of effort, including the need to involve our actuarial specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the discount rates for the U.S. pension and OPEB plans selected by management included the following, among others:

- We tested the effectiveness of internal controls over the valuation of the U.S. pension and OPEB projected benefit obligations, including management's controls over selection of the discount rates.
- With the assistance of our actuarial specialists:
    - We evaluated the methodology utilized to select the discount rates for conformity with applicable accounting guidance.
    - We tested the source information underlying the determination of the discount rates, including the methodology used to construct the yield curve and the mathematical accuracy of the calculation.
    - We evaluated the reasonableness of the Company's selection and use of the external published yield curve used by management to determine the discount rates.

/s/ Deloitte & Touche LLP

Indianapolis, IN
November 17, 2022

We have served as the Company's auditor since fiscal year 1998.

HAYNES INTERNATIONAL, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

	September 30, 2021	September 30, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	$ 47,726	$ 8,440
Accounts receivable, less allowance for credit losses of $553 and $428 at September 30, 2021 and September 30, 2022, respectively	57,964	94,912
Inventories	248,495	357,556
Income taxes receivable	1,292	—
Other current assets	6,129	3,514
Total current assets	361,606	464,422
Property, plant and equipment, net	147,248	142,772
Deferred income taxes	16,397	5,680
Other assets	10,829	9,723
Goodwill	4,789	4,789
Other intangible assets, net	5,586	4,909
Total assets	$ 546,455	$ 632,295
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 47,680	$ 54,886
Accrued expenses	20,100	19,294
Income taxes payable	379	828
Accrued pension and postretirement benefits	3,554	3,371
Deferred revenue—current portion	2,500	2,500
Total current liabilities	74,213	80,879
Revolving credit facilities - Long-term	—	74,721
Long-term obligations (less current portion)	8,301	7,848
Deferred revenue (less current portion)	10,329	7,829
Deferred income taxes	3,459	3,103
Operating lease liabilities	664	576
Accrued pension benefits (less current portion)	26,663	21,090
Accrued postretirement benefits (less current portion)	79,505	60,761
Total liabilities	203,134	256,807
Commitments and contingencies	—	—
Stockholders' equity:		
Common stock, $0.001 par value (40,000,000 shares authorized, 12,757,778 and 12,854,773 shares issued and 12,562,140 and 12,479,741 shares outstanding at September 30, 2021 and September 30, 2022, respectively)	13	13
Preferred stock, $0.001 par value (20,000,000 shares authorized, 0 shares issued and outstanding)	—	—
Additional paid-in capital	262,057	266,193
Accumulated earnings	101,015	135,040
Treasury stock, 195,638 shares at September 30, 2021 and 375,032 shares at September 30, 2022	(7,423)	(14,666)
Accumulated other comprehensive loss	(12,341)	(11,092)
Total stockholders' equity	343,321	375,488
Total liabilities and stockholders' equity	$ 546,455	$ 632,295

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

HAYNES INTERNATIONAL, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	Year Ended September 30, 2020	Year Ended September 30, 2021	Year Ended September 30, 2022
Net revenues	$ 380,530	$ 337,661	$ 490,461
Cost of sales	335,898	297,931	384,128
Gross profit	44,632	39,730	106,333
Selling, general and administrative expense	40,307	43,470	47,089
Research and technical expense	3,713	3,403	3,822
Operating income (loss)	612	(7,143)	55,422
Nonoperating retirement benefit expense (income)	6,822	1,470	(4,655)
Interest income	(44)	(16)	(18)
Interest expense	1,332	1,186	2,481
Income (loss) before income taxes	(7,498)	(9,783)	57,614
Provision for (benefit from) income taxes	(1,020)	(1,100)	12,527
Net income (loss)	$ (6,478)	$ (8,683)	$ 45,087
Net income (loss) per share:			
Basic	$ (0.53)	$ (0.71)	$ 3.62
Diluted	$ (0.53)	$ (0.71)	$ 3.57
Weighted Average Common Shares Outstanding			
Basic	12,471	12,500	12,346
Diluted	12,471	12,500	12,506
Dividends declared per common share	$ 0.88	$ 0.88	$ 0.88

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

HAYNES INTERNATIONAL, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)

	Year Ended September 30, 2020	Year Ended September 30, 2021	Year Ended September 30, 2022
Net income (loss)	$ (6,478)	$ (8,683)	$ 45,087
Other comprehensive income (loss), net of tax:			
Pension and postretirement	15,630	59,006	13,066
Foreign currency translation adjustment	3,690	3,254	(11,817)
Other comprehensive income	19,320	62,260	1,249
Comprehensive income	$ 12,842	$ 53,577	$ 46,336

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

HAYNES INTERNATIONAL, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share data)

	Common Stock		Additional Paid-in	Accumulated	Treasury	Accumulated Other Comprehensive	Total Stockholders'
	Shares	Par	Capital	Earnings	Stock	Income (Loss)	Equity
Balance October 1, 2019	12,513,500	$ 13	$ 253,843	$ 125,296	$ (2,239)	$ (80,638)	$ 296,275
Net income (loss)				(6,478)			(6,478)
Dividends paid ($0.88 per share)				(11,158)			(11,158)
Other comprehensive income (loss)						19,320	19,320
Exercise of stock options	12,400		422				422
Reclass due to adoption of ASU 2018-02				13,283		(13,283)	—
Issue restricted stock (less forfeitures)	101,911						—
Purchase of treasury stock	(5,440)				(198)		(198)
Stock compensation			3,318				3,318
Balance September 30, 2020	12,622,371	$ 13	$ 257,583	$ 120,943	$ (2,437)	$ (74,601)	$ 301,501
Net income (loss)				(8,683)			(8,683)
Dividends paid ($0.88 per share)				(11,245)			(11,245)
Other comprehensive income (loss)						62,260	62,260
Issue restricted stock (less forfeitures)	76,498						—
Purchase of treasury stock	(136,729)				(4,986)		(4,986)
Stock compensation			4,474				4,474
Balance September 30, 2021	12,562,140	$ 13	$ 262,057	$ 101,015	$ (7,423)	$ (12,341)	$ 343,321
Net income (loss)				45,087			45,087
Dividends paid and accrued ($0.88 per share)				(11,062)			(11,062)
Other comprehensive income (loss)						1,249	1,249
Exercise of stock options	14,558		537				537
Issue restricted stock (less forfeitures)	82,437						—
Purchase of treasury stock	(179,394)				(7,243)		(7,243)
Stock compensation			3,599				3,599
Balance September 30, 2022	12,479,741	$ 13	$ 266,193	$ 135,040	$ (14,666)	$ (11,092)	$ 375,488

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

HAYNES INTERNATIONAL, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended September 30, 2021	Year Ended September 30, 2022
Cash flows from operating activities:		
Net income (loss)	$ (8,683)	$ 45,087
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation	19,100	18,289
Amortization	467	780
Pension and post-retirement expense - U.S. and U.K.	8,100	1,898
Change in long-term obligations	9	(136)
Stock compensation expense	4,474	3,599
Deferred revenue	(2,500)	(2,500)
Deferred income taxes	(2,436)	6,442
Loss on disposition of property	173	18
Change in assets and liabilities:		
Accounts receivable	(6,159)	(42,710)
Inventories	(777)	(116,780)
Other assets	(4,926)	3,464
Accounts payable and accrued expenses	33,869	10,696
Income taxes	2,859	1,780
Accrued pension and postretirement benefits	(20,305)	(9,408)
Net cash provided by (used in) operating activities	23,265	(79,481)
Cash flows from investing activities:		
Additions to property, plant and equipment	(5,949)	(15,114)
Net cash used in investing activities	(5,949)	(15,114)
Cash flows from financing activities:		
Revolving credit facility borrowings	—	115,528
Revolving credit facility repayments	—	(40,807)
Dividends paid	(11,175)	(11,072)
Proceeds from exercise of stock options	—	537
Payment for purchase of treasury stock	(4,986)	(7,243)
Payment for debt issuance cost	(997)	(103)
Payments on long-term obligations	(285)	(278)
Net cash provided by (used in) financing activities	(17,443)	56,562
Effect of exchange rates on cash	615	(1,253)
Increase (decrease) in cash and cash equivalents:	488	(39,286)
Cash and cash equivalents:		
Beginning of period	47,238	47,726
End of period	$ 47,726	$ 8,440
Supplemental disclosures of cash flow information:		
Interest (net of capitalized interest)	$ 855	$ 1,206
Income taxes paid (refunded), net	$ (1,580)	$ 3,671
Capital expenditures incurred but not yet paid	$ 666	$ 242
Dividends declared but not yet paid	$ 210	$ 199

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data and as otherwise noted)

Note 1. Background and Organization

Description of Business

Haynes International, Inc. and its subsidiaries (the "Company", "Haynes", "we", "our" or "us") develops, manufactures, markets and distributes technologically advanced, high-performance alloys primarily for use in the aerospace, industrial gas turbine and chemical processing industries. The Company's products are high-temperature resistant alloys ("HTA") and corrosion-resistant alloys ("CRA"). The Company's HTA products are used by manufacturers of equipment that is subjected to extremely high temperatures, such as jet engines for the aerospace industry, gas turbine engines for power generation, waste incineration and industrial heating equipment. The Company's CRA products are used in applications that require resistance to extreme corrosion, such as chemical processing, power plant emissions control and hazardous waste treatment. The Company produces its high-performance alloys primarily in sheet, coil and plate forms. In addition, the Company produces its products as seamless and welded tubulars, and in slab, bar, billets and wire forms.

High-performance alloys are characterized by highly engineered, often proprietary, metallurgical formulations primarily of nickel, cobalt and other metals with complex physical properties. The complexity of the manufacturing process for high-performance alloys is reflected in the Company's relatively high average selling price per pound, compared to the average selling price of other metals, such as carbon steel sheet, stainless steel sheet and aluminum. The high-performance alloy industry has significant barriers to entry such as the combination of (i) demanding end-user specifications, (ii) a multi-stage manufacturing process and (iii) the technical sales, marketing and manufacturing expertise required to develop and sell new applications.

COVID-19 Pandemic

COVID-19 related disruptions negatively impacted the Company's financial and operating results in the second half of fiscal 2020 and the full year of fiscal 2021. In particular, the pandemic negatively impacted the aerospace supply chain, however markets other than aerospace were also depressed during that time period.

Note 2. Summary of Significant Accounting Policies

A. Principles of Consolidation and Nature of Operations

The consolidated financial statements include the accounts of Haynes International, Inc. and its wholly-owned subsidiaries. All intercompany transactions and balances are eliminated. The Company has manufacturing facilities in Kokomo, Indiana; Mountain Home, North Carolina; and Arcadia, Louisiana with service centers in LaPorte, Indiana; LaMirada, California; Houston, Texas; Windsor, Connecticut; Openshaw, England; Lenzburg, Switzerland; Shanghai, China; and sales offices in Paris, France; Singapore; Milan, Italy; and Tokyo, Japan.

B. Cash and Cash Equivalents

The Company considers all highly liquid investment instruments, including investments with original maturities of three months or less at acquisition, to be cash equivalents, the carrying value of which approximates fair value due to the short maturity of these investments.

C. Accounts Receivable

The Company maintains allowances for credit losses for estimated losses resulting from the inability of its customers to make required payments. The Company markets its products to a diverse customer base, both in the United

States of America and overseas. Trade credit is extended based upon evaluation of each customer's ability to perform its obligation, which is updated periodically.

D. Revenue Recognition

The Company recognizes revenue when performance obligations under the terms of customer contracts are satisfied which occurs when control of the goods has been transferred to the customer and services have been performed. Allowances for sales returns are recorded as a component of net sales in the periods in which the related sales are recognized. The Company determines this allowance based on historical experience. Additionally, the Company recognizes revenue attributable to an up-front fee received from Titanium Metals Corporation (TIMET) as a result of a twenty-year agreement entered into on November 17, 2006 to provide conversion services to TIMET. See Note 15, Deferred Revenue for a description of accounting treatment relating to this up-front fee.

E. Inventories

Inventories are stated at the lower of cost or net realizable value. The cost of inventories is determined using the first-in, first-out (FIFO) method. The Company writes down its inventory for estimated obsolescence or unmarketable inventory in an amount equal to the difference between the cost of inventory and the estimated market or scrap value, if applicable, based upon assumptions about future demand and market conditions.

F. Goodwill and Other Intangible Assets

The Company has goodwill, trademarks, customer relationships and other intangibles as of September 30, 2022. As the customer relationships have a definite life, they are amortized over fifteen years. The Company reviews customer relationships for impairment whenever events or circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of the assets is measured by a comparison of the carrying amount of the asset to the undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount exceeds the fair value of the asset.

Goodwill and trademarks (indefinite lived) are tested for impairment at least annually as of January 31 for goodwill and August 31 for trademarks (the annual impairment testing dates), or more frequently if impairment indicators exist. If the carrying value of the trademarks exceeds the fair value (determined using an income approach, based upon a discounted cash flow of an assumed royalty rate), impairment of the trademark may exist resulting in a charge to earnings to the extent of the impairment. The impairment test for goodwill is performed by comparing the fair value of a reporting unit with its carrying amount and recognizing an impairment loss in the event that the carrying amount is greater than the fair value. Any goodwill impairment loss recognized would not exceed the total carrying amount of goodwill allocated to that reporting unit. No impairment was recognized in the years ended September 30, 2020, 2021 or 2022 because the fair value exceeded the carrying values.

During fiscal 2020, 2021 and 2022, there were no changes in the carrying amount of goodwill.

Amortization of the customer relationships and other intangibles was $228, $467 and $780 for the years ended September 30, 2020, 2021 and 2022, respectively. The following represents a summary of intangible assets at September 30, 2021 and 2022:

September 30, 2021	**Gross Amount**	**Accumulated Amortization**	**Carrying Amount**
Trademarks	$ 3,800	$ —	$ 3,800
Customer relationships	2,100	(995)	1,105
Other	997	(316)	681
	$ 6,897	$ (1,311)	$ 5,586

September 30, 2022	Gross Amount	Accumulated Amortization	Carrying Amount
Trademarks	$ 3,800	$ —	$ 3,800
Customer relationships	2,100	(1,128)	972
Other	1,100	(963)	137
	$ 7,000	$ (2,091)	$ 4,909

Estimated future Aggregate Amortization Expense: Year Ending September 30,	
2023	$ 216
2024	176
2025	123
2026	120
2027	116
Thereafter	358

G. Property, Plant and Equipment

Additions to property, plant and equipment are recorded at cost with depreciation calculated primarily by using the straight-line method based on estimated economic useful lives, which are generally as follows:

Buildings and improvements	40 years
Machinery and equipment	5 — 14 years
Land improvements	20 years

Expenditures for maintenance and repairs and minor renewals are charged to expense; major renewals are capitalized. Upon retirement or sale of assets, the cost of the disposed assets and the related accumulated depreciation are removed from the accounts and any resulting gain or loss is credited or charged to operations.

The Company records capitalized interest for long-term construction projects to capture the cost of capital committed prior to the placed in service date as a part of the historical cost of acquiring the asset. Interest is not capitalized when the balance on the revolver is zero.

The Company reviews long-lived assets for impairment whenever events or circumstances indicate that the carrying amount of an asset may not be recoverable. The reviews are conducted at the lowest identifiable level of cash flows for the identified asset group. Recoverability the asset group is measured by a comparison of the carrying amount of the asset to the undiscounted future cash flows expected to be generated by the asset group. If the carrying amount of an asset group exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount exceeds the fair value of the asset group. No impairment was recognized during the years ended September 30, 2020, 2021 or 2022.

H. Environmental Remediation

When it is probable that a liability has been incurred or an asset of the Company has been impaired, a loss is recognized assuming the amount of the loss can be reasonably estimated. The measurement of environmental liabilities by the Company is based on currently available facts, present laws and regulations and current technology. Such estimates take into consideration the expected costs of post-closure monitoring based on historical experience. Amounts accrued for post-closure monitoring are presented in Note 18, Long-term Obligations.

I. Pension and Postretirement Benefits

The Company has defined benefit pension and postretirement plans covering most of its current and former employees. Significant elements in determining the assets or liabilities and related income or expense for these plans are the expected return on plan assets, the discount rate used to value future payment streams, expected trends in health care costs and other actuarial assumptions. Annually, the Company evaluates the significant assumptions to be used to value its pension and postretirement plan assets and liabilities based on current market conditions and expectations of future costs. If actual results are less favorable than those projected by management, additional expense may be required in future periods. Salaried employees hired after December 31, 2005 and hourly employees hired after June 30, 2007 are not covered by the pension plan; however, they are eligible for an enhanced matching program of the defined contribution plan (401(k)). Effective December 31, 2007, the U.S. pension plan was amended to freeze benefits for all non-union employees in the U.S. Effective September 30, 2009, the U.K. pension plan was amended to freeze benefits for employees in the plan. Effective January 1, 2007, a plan amendment of the postretirement medical plan caps the Company's liability related to retiree health care costs at $5,000 annually. Effective October 1, 2009, the U.S. postretirement plan was closed for all non-union employees.

J. Foreign Currency Exchange

The Company's foreign operating entities' financial statements are denominated in the functional currencies of each respective country, which are the local currencies. All assets and liabilities are translated to U.S. dollars using exchange rates in effect at the end of the year, and revenues and expenses are translated at the weighted average rate for the year. Translation gains or losses are recorded as a separate component of comprehensive income (loss) and transaction gains and losses are reflected in the consolidated statements of operations.

Gains and losses arising from the impact of foreign currency exchange rate fluctuations on transactions in foreign currency are included in selling, general and administrative expense. The Company has entered into foreign currency forward contracts (See Note 20, Foreign Currency Forward Contracts) with the purpose to reduce income statement volatility resulting from transaction gains and losses.

K. Research and Technical Costs

Research and technical costs related to the development of new products and processes are expensed as incurred. Research and technical costs for the fiscal years ended September 30, 2020, 2021 and 2022 were $3,713, $3,403 and $3,822, respectively.

L. Income Taxes

The Company accounts for deferred tax assets and liabilities using enacted tax rates for the effect of temporary differences between book and tax basis of recorded assets and liabilities. A valuation allowance is required if it is more likely than not that some portion or all of the deferred tax assets will not be realized. The determination of whether or not a valuation allowance is needed is based upon an evaluation of both positive and negative evidence. In its evaluation of the need for a valuation allowance, the Company utilizes prudent and feasible tax planning strategies. The ultimate amount of deferred tax assets realized could be different from those recorded, as influenced by potential changes in enacted tax laws and the availability of future taxable income. The Company records uncertain tax positions on the basis of a two-step process whereby (1) it is determined whether it is more likely than not that the tax positions will be sustained based on the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, we recognize the largest amount of tax benefit that is greater than 50 percent likely to be realized upon ultimate settlement with the related tax authority (See Note 7, Income Taxes).

M. Stock-based Compensation

As described in Note 12, the Company has incentive compensation plans that provide for the issuance of restricted stock, restricted stock units, performance shares, stock options and stock appreciation rights to key employees and non-employee directors. To date, the Company has only issued restricted stock, performance shares and stock options. The stock-based compensation grants typically have a vesting period before the employee can take receipt of the stock or becomes eligible to exercises stock options. Employees earn and receive dividends from the restricted stock during this vesting period and accumulated dividends related to performance shares are paid to the employees at the time that the shares are received by the employee after the end of the vesting period. The Company recognizes compensation expense under the fair-value based method as a component of operating expenses.

N. Financial Instruments and Concentrations of Risk

The Company may periodically enter into forward currency exchange contracts to minimize the variability in the Company's operating results arising from foreign exchange rate movements. The Company does not engage in foreign currency speculation. At September 30, 2021 and 2022, the Company had no foreign currency exchange contracts outstanding. To date, all foreign currency contracts have been settled prior to the end of the month in which they were initiated.

Financial instruments which potentially subject the Company to concentrations of credit risk consist of cash and cash equivalents and accounts receivable. At September 30, 2022, and periodically throughout the year, the Company has maintained cash balances in excess of federally insured limits. The carrying amounts of cash and cash equivalents, accounts receivable and accounts payable approximate fair value because of the relatively short maturity of these instruments.

During 2020, 2021 and 2022, the Company did not have sales to any group of affiliated customers that were greater than 10% of net revenues. The Company generally does not require collateral with the exception of letters of credit with certain foreign sales. Credit losses amounted to $139, $74 and $171 in fiscal 2020, 2021 and 2022, respectively. The Company does not believe it is significantly vulnerable to the risk of near-term severe impact from business concentrations with respect to customers, suppliers, products, markets or geographic areas.

O. Accounting Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an on-going basis, management evaluates its estimates and judgments, including those related to credit losses, inventories, income taxes, asset impairment, incremental borrowing rates, retirement benefits and environmental matters. The process of determining significant estimates is fact specific and takes into account factors such as historical experience, current and expected economic conditions, product mix, pension asset mix and in some cases, actuarial techniques, and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. The Company routinely reevaluates these significant factors and makes adjustments where facts and circumstances dictate. Actual results may differ from these estimates under different assumptions or conditions.

P. Earnings Per Share

The Company accounts for earnings per share using the two-class method. The two-class method is an earnings allocation that determines net income per share for each class of common stock and participating securities according to participation rights in undistributed earnings. Non-vested restricted stock awards that include non-forfeitable rights to dividends are considered participating securities. Basic earnings per share is computed by dividing net income available to common stockholders for the period by the weighted average number of common shares outstanding for the period. The computation of diluted earnings per share is similar to basic earnings per share, except the denominator is increased to include the number of additional common shares that would have been outstanding if the potentially dilutive common shares had been issued.

Basic and diluted net income per share were computed as follows:

(in thousands, except share and per share data)	Years ended September 30, 2020	2021	2022
Numerator: Basic and Diluted			
Net income (loss)	$ (6,478)	$ (8,683)	$ 45,087
Dividends	(11,158)	(11,245)	(11,062)
Undistributed income (loss)	(17,636)	(19,928)	34,025
Percentage allocated to common shares [a]	100.0 %	100.0 %	99.0 %
Undistributed income (loss) allocated to common shares	(17,636)	(19,928)	33,699
Dividends paid on common shares outstanding	11,071	11,098	10,955
Net income (loss) available to common shares	(6,565)	(8,830)	44,654
Denominator: Basic and Diluted			
Weighted average common shares outstanding	12,470,664	12,499,609	12,346,025
Adjustment for dilutive potential common shares	—	—	159,475
Weighted average shares outstanding - Diluted	12,470,664	12,499,609	12,505,500
Basic net income (loss) per share	$ (0.53)	$ (0.71)	$ 3.62
Diluted net income (loss) per share	$ (0.53)	$ (0.71)	$ 3.57
Number of stock option shares excluded as their effect would be anti-dilutive	285,699	385,548	261,228
Number of restricted stock shares excluded as their effect would be anti-dilutive	96,999	165,794	50,415
Number of deferred restricted stock shares excluded as their effect would be anti-dilutive	34,498	30,529	2,791
Number of performance share awards excluded as their effect would be anti-dilutive	47,195	76,266	46,693
[a] Percentage allocated to common shares - weighted average			
Common shares outstanding	12,470,664	12,499,609	12,346,025
Unvested participating shares	—	—	119,549
	12,470,664	12,499,609	12,465,574

Q. Recently Issued Accounting Pronouncements

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments – Credit Losses (Topic 326)* which introduced the expected credit losses methodology for the measurement of credit losses on financial assets measured at amortized cost basis, replacing the previous incurred loss methodology. The new current expected credit loss (CECL) methodology does not have a minimum threshold for recognition of impairment losses, and entities will need to measure expected credit losses on assets that have a low risk of loss. This update is effective for fiscal years beginning after December 15, 2019. The Company adopted this standard on October 1, 2020. This standard did not have a material impact on the Company's Consolidated Financial Statements.

In March 2020, the FASB issued ASU 2020-04, *Reference Rate Reform (Topic 848).* This new update provides optional expedients to ease the potential burden of accounting for the effects of reference rate reform as it pertains to contracts, hedging relationships and other transactions affected by the discontinuation of the London Interbank Offered Rate ("LIBOR") or by another reference rate expected to be discontinued. These amendments are effective immediately and may be applied prospectively to modifications made or relationships entered into or evaluated on or before December 31, 2022. This standard did not have a material impact on the Company's Consolidated Financial Statements.

Note 3. Revenues from Contracts with Customers

The Company applies a five-step analysis to: (i) identify the contract with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when, or as, the Company satisfies a performance obligation. The Company's revenue from contracts with customers is generated primarily from providing high-performance alloys, manufactured to the specifications of its customers, along with conversion services to certain customers.

Performance Obligations

Revenue is recognized when performance obligations under the terms of contracts with the customer are satisfied, which occurs when control of the goods and services has been transferred to the customer. This predominately occurs upon shipment or delivery of the product or when the service is performed.

The Company may occasionally have customer agreements involving production and shipment of goods that would require revenue to be recognized over time due to there being no alternative use for the product without significant economic loss and an enforceable right to payment including a normal profit margin from the customer in the event of contract termination. As of September 30, 2021 and September 30, 2022, the Company did not have any customer agreements that would require revenue to be recorded over time.

Each customer purchase order or contract for goods transferred represents a single performance obligation for which revenue is recognized at either a point in time or over-time as described in the preceding paragraph. The standard terms and conditions of a customer purchase order include limited warranties and the right of customers to have products that do not meet specifications repaired or replaced, at the Company's option. Such warranties do not represent a separate performance obligation.

The customer agreement with Titanium Metals Corporation ("TIMET") (See Note 15) includes the performance obligation to provide conversion services for up to ten million pounds of titanium metal annually over a twenty-year period which ends in fiscal 2027. The transaction price under this contract included a $50,000 up-front fee as well as conversion service fees based upon the fulfillment of conversion services requested at the option of TIMET. The $50,000 fee is allocated to the obligation to provide manufacturing capacity over time and, therefore, is recognized in income on a straight-line basis over the 20-year term of that agreement. The fees for conversion services are based on quantity of service and are recognized as revenue at the time the service is performed.

Transaction Price

Each customer purchase order or contract sets forth the transaction price for the products and services purchased under that arrangement. Some customer arrangements may include variable consideration, such as volume rebates, which generally depend upon the Company's customers meeting specified performance criteria, such as a purchasing level over a period of time. The Company exercises judgment to estimate the most likely amount of variable consideration at each reporting date.

Revenue is measured as the amount of consideration expected to be received in exchange for the transfer of goods or services to customers. Revenue is derived from product sales or conversion services, and is reported net of sales discounts, rebates, incentives, returns and other allowances offered to customers, if applicable. Payment terms vary from customer to customer depending upon credit worthiness, prior payment history and other credit considerations.

Amounts billed to customers for shipping and handling activities to fulfill the Company's promise to transfer of the goods are included in revenues and costs incurred by the Company for the delivery of goods and are classified as cost of sales in the consolidated statements of operations. Shipping terms may vary for products shipped outside the United States depending on the mode of transportation, the country where the material is shipped and any agreements made with the customers.

Contract Balances

As of September 30, 2021 and September 30, 2022, accounts receivable with customers were $58,517 and $95,340, respectively. Allowance for credit losses as of September 30, 2021 and September 30, 2022 were $553 and $428, respectively, and are presented within accounts receivable, less allowance for credit losses on the consolidated balance sheet.

Contract liabilities are recognized when the Company has received consideration from a customer to transfer goods or services at a future point in time when the Company performs under the purchase order or contract. As of September 30, 2021 and September 30, 2022, no contract liabilities have been recorded except for $12,829 and $10,329, respectively, for the TIMET agreement and $1,060 and $700 for accrued product returns, respectively.

Practical Expedients

The Company has elected to use the practical expedient that permits the omission of disclosure for remaining performance obligations which are expected to be satisfied within one year or less. Aside from the TIMET agreement, the Company does not have any remaining performance obligations in excess of one year or contracts that it does not have the right to invoice as of September 30, 2022. The Company does not adjust for the time value of money as the majority of its contracts have an original expected duration of one year or less; contracts that are greater than one year are related to net revenues that are constrained until the subsequent sales occur.

Disaggregation of Revenue

Revenue is disaggregated by end-use markets. The following table includes a breakdown of net revenues to the markets served by the Company for the fiscal years ended September 30, 2020, 2021 and 2022.

	Year Ended September 30,		
	2020	**2021**	**2022**
Net revenues (dollars in thousands)			
Aerospace	$ 191,980	$ 128,072	$ 230,001
Chemical processing	63,170	63,147	91,665
Industrial gas turbine	56,576	66,772	91,878
Other markets	45,099	58,090	53,706
Total product revenue	356,825	316,081	467,250
Other revenue	23,705	21,580	23,211
Net revenues	$ 380,530	$ 337,661	$ 490,461

See Note 13 for revenue disaggregated by geography and product group.

Note 4. Inventories

Inventories are stated at the lower of cost or net realizable value. The cost of inventories is determined using the first-in, first-out (“FIFO”) method. The following is a summary of the major classes of inventories:

	September 30, 2021	**September 30, 2022**
Raw Materials	$ 22,711	$ 31,887
Work-in-process	138,609	226,572
Finished Goods	85,797	97,657
Other	1,378	1,440
	$ 248,495	$ 357,556

Note 5. Property, Plant and Equipment

The following is a summary of the major classes of property, plant and equipment:

	September 30,	
	2021	2022
Land and land improvements	$ 10,266	$ 10,158
Buildings and improvements	46,241	45,872
Machinery and equipment	306,161	313,841
Construction in process	3,344	8,756
	366,012	378,627
Less accumulated depreciation	(218,764)	(235,855)
	$ 147,248	$ 142,772

As of September 30, 2021 and 2022, the Company had $145 and $132, respectively, of assets under a finance lease for equipment related to the service center operation in Shanghai, China. Additionally, the Company had $6,073 and $5,643 of assets under finance leases for two buildings at the LaPorte, Indiana service center as of September 30, 2021 and 2022, respectively.

Note 6. Accrued Expenses

The following is a summary of the major classes of accrued expenses:

	September 30,	
	2021	2022
Employee compensation	$ 9,424	$ 7,734
Taxes, other than income taxes	2,798	2,897
Accrued product returns	1,060	700
Utilities	1,000	1,383
Professional fees	836	966
Finance lease obligation, current	228	265
Management incentive compensation	3,411	3,609
Other	1,343	1,740
	$ 20,100	$ 19,294

Note 7. Income Taxes

The components of income (loss) before provision for income taxes and the provision for income taxes are as follows:

	Year Ended September 30,		
	2020	2021	2022
Income (loss) before income taxes:			
U.S.	$ (9,831)	$ (11,417)	$ 38,864
Foreign	2,333	1,634	18,750
Total	$ (7,498)	$ (9,783)	$ 57,614
Provision for (benefit from) income taxes:			
Current:			
U.S. Federal	$ (371)	$ 741	$ 2,031
Foreign	541	349	3,302
State	29	228	639
Total	199	1,318	5,972
Deferred:			
U.S. Federal	(2,266)	(2,986)	5,931
Foreign	56	470	120
State	(810)	(317)	(300)
Valuation allowance	1,801	415	804
Total	(1,219)	(2,418)	6,555
Total provision for (benefit from) income taxes	$ (1,020)	$ (1,100)	$ 12,527

The provision for income taxes applicable to results of operations differed from the U.S. federal statutory rate as follows:

	Year Ended September 30,		
	2020	2021	2022
Statutory federal tax rate	21.00 %	21.00 %	21.00 %
Tax provision for income taxes at the statutory rate	$ (1,575)	$ (2,054)	$ 12,099
Foreign tax rate differentials	107	(59)	(307)
Provision for state taxes, net of federal taxes	(145)	(84)	974
U.S. tax on distributed and undistributed earnings of foreign subsidiaries	(289)	198	984
Foreign derived intangible income deduction	—	—	(966)
Tax credits	(1,058)	(691)	(702)
Federal and state tax rate change impact on deferred tax asset	(60)	790	(206)
Change in valuation allowance	1,801	415	804
Stock compensation	24	138	191
Other, net	175	247	(344)
Provision for (benefit from) income taxes at effective tax rate	$ (1,020)	$ (1,100)	$ 12,527
Effective tax rate	13.6 %	11.2 %	21.7 %

During fiscal 2020, the Company's effective tax rate was lower than the federal statutory rate primarily due to an increased valuation allowance on tax credits that are not expected to be able to be utilized before they expire.

During fiscal 2021, the Company's effective tax rate was lower than the federal statutory rate primarily due to an increase in the UK tax rate and decreases in the state tax rates and apportionment, both of which resulted in a decrease in net deferred tax assets.

During fiscal 2022, the Company's effective tax rate was higher than the federal statutory rate primarily due to a provision for state taxes, net of federal taxes and an increased valuation allowance on tax credits that are not expected to be able to be utilized before they expire.

Deferred tax assets (liabilities) are comprised of the following:

	September 30,	
	2021	2022
Deferred tax assets:		
Pension and postretirement benefits	$ 22,318	$ 16,802
TIMET Agreement	2,976	2,396
Inventories	1,498	3,225
Accrued compensation and benefits	2,034	2,096
Accrued expenses and other	3,376	2,600
Tax attributes	11,638	5,625
Other assets	299	250
Valuation allowance	(3,891)	(4,695)
Total deferred tax assets	$ 40,248	$ 28,299
Deferred tax liabilities:		
Property, plant and equipment, net	$ (25,669)	$ (24,081)
Intangible and other	(1,296)	(1,414)
Other liabilities	(345)	(227)
Total deferred tax liabilities	$ (27,310)	$ (25,722)
Net deferred tax assets (liabilities)	$ 12,938	$ 2,577

As of September 30, 2022, the Company had state tax net operating loss carryforwards of $14,557, tax credits of $5,193 and foreign net operating loss carryforwards of $2,392. Certain state tax attributes and other tax credit attributes begin to expire in 2026 and 2024, respectively, and the foreign tax attributes begin to expire in 2025. The Company has recorded a valuation allowance against the foreign net operating loss carryforwards of $598 and federal and state tax credits of $4,097 because management does not believe that it is more likely than not that the amounts will be realized.

Undistributed earnings of certain of the Company's foreign subsidiaries amounted to approximately $66,094 at September 30, 2022. The Company considers most of those earnings reinvested indefinitely and, accordingly, aside from the one-time transition tax associated with the Tax Cuts and Jobs Act, no additional provision for U.S. income taxes has been provided. We note that with our foreign subsidiary in the United Kingdom, Haynes International Ltd, as of September 30, 2022, we consider this subsidiary to be indefinitely reinvested except to the extent there is previously tax earnings and profit (PTEP), in that case, we might decide to repatriate cash via a dividend to the U.S. If such funds were to be repatriated, there could be minor currency gain/loss that would be subject to tax and any distribution could also be subject to applicable non-U.S. income and withholding taxes.

As of September 30, 2022, the Company is open to examination in the U.S. for the 2017 through 2021 tax years and in various foreign jurisdictions from 2017 through 2022. The Company is also open to examination in various states in the U.S., none of which were individually material.

As of September 30, 2021 and 2022, the Company had no uncertain tax positions.

Note 8. Debt

U.S. revolving credit facility

On October 19, 2020, the Company and JPMorgan Chase Bank, N.A. entered into a Credit Agreement (the "Credit Agreement") and related Pledge and Security Agreement with certain other lenders (the "Security Agreement", and, together with the Credit Agreement, the "Credit Documents"). The Credit Documents, which had a three-year term expiring in October 2023, replaced the Third Amended and Restated Loan and Security Agreement and related agreements, dated as of July 14, 2011, as amended, previously entered into between the Company and Wells Fargo Capital Finance, LLC with certain other lenders. On August 30, 2022, the Company amended the Credit Agreement to extend the maturity of the agreement from October 19, 2023 to April 19, 2024 and switched from a LIBOR-based interest rate calculation to a SOFR-based interest rate calculation. On October 7, 2022, the Company again amended the Credit Agreement to implement an accordion feature that increased the maximum borrowing amount from $100.0 million to $160.0 million, subject to a borrowing base and certain reserves.

As of September 30, 2022, the Credit Agreement had a balance of $74.7 million which is classified as long-term on the Consolidated Balance Sheet. With the amendment executed on October 7, 2022, the Credit Agreement provides for revolving loans in the maximum amount of $160.0 million, subject to a borrowing base and certain reserves. The Credit Agreement has a remaining accordion which permits an increase in the maximum revolving loan amount from $160.0 million up to an aggregate amount of $170.0 million at the request of the borrower if certain conditions are met. Borrowings under the Credit Agreement bear interest, at the Company's option, at either JPMorgan's "prime rate", plus 1.25% - 1.75% per annum, or the adjusted SOFR rate (SOFR plus 0.10%) by the lender, plus 2.25% - 2.75% per annum (with a SOFR floor of 0.5%).

The Company must pay monthly, in arrears, a commitment fee of 0.425% per annum on the unused amount of the U.S. revolving credit facility total commitment. For letters of credit, the Company must pay a fronting fee of 0.125% per annum as well as customary fees for issuance, amendments and processing.

The Company is subject to certain covenants as to fixed charge coverage ratios and other customary covenants, including covenants restricting the incurrence of indebtedness, the granting of liens and the sale of assets. The covenant pertaining to fixed charge coverage ratios is only effective in the event the amount of excess availability under the revolver is less than the greater of (i) 12.5% of the maximum credit revolving loan amount and (ii) $12.5 million. The Company is permitted to pay dividends and repurchase common stock if certain financial metrics are met. The Company may pay quarterly cash dividends up to $3.5 million per fiscal quarter so long as the Company is not in default under the Credit Documents.

Borrowings under the Credit Agreement are collateralized by a pledge of substantially all of the U.S. assets of the Company, including the equity interests in its U.S. subsidiaries, but excluding the four-high Steckel rolling mill and related assets, which are pledged to Titanium Metals Corporation ("TIMET") to secure the performance of the Company's obligations under a Conversion Services Agreement with TIMET (see discussion of TIMET at Note 15). Borrowings under the Credit Agreement are also secured by a pledge of a 100% equity interest in each of the Company's direct foreign subsidiaries.

The Company's U.K. subsidiary (Haynes International Ltd.) has an overdraft facility of 1,333 Pounds Sterling ($1,471), all of which was available on September 30, 2022. The Company's French subsidiary (Haynes International, S.A.R.L.) has an overdraft banking facility of 240 Euro ($234), all of which was available on September 30, 2022. The Company's Swiss subsidiary (Haynes International AG) has an overdraft banking facility of 1,020 Swiss Francs ($1,040), all of which was available on September 30, 2022.

Note 9. Pension Plan and Retirement Benefits

Defined Contribution Plans

The Company sponsors a defined contribution plan (401(k)) for substantially all U.S. employees. The Company contributes an amount equal to 50% of an employee's contribution to the plan up to a maximum contribution of 3% of the employee's salary, except for all salaried employees and certain hourly employees (those hired after June 30, 2007 that are not eligible for the U.S. pension plan). The Company contributes an amount equal to 60% of an employee's contribution to the plan up to a maximum contribution of 6% of the employee's salary for these groups. Expenses associated with this plan for the years ended September 30, 2020, 2021 and 2022 totaled $1,950, $1,748 and $2,016, respectively.

The Company sponsors certain profit sharing plans for the benefit of employees meeting certain eligibility requirements. There were no contributions to these plans for the years ended September 30, 2020, 2021 and 2022.

Defined Benefit Plans

The Company has non-contributory defined benefit pension plans which cover certain employees in the U.S. and the U.K.

Benefits provided under the Company's U.S. defined benefit pension plan are based on years of service and the employee's final compensation. The Company's funding policy is to contribute annually an amount deductible for federal income tax purposes based upon an actuarial cost method using actuarial and economic assumptions designed to achieve adequate funding of benefit obligations. In fiscal 2021, the Company accelerated funding as part of its capital allocation strategy and continues to evaluate additional funding in future years as it strives to achieve a zero net liability.

The Company has non-qualified pensions for a few former executives of the Company. Non-qualified pension plan expense for the years ended September 30, 2020, 2021 and 2022 was $57, $37 and $3, respectively. Accrued liabilities in the amount of $623 and $530 for these benefits are included in accrued pension and postretirement benefits liability at September 30, 2021 and 2022, respectively.

In addition to providing pension benefits, the Company provides certain health care and life insurance benefits for retired employees. Certain employees, depending on date of hire, become eligible for health care, and substantially all employees become eligible for life insurance, if they reach normal retirement age while working for the Company. The Company's liability related to total retiree health care costs is limited to $5,000 annually.

The Company made contributions of $6,000, $21,000, and $6,000 to fund its domestic Company-sponsored pension plan for the years ended September 30, 2020, 2021 and 2022, respectively. The Company's U.K. subsidiary made contributions of $517, $0 and $0 for the years ended September 30, 2020, 2021 and 2022, respectively, to the U.K. pension plan.

The Company uses a September 30 measurement date for its plans. As of the September 30, 2022 measurement date, the Projected benefit obligation for the U.S pension plan and the U.K. pension plan was $223,871 and $7,404, respectively. The status of employee pension benefit plans and other postretirement benefit plans is summarized below:

	Defined Benefit Pension Plans Year Ended September 30,		Postretirement Health Care Benefits Year Ended September 30,	
	2021	2022	2021	2022
Change in Benefit Obligation:				
Projected benefit obligation at beginning of year	$ 345,390	$ 315,466	$ 93,339	$ 82,964
Service cost	5,795	4,728	1,095	1,825
Interest cost	7,481	7,936	2,292	2,234
Actuarial (gains) losses	(27,225)	(81,225)	(10,943)	(20,343)
Benefits paid	(14,965)	(15,223)	(2,819)	(2,643)
Administrative expenses	(1,010)	(407)	—	—
Projected benefit obligation at end of year	$ 315,466	$ 231,275	$ 82,964	$ 64,037
Change in Plan Assets:				
Fair value of plan assets at beginning of year	$ 245,546	$ 297,703	$ —	$ —
Actual return on assets	47,132	(69,752)	—	—
Employer contributions	21,000	6,000	2,819	2,643
Benefits paid	(14,965)	(15,223)	(2,819)	(2,643)
Administrative expenses	(1,010)	(407)	—	—
Fair value of plan assets at end of year	$ 297,703	$ 218,321	$ —	$ —
Funded Status of Plan:				
Unfunded status	$ (17,763)	$ (12,954)	$ (82,964)	$ (64,037)

The actuarial gain incurred during the fiscal year ended September 30, 2021, for the Defined Benefit Pension Plan was driven by higher returns on pension assets than were expected and an increase in the discount rate which resulted in an increase in pension assets and a decrease in the defined benefit obligation. The actuarial gain incurred during the fiscal year ended September 30, 2022 for the Defined Benefit Pension Plan was driven by an increase in the discount rate applied against future expected benefit payments which resulted in a decrease in the defined benefit obligation.

The actuarial gain incurred during the fiscal year ended September 30, 2021 for the Postretirement Health Care Plan was primarily driven by reductions in healthcare costs incurred over the past three years. The actuarial gain incurred during the fiscal year ended September 30, 2022, for the Postretirement Health Care Plan was primarily driven by an increase in the discount rate applied against future expected health care benefit payments which resulted in a decrease in the defined benefit obligation.

Amounts recognized in the consolidated balance sheets are as follows:

	Defined Benefit Pension Plans September 30,		Postretirement Health Care Benefits September 30,		Non-Qualified Pension Plans September 30,		All Plans Combined September 30,	
	2021	2022	2021	2022	2021	2022	2021	2022
Accrued pension and postretirement benefits:								
Current	$ —	$ —	$ (3,459)	$ (3,276)	$ (95)	$ (95)	$ (3,554)	$ (3,371)
Non-current	(17,763)	(12,954)	(79,505)	(60,761)	(528)	(435)	(97,796)	(74,150)
Accrued pension and postretirement benefits	$ (17,763)	$ (12,954)	$ (82,964)	$ (64,037)	$ (623)	$ (530)	$ (101,350)	$ (77,521)
Accumulated other comprehensive income (loss):								
Net income (loss)	19,150	22,496	(10,704)	(30,807)	—	—	8,446	(8,311)
Prior service cost	1,599	1,365	—	—	—	—	1,599	1,365
Total accumulated other comprehensive income (loss)	$ 20,749	$ 23,861	$ (10,704)	$ (30,807)	$ —	$ —	$ 10,045	$ (6,946)

The non-current portion of the defined benefit pension plan portion of accrued pension and postretirement benefits amounts to $17,763 and $12,954 in fiscal 2021 and 2022, respectively. These amounts include the UK pension plan net pension asset of $8,372 and $7,702, respectively, which is included in Other assets on the consolidated balance sheets as well as the US pension plan accrued pension liability of $26,135 and $20,655, respectively, which are recorded in accrued pension benefit (less current portion) on the consolidated balance sheet.

The accumulated benefit obligation for the pension plans was $308,284 and $227,915 at September 30, 2021 and 2022, respectively.

The cost of the Company's postretirement benefits is accrued over the years that employees provide service to the date of their full eligibility for such benefits. The Company's policy is to fund the cost of claims on an annual basis.

The components of net periodic pension cost and postretirement health care benefit cost are as follows:

	Defined Benefit Pension Plans Year Ended September 30,		
	2020	**2021**	**2022**
Service cost	$ 5,546	$ 5,628	$ 4,728
Interest cost	8,866	7,481	7,936
Expected return on assets	(15,061)	(16,356)	(14,818)
Amortization of prior service cost	228	239	233
Recognized actuarial loss	7,288	7,721	—
Net periodic cost	$ 6,867	$ 4,713	$ (1,921)

	Postretirement Health Care Benefits Year Ended September 30,		
	2020	**2021**	**2022**
Service cost	$ 1,416	$ 1,095	$ 1,825
Interest cost	3,493	2,292	2,234
Recognized actuarial loss	1,848	—	(240)
Net periodic cost	$ 6,757	$ 3,387	$ 3,819

Assumptions

A 5.0% annual rate of increase for the costs of covered health care benefits for ages under 65 and a 5.0% annual rate of increase for ages over 65 were assumed for 2021 and 2022 and increased to 7.0% for the under 65 and over 65 age groups in 2023, 6.5% in 2024, 6.0% in 2025, 5.5% in 2026 and 5.0% in the years thereafter.

The actuarial present value of the projected pension benefit obligation and postretirement health care benefit obligation for the plans at September 30, 2021 and 2022 were determined based on the following assumptions:

	September 30, 2021	September 30, 2022
Discount rate (postretirement health care)[(1)]	2.75 %	5.13 %
Discount rate (U.S. pension plan)[(1)]	2.63 %	5.13 %
Discount rate (U.K. pension plan)	2.00 %	5.90 %
Rate of compensation increase (U.S. pension plan only)	2.50 %	2.50 %

(1) The discount rate for the Postretirement health care plan and the U.S. pension plan are derived using the FTSE Pension Discount Curve and projected benefit payments.

	Defined Benefit Pension and Postretirement Health Care Plans		
	Year Ended September 30,		
	2020	2021	2022
Discount rate (postretirement health care plan)	3.13 %	2.50 %	2.75 %
Discount rate (U.S. pension plan)	2.88 %	2.25 %	2.63 %
Discount rate (U.K. pension plan)	1.70 %	1.50 %	2.00 %
Expected return on plan assets (U.S. pension plan)	7.25 %	7.25 %	5.25 %
Expected return on plan assets (U.K. pension plan)	2.20 %	2.00 %	3.00 %
Rate of compensation increase (U.S. pension plan only)	2.50 %	2.50 %	2.50 %

Plan Assets and Investment Strategy

The Company's pension plan assets by level within the fair value hierarchy at September 30, 2021 and 2022, are presented in the table below. The pension plan assets were accounted for at fair value. A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Investments in U.S and International equities, and Fixed Income are held in mutual funds and common / collective funds which are valued using net asset value (NAV) provided by the administrator of the fund, and individual fixed income securities which consists of Level 1 and Level 2 assets. As of September 30, 2022, the fixed income portfolio consisted of 305 issuances of fixed income securities from 251 issuers. For more information on a description of the fair value hierarchy, see Note 16.

	September 30, 2021			
	Level 1 Active Markets for Identical Assets	Level 2 Other Observable Inputs	NAV	Total
U.S. Pension Plan Assets:				
U.S. corporate and government bonds	$ 23,654	$ 169,953	$ —	$ 193,607
U.S. common stock mutual funds	—	$ —	$ 44,743	44,743
Common /collective funds				
U.S. common stock	—	—	19,672	19,672
International equity	—	—	16,245	16,245
Total U.S.	$ 23,654	$ 169,953	$ 80,660	$ 274,267
U.K. Plan Assets:				
Equities	$ —	$ —	$ 8,202	$ 8,202
Bonds	—	—	12,890	12,890
Other	—	—	2,344	2,344
Total U.K.	$ —	$ —	$ 23,436	$ 23,436
Total pension plan assets	$ 23,654	$ 169,953	$ 104,096	$ 297,703

	September 30, 2022			
	Level 1 Active Markets for Identical Assets	Level 2 Other Observable Inputs	NAV	Total
U.S. Pension Plan Assets:				
U.S. corporate and government bonds	$ 15,926	$ 158,582	$ —	$ 174,508
U.S. common stock mutual funds	—	—	16,471	16,471
Common /collective funds				
Bonds	—	—	—	—
Short-term money market	—	—	—	—
U.S. common stock	—	—	6,847	6,847
International equity	—	—	5,390	5,390
Total U.S.	$ 15,926	$ 158,582	$ 28,708	$ 203,216
U.K. Plan Assets:				
Equities	$ —	$ —	$ 5,135	$ 5,135
Bonds	—	—	8,006	8,006
Other	—	—	1,964	1,964
Total U.K.	$ —	$ —	$ 15,105	$ 15,105
Total pension plan assets	$ 15,926	$ 158,582	$ 43,813	$ 218,321

The primary financial objectives of the plans are to maintain asset funding as a percentage of the benefit obligations. The U.S. Pension Plan utilized a customized liability driven investment (LDI) strategy which is designed to match the risk and duration of the fixed income assets in the portfolio with that of the obligation.

It is the policy of the U.S. pension plan to invest assets with an allocation to equities as shown below based on a matrix which determines the allocation between equities and fixed income based on the funding percentage of the plan. The balance of the assets is maintained in fixed income investments, and in cash holdings, to the extent permitted by the plan documents.

Target asset classes as a percent of total assets as of September 30, 2022:

Asset Class	Target[(1)]
Equity	14 %
Fixed Income	86 %
Real Estate and Other	— %

(1) The Company adjusts the target allocation based on the fair value of pension assets as a percentage of the projected pension obligation.

In choosing the assumption for the expected long-term rate of return on U.S. pension plan assets, the Company takes into account the plan's target asset allocation as well as capital market assumptions relating to the asset classes. The Company believes that its assumption the long-term rate of return on plan assets is reasonable, and comparable to the asset return assumptions of other companies, given the target allocation of the plan assets. Note that over very long historical periods, the realized return on plan assets has met or exceeded the expected rate of return. Also note that in recognition of the variability of future market returns, it is reasonable to consider a modest range around the expected future return, and there exists the potential for the use of a lower, or higher, expected rates of return in the future.

The U.K. pension plan assets follow a more conservative investment objective due to the higher funding status of the plan.

Contributions and Benefit Payments

The Company has not yet determined the amounts to contribute to its domestic pension plans, domestic other postretirement benefit plans and the U.K. pension plan in fiscal 2023.

Pension and postretirement health care benefits, which include expected future service, are expected to be paid out of the respective plans as follows:

Fiscal Year Ending September 30	Pension	Postretirement Health Care
2023	$ 15,738	$ 4,828
2024	16,081	4,841
2025	16,366	4,890
2026	16,573	5,068
2027	16,802	5,007
2028 - 2032 (in total)	83,895	25,956

Note 10. Legal, Environmental and Other Contingencies

Legal

The Company is regularly involved in litigation, both as a plaintiff and as a defendant, relating to its business and operations, including environmental, commercial, asbestos, employment and federal and/or state Equal Employment Opportunity Commission administrative actions. Future expenditures for environmental, employment, intellectual property and other legal matters cannot be determined with any degree of certainty.

Environmental

The Company has received permits from the Indiana Department of Environmental Management and the North Carolina Department of Environment and Natural Resources to close and provide post-closure environmental monitoring and care for certain areas of its Kokomo, Indiana and Mountain Home, North Carolina facilities, respectively.

The Company is required to, among other things, monitor groundwater and to continue post-closure maintenance of the former disposal areas at each site. As a result, the Company is aware of elevated levels of certain contaminants in the groundwater, and additional testing and corrective action by the Company could be required. The Company is unable to estimate the costs of any further corrective action at these sites, if required. Accordingly, the Company cannot assure that the costs of any future corrective action at these or any other current or former sites would not have a material effect on the Company's financial condition, results of operations or liquidity.

As of September 30, 2022, the Company has accrued $407 for post-closure monitoring and maintenance activities, of which $341 is included in long-term obligations as it is not due within one year. Accruals for these costs are calculated by estimating the cost to monitor and maintain each post-closure site and multiplying that amount by the number of years remaining in the post-closure monitoring.

Expected maturities of post-closure monitoring and maintenance activities (discounted) included in long-term obligations are as follows at September 30, 2022.

Expected maturities of post-closure monitoring and maintenance activities (discounted)

Year Ending September 30,		
2024	$	82
2025		60
2026		58
2027		62
2028 and thereafter		79
	$	341

Note 11. Stockholder's Equity

Dividends

During fiscal years 2020, 2021, and 2022, the Company paid dividends of $11,058, $11,175 and $11,072, respectively.

Treasury Stock

Treasury stock activity for fiscal years 2020, 2021 and 2022 are as follows:

	Year Ended September 30, 2020	**Year Ended September 30, 2021**	**Year Ended September 30, 2022**
Number of shares at beginning of year	53,469	58,909	195,638
Repurchases of common stock to satisfy employee payroll taxes	5,440	23,751	37,002
Repurchases of common stock from share repurchase plan	—	112,978	142,392
Number of shares at end of year	58,909	195,638	375,032

Share Repurchase Plan

On July 28, 2021, the Board of Directors authorized the use of up to $20 million of available cash to purchase shares of the Company's common stock through July 27, 2022. The Board adopted the repurchase plan because it believed that repurchasing the Company's stock at current market prices presented an attractive capital allocation strategy for the Company given the available options for the use of capital. The authorization of the repurchase plan has expired and no new authorization has been put in place.

In the fourth quarter of fiscal 2021, the Company repurchased 112,978 shares at an average price per share of $37.57 with an aggregate purchase price of $4,245 under the 10b5-1 agreement and in the first quarter of fiscal 2022, the

Company repurchased 142,392 shares at an average price per share of $40.09 with an aggregate purchase price of $5,709 under the 10b5-1 agreement.

In addition to the above-mentioned share repurchase plan, the Company repurchased 37,002 shares in fiscal 2022 with an aggregate purchase price of $1,534 in order to satisfy payroll taxes related to employee stock-based compensation plans.

Note 12. Stock-based Compensation

Restricted Stock Plan

On March 1, 2016, the Company adopted the 2016 Incentive Compensation Plan which provides for grants of restricted stock, restricted stock units and performance shares, among other awards. Up to 275,000 shares of restricted stock, restricted stock units and performance shares may be granted in the aggregate under this plan. Following the adoption of the 2016 Incentive Compensation Plan, the Company ceased granting awards from the 2009 restricted stock plan, although awards remain outstanding thereunder. On January 24, 2020, the Company adopted the 2020 Incentive Compensation Plan which provides for grants of restricted stock, restricted stock units and performance shares, among other awards. Up to 250,000 shares of restricted stock, restricted stock units and performance shares were authorized to be granted in the aggregate under this plan which was subsequently amended on February 25, 2022 to allow for an aggregate of 575,000 authorized shares of restricted stock, restricted stock units and performance shares to be granted. Following the adoption of the 2020 Incentive Compensation Plan, the Company ceased granting awards from the 2016 Incentive Compensation Plan, although awards remain outstanding thereunder.

Grants of restricted stock are comprised of shares of the Company's common stock subject to transfer restrictions, which vest in accordance with the terms and conditions established by the Compensation Committee. The Compensation Committee may set vesting requirements based on the achievement of specific performance goals or the passage of time. Employees earn and receive dividends from the restricted stock during this vesting period.

Restricted shares are subject to forfeiture if employment or service terminates prior to the vesting date or if any applicable performance goals are not met. The Company will assess, on an ongoing basis, the probability of whether the performance criteria will be achieved. The Company will recognize compensation expense over the performance period if it is deemed probable that the goals will be achieved. The fair value of the Company's restricted stock is determined based upon the closing price of the Company's common stock on the trading day immediately preceding the grant date. The Company's plans provide for the adjustment of the number of shares covered by an outstanding grant and the maximum number of shares for which restricted stock may be granted in the event of a stock split, extraordinary dividend or distribution or similar recapitalization event.

The shares of time-based restricted stock granted to employees vest on the third anniversary of their grant date if the recipient is still an employee of the Company on such date. The shares of restricted stock granted to non-employee directors will vest on the earlier of (a) the first anniversary of the date of grant or (b) the failure of such non-employee director to be re-elected at an annual meeting of the stockholders of the Company as a result of such non-employee director being excluded from the nominations for any reason other than cause.

The following table summarizes the activity under the 2016 restricted stock plan and the 2020 Incentive Compensation Plan with respect to restricted stock for the year ended September 30, 2022:

	Number of Shares	Weighted Average Fair Value At Grant Date
Unvested at September 30, 2021	142,269	$ 26.78
Granted	32,204	$ 43.98
Forfeited / Canceled	(6,522)	$ 28.79
Vested	(71,415)	$ 25.63
Unvested at September 30, 2022	96,536	$ 33.23
Expected to vest	96,536	$ 33.23

Compensation expense related to restricted stock for the years ended September 30, 2020, 2021 and 2022 was $1,160, $2,024, and $1,474, respectively. The remaining unrecognized compensation expense related to restricted stock at September 30, 2022 was $1,239, to be recognized over a weighted average period of 0.99 years. During fiscal 2022, the Company repurchased 25,386 shares of stock from employees at an average purchase price of $40.78 to satisfy required withholding taxes upon vesting of restricted stock-based compensation.

Deferred Restricted Stock

On November 20, 2017, the Company adopted a deferred compensation plan that allows directors and officers the option to defer receipt of cash and stock compensation. Beginning in fiscal 2018, the Company has granted shares of restricted stock from the 2016 and 2020 Incentive Compensation Plans with respect to which elections have been made by certain individuals to defer receipt to a future period. Such shares vest in accordance with the parameters of the 2016 and 2020 Incentive Compensation Plans, however, receipt of the shares and any corresponding dividends are deferred until the end of the deferral period. In the event the deferred shares are forfeited prior to the vesting date, deferred dividends pertaining to those shares will also be forfeited. During the deferral period, the participants who elected to defer shares will not have voting rights with respect to those shares.

The following table summarizes the activity under the 2016 Incentive Compensation Plan and the 2020 Incentive Compensation Plan with respect to deferred restricted stock for the year ended September 30, 2022.

	Number of Shares	Weighted Average Fair Value At Grant Date
Unvested and deferred at September 30, 2021	7,398	$ 22.64
Granted	3,801	$ 44.07
Vested and deferred	(7,398)	$ 22.64
Unvested and deferred at September 30, 2022	3,801	$ 44.07
Vested and deferred at September 30, 2022	20,050	$ 29.23

Compensation expense related to deferred restricted stock for the year ended September 30, 2020, 2021 and 2022 was $271, $188 and $168, respectively. The remaining unrecognized compensation expense related to restricted stock at September 30, 2022 was $28, to be recognized over a weighted average period of 0.17 years.

Performance Shares

In November 2019, the Company granted to certain employees, target numbers of performance shares under the 2016 Incentive Compensation Plan. The number of performance shares that will ultimately be earned, as well as the number of shares that will be distributed in settling those earned performance shares, if any, will not be determined until the end of the performance period. Performance shares earned will depend on the calculated total shareholder return of the Company at the end of the three-year period commencing from the beginning of the fiscal year in which the award was granted as compared to the total shareholder return of the Company's peer group, as defined by the Compensation Committee for this purpose. The fair value of the performance shares is estimated as of the date of the grant using a Monte Carlo simulation model.

The following table summarizes the activity under the 2016 and 2020 Incentive Compensation Plans with respect to performance shares for the twelve months ended September 30, 2022.

	Number of Shares	Weighted Average Fair Value At Grant Date
Unvested at September 30, 2021	87,193	$ 37.24
Granted	21,520	$ 61.04
Vested	(24,121)	$ 43.42
Forfeited / Canceled	(8,172)	$ 42.97
Unvested at September 30, 2022	76,420	$ 41.37

Compensation expense related to the performance shares for the years ended September 30, 2020, 2021 and 2022 was $849, $1,082 and $1,021, respectively. The remaining unrecognized compensation expense related to performance shares at September 30, 2022 was $1,242, to be recognized over a weighted average period of 1.54 years.

Stock Option Plans

The Company's 2020 Incentive Compensation Plan and its previous stock option plans authorize, or formerly authorized, the granting of non-qualified stock options and stock appreciation rights to certain key employees and non-employee directors for the purchase of shares of the Company's common stock. For the 2020 Incentive Compensation Plan, the maximum number of shares granted subject to options is 350,000 which was subsequently amended on February 25, 2022 to allow for a maximum number of shares granted subject to options in the amount of 400,000. Following the adoption of the 2020 Incentive Compensation Plan, the Company ceased granting awards from its previous stock option plan, although awards remain outstanding from previous plans. Each plan provides for the adjustment of the maximum number of shares for which options may be granted in the event of a stock split, extraordinary dividend or distribution or similar recapitalization event. Unless the Compensation Committee determines otherwise, options are exercisable for a period of ten years from the date of grant and vest $33^1/_3$% per year over three years from the grant date. The amount of compensation cost recognized in the financial statements is measured based upon the grant date fair value.

The Company has elected to use the Black-Scholes option pricing model to estimate fair value, which incorporates various assumptions including volatility, expected life, risk-free interest rates and dividend yields. The volatility is based on historical volatility of the Company's common stock over the most recent period commensurate with the estimated expected term of the stock option granted. The Company uses historical volatility because management believes such volatility is representative of prospective trends. The expected term of an award is based on historical exercise data. The risk-free interest rate assumption is based upon observed interest rates appropriate for the expected term of the awards. The dividend yield assumption is based on the Company's history and expectations regarding dividend payouts at the time of the grant. The following assumptions were used for grants during fiscal 2020, 2021 and 2022:

Grant Date	Fair Value	Dividend Yield	Risk-free Interest Rate	Expected Volatility	Expected Life
November 23, 2021	$ 15.02	2.00 %	1.22 %	45 %	5 years
November 24, 2020	$ 5.91	3.89 %	0.39 %	43 %	5 years
November 19, 2019	$ 9.66	2.38 %	1.65 %	35 %	5 years

The stock-based employee compensation expense for stock options for the years ended September 30, 2020, 2021 and 2022 was $1,038, $1,180 and $937, respectively. The remaining unrecognized compensation expense at September 30, 2022 was $717, to be recognized over a weighted average vesting period of 1.03 years.

The following table summarizes the activity under the stock option plans for the year ended September 30, 2022:

	Number of Shares	Aggregate Intrinsic Value (000s)	Weighted Average Exercise Prices	Weighted Average Remaining Contractual Life
Outstanding at September 30, 2021	702,576		$ 34.68	
Granted	42,080		$ 44.07	
Exercised	(14,558)		$ 36.83	
Forfeited/Canceled	(32,878)		$ 44.36	
Outstanding at September 30, 2022	697,220	$ 2,281	$ 34.75	6.17 yrs.
Vested or expected to vest	669,846	$ 2,101	$ 34.92	6.10 yrs.
Exercisable at September 30, 2022	534,296	$ 1,103	$ 36.07	5.55 yrs.

Note 13. Segment Reporting

The Company operates in one business segment: the design, manufacture, marketing and distribution of technologically advanced, high-performance alloys for use in the aerospace, industrial gas turbine, chemical processing and other industries. The Company has operations in the United States, Europe and China, which are summarized below. Sales between geographic areas are made at negotiated selling prices. Revenues from external customers are attributed to the geographic areas presented based on the destination of product shipments.

	Year Ended September 30,		
	2020	2021	2022
Net Revenue by Geography:			
United States	$ 230,764	$ 179,127	$ 278,473
Europe	91,480	85,555	116,599
China	17,398	30,668	33,910
Other	40,888	42,311	61,479
Net Revenues	$ 380,530	$ 337,661	$ 490,461
Net Revenue by Product Group:			
High-temperature resistant alloys	$ 308,229	$ 253,246	$ 387,464
Corrosive-resistant alloys	72,301	84,415	102,997
Net revenues	$ 380,530	$ 337,661	$ 490,461

	September 30,	
	2021	2022
Long-lived Assets by Geography		
United States	$ 140,263	$ 135,698
Europe	6,834	6,921
China	151	153
Total long-lived assets	$ 147,248	$ 142,772

Note 14. Valuation and Qualifying Accounts

	Balance at Beginning of Period	Charges (credits) to Expense	Deductions[(1)]	Balance at End of Period
Allowance for credit losses:				
September 30, 2020	441	139	(35)	545
September 30, 2021	545	74	(66)	553
September 30, 2022	553	171	(296)	428

(1) Uncollectible accounts written off net of recoveries.

Note 15. Deferred Revenue

On November 17, 2006, the Company entered into a twenty-year agreement to provide conversion services to Titanium Metals Corporation (TIMET) for up to ten million pounds of titanium metal annually. TIMET paid the Company a $50,000 up-front fee and will also pay the Company for its processing services during the term of the agreement (20 years) at prices established by the terms of the agreement. TIMET may exercise an option to have ten million additional pounds of titanium converted annually, provided that it offers to loan up to $12,000 to the Company for certain capital expenditures which may be required to expand capacity. In addition to the volume commitment, the Company has granted TIMET a first priority security interest in its four-high Steckel rolling mill, along with rights of access if the Company enters into bankruptcy or defaults on any financing arrangements. The Company has agreed not to manufacture titanium products (other than cold reduced titanium tubing). The Company has also agreed not to provide titanium hot-rolling conversion services to any entity other than TIMET for the term of the Conversion Services Agreement. The agreement contains certain default provisions which could result in contract termination and damages, including liquidated damages of $25,000 and the Company being required to return the unearned portion of the up-front fee. The Company considered each provision and the likelihood of the occurrence of a default that would result in liquidated damages. Based on the nature of the events that could trigger the liquidated damages clause, and the availability of the cure periods set forth in the agreement, the Company determined and continues to believe that none of these circumstances are reasonably likely to occur. Therefore, events resulting in liquidated damages have not been factored in as a reduction to the amount of revenue recognized over the life of the contract. The cash received of $50,000 is recognized in income on a straight-line basis over the 20-year term of the agreement. If an event of default occurred and was not cured within any applicable grace period, the Company would recognize the impact of the liquidated damages in the period of default and re-evaluate revenue recognition under the contract for future periods. The portion of the up-front fee not recognized in income is shown as deferred revenue on the Consolidated Balance Sheet.

Note 16. Fair Value Measurements

The fair value hierarchy has three levels based on the inputs used to determine fair value:

- Level 1—Quoted prices in active markets that are unadjusted and accessible at the measurement date for identical, unrestricted assets or liabilities;

- Level 2—Quoted prices for identical assets and liabilities in markets that are not active, quoted prices for similar assets and liabilities in active markets or financial instruments for which significant inputs are observable, either directly or indirectly; and

- Level 3—Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable.

When available, the Company uses unadjusted quoted market prices to measure fair value. If quoted market prices are not available, fair value is based upon internally-developed models that use, where possible, current market-based or independently-sourced market parameters such as interest rates and currency rates. Items valued using internally-generated models are classified according to the lowest level input or value driver that is significant to the valuation. The valuation model used depends on the specific asset or liability being valued.

Fixed income securities are held as individual bonds and are valued as either level 1 assets as they are quoted in active markets or level 2 assets. U.S and International equities, and Other Investments held in the Company's pension plan are held as individual bonds or in mutual funds and common / collective funds which are valued using net asset value (NAV) provided by the administrator of the fund. The NAV is based on the value of the underlying assets owned by the fund, minus its liabilities, and then divided by the number of shares outstanding. These investments are not classified in the fair value hierarchy in accordance with guidance included in ASU 2015-07, *Fair Value Measurement (Topic 820): Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)*.

The fair value of Cash and Cash Equivalents is determined using Level 1 information.

The following table represents the Company's fair value hierarchy for its financial assets and liabilities measured at fair value on a recurring basis as of September 30, 2021 and 2022:

	September 30, 2021 Fair Value Measurements at Reporting Date Using:				
	Level 1	**Level 2**	**Level 3**	**NAV**	**Total**
Assets:					
Pension plan assets	$ 23,654	$ 169,953	$ —	$ 104,096	$ 297,703
Total fair value	$ 23,654	$ 169,953	$ —	$ 104,096	$ 297,703

	September 30, 2022 Fair Value Measurements at Reporting Date Using:				
	Level 1	**Level 2**	**Level 3**	**NAV**	**Total**
Assets:					
Pension plan assets	$ 15,926	$ 158,582	$ —	$ 43,813	$ 218,321
Total fair value	$ 15,926	$ 158,582	$ —	$ 43,813	$ 218,321

The Company had no other financial assets or liabilities measured at fair value on a recurring basis as of September 30, 2021 or 2022.

Note 17. Comprehensive Income (Loss) and Changes in Accumulated Other Comprehensive Income (Loss) by Component

Comprehensive income (loss) includes changes in equity that result from transactions and economic events from non-owner sources. Comprehensive income (loss) consists of net income (loss) and other comprehensive income (loss) items, including pension and foreign currency translation adjustments, net of tax when applicable.

Comprehensive Income (Loss)

	Year Ended September 30,								
	2020			2021			2022		
	Pre-tax	Tax	Net	Pre-tax	Tax	Net	Pre-tax	Tax	Net
Net income (loss)			$ (6,478)			$ (8,683)			$ 45,087
Other comprehensive income (loss):									
Pension and postretirement:									
Net gain (loss) arising during period	$ 11,121	(2,381)	8,740	$ 68,941	(16,044)	52,897	$ 16,991	(3,924)	13,067
Amortization of prior service cost	228	(58)	170	228	(52)	176	239	(56)	183
Amortization of (gain) loss	9,129	(2,409)	6,720	7,735	(1,802)	5,933	(240)	56	(184)
Foreign currency translation adjustment	3,690	—	3,690	3,254	—	3,254	(11,817)	—	(11,817)
Other comprehensive income (loss)	$ 24,168	$ (4,848)	19,320	$ 80,158	$ (17,898)	62,260	$ 5,173	$ (3,924)	1,249
Total comprehensive income (loss)			$ 12,842			$ 53,577			$ 46,336

Accumulated Other Comprehensive Income (Loss)

	Year Ended September 30, 2021			
	Pension Plan	Postretirement Plan	Foreign Exchange	Total
Accumulated other comprehensive income (loss) as of September 30, 2020	$ (65,393)	$ 613	$ (9,821)	$ (74,601)
Other comprehensive income (loss) before reclassifications	44,493	8,404	3,254	56,151
Amounts reclassified from accumulated other comprehensive income (loss)				
Amortization of Pension and Postretirement Plan items [(1)]	228	—	—	228
Actuarial losses [(1)]	7,735	—	—	7,735
Tax benefit	(1,854)	—	—	(1,854)
Net current-period other comprehensive income (loss)	50,602	8,404	3,254	62,260
Accumulated other comprehensive income (loss) as of September 30, 2021	$ (14,791)	$ 9,017	$ (6,567)	$ (12,341)

	Year Ended September 30, 2022			
	Pension Plan	Postretirement Plan	Foreign Exchange	Total
Accumulated other comprehensive income (loss) as of September 30, 2021	$ (14,791)	$ 9,017	$ (6,567)	$ (12,341)
Other comprehensive income (loss) before reclassifications	(2,557)	15,624	(11,817)	1,250
Amounts reclassified from accumulated other comprehensive income (loss)				
Amortization of Pension and Postretirement Plan items [(1)]	239	—	—	239
Actuarial losses [(1)]	—	(240)	—	(240)
Tax benefit	(56)	56	—	—
Net current-period other comprehensive income (loss)	(2,374)	15,440	(11,817)	1,249
Accumulated other comprehensive income (loss) as of September 30, 2022	$ (17,165)	$ 24,457	$ (18,384)	$ (11,092)

(1) These accumulated other comprehensive income components are included in the computation of net periodic pension cost.

Note 18. Long-term Obligations

The following table sets for the components of Long-term obligations as of September 30, 2021 and 2022.

	September 30, 2021	September 30, 2022
Finance lease obligations	$ 7,613	$ 7,384
Environmental post-closure monitoring and maintenance activities	566	407
Long-term disability	231	210
Deferred dividends	210	199
Less amounts due within one year	(319)	(352)
Long-term obligations (less current portion)	$ 8,301	$ 7,848

Note 19. Leases

On October 1, 2019, the Company adopted ASU 2016-02, *Leases (Topic 842)*. This new guidance requires that a lessee recognize assets and liabilities on the balance sheet for all leases with a lease term of more than twelve months, with the result being the recognition of a right of use asset and a lease liability. The Company adopted the provisions of ASU 2016-02 in the first quarter of fiscal 2020 using the modified retrospective transition method, which did not require the Company to adjust comparative periods. The Company's right-of-use assets ("ROU") and lease liabilities are recognized on the lease commencement date in an amount that represents the present value of future lease payments. ROU assets are included in Other assets, and the related lease obligation is included in Operating lease liabilities on the Consolidated Balance Sheets.

Nature of the Leases

The Company has operating and finance leases for buildings, equipment (e.g. trucks and forklifts), vehicles, and computer equipment. Leasing arrangements require fixed payments and also include an amount that is probable will be owed under residual value guarantees, if applicable. Some lease payments also include payments related to purchase or termination options when the lessee is reasonably certain to exercise the option or is not reasonably certain not to exercise the option, respectively. The leases have remaining terms of 1 to 15 years.

For all leases with an initial expected term of more than 12 months, the Company recorded, at the adoption date of ASC 842 or lease commencement date for leases entered into after the adoption date, a lease liability, which is the lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and a right-of-use asset, which is an asset that represents the lessee's right to use, or to control the use of, a specified asset for the lease term. The Company utilizes its collateralized incremental borrowing rate commensurate to the lease term as the discount rate for its leases, unless the Company can specifically determine the lessor's implicit rate.

On January 1, 2015, the Company entered into a finance lease agreement for the building that houses the assets and operations of LaPorte Custom Metal Processing (LCMP). The leased asset and obligation are recorded at the present value of the minimum lease payments. The asset is included in Property, plant and equipment, net on the Consolidated Balance Sheet and is depreciated over the 20-year lease term. The long term component of the finance lease obligation is included in Long term obligations.

The Company entered into a twenty-year "build-to-suit" lease for a building that houses the assets and operations of the service center located in LaPorte, Indiana that was relocated from Lebanon, Indiana. During the first quarter of fiscal 2017, the Company took occupancy of the building. The Company retained substantially all of the construction risk and was deemed to be the owner of the facility for accounting purposes, even though it is not the legal owner. Construction costs incurred relative to the buildout of the facility of approximately $4,100 are included in Property, plant and equipment, net on the Consolidated Balance Sheet and depreciated over the 20-year lease term. The Company accounts for the related build-to-suit liability as a financing obligation.

Significant Judgments and Assumptions

Determination of Whether a Contract Contains a Lease

The Company determines whether a contract is or contains a lease at the inception of the contract. The contract is or contains a lease if the contract conveys the right to control the use of identified assets for a period of time in exchange for consideration. The Company generally must also have the right to obtain substantially all of the economic benefits from use of the property, plant, and equipment and have the right to direct its use.

Practical Expedients (Policy Elections)

The Company elected certain practical expedients and transition relief, including the short-term lease recognition exemption, which excludes leases with a term of 12 months or less from recognition on the balance sheet, recognizing lease components and non-lease components together as a single lease component, and the transition relief package which, among other things, includes not reassessing the lease classification or whether a contract is or contains a lease.

The following table sets forth the components of the Company's lease cost for the year ended September 30, 2021 and 2022.

	September 30, 2021	September 30, 2022
Finance lease cost:		
Amortization of right of use asset	$ 430	$ 430
Interest on lease liabilities	806	784
Total finance lease cost	$ 1,236	$ 1,214
Operating lease cost	$ 1,687	$ 1,100
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flows from finance leases	806	784
Operating cash flows from operating leases	1,687	1,100
Financing cash flows from finance leases	195	228
Total cash paid for amounts included in measurement of lease liabilities	$ 2,688	$ 2,112

Lease costs associated with short term leases are not material.

The following table sets forth the Company's right of use assets and lease liabilities as of September 30, 2021 and 2022.

	September 30, 2021	September 30, 2022
Finance lease assets (included in Property, plant and equipment, net)	$ 6,218	$ 5,643
Operating right of use lease assets (included in Other assets)	$ 1,494	$ 1,085
Finance lease liabilities		
Accrued expenses	$ 228	$ 265
Long-term obligations (less current portion)	7,385	7,119
Total Finance lease liabilities	$ 7,613	$ 7,384
Operating lease liabilities	$ 1,494	$ 1,085

Operating lease payments due within one year are recorded in Accrued expenses on the Consolidated Balance Sheet.

	September 30, 2021	September 30, 2022
Weighted average lease term (Years)		
Finance leases	14.1	13.1
Operating leases	2.5	3.0
Weighted average discount rate		
Finance leases	10.32 %	10.32 %
Operating leases	5.25 %	5.25 %

The following is a table of future minimum lease payments during each fiscal year under operating and finance leases and the present value of the net minimum lease payments as of September 30, 2022.

Future minimum lease payments	Finance Leases	Operating Leases
2023	$ 1,024	$ 507
2024	1,032	381
2025	1,037	154
2026	1,044	82
2027	1,049	62
Thereafter	8,408	—
Total minimum lease payments	13,594	1,186
Less: amount representing interest	(6,210)	(101)
Present value of net minimum lease payments	$ 7,384	$ 1,085

Note 20. Foreign Currency Forward Contracts

The Company enters into foreign currency forward contracts with the purpose of reducing income statement volatility resulting from foreign currency denominated transactions. The Company has not designated the contacts as hedges; therefore, changes in fair value are recognized in earnings. All of these contracts are designed to be settled within the same fiscal quarter they are entered into and, accordingly, as of September 30, 2020, 2021 and 2022, there are no contracts that remain unsettled. As a result, there is no impact to the balance sheet as of September 30, 2021 or September 30, 2022. Foreign exchange contract gains and losses are recorded within Selling, General and Administrative expenses on the Consolidated Statements of Operations along with foreign currency transactional gains and losses as follows.

	Year Ended September 30, 2020	Year Ended September 30, 2021	Year Ended September 30, 2022
Foreign currency transactional gain (loss)	$ (567)	$ (42)	$ 4,393
Foreign exchange forward contract gain (loss)	(273)	(532)	(6,066)
Net gain (loss) included in selling, general and administrative expense	$ (840)	$ (574)	$ (1,673)

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

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the U.S. Securities and Exchange Commission, including to ensure that information required to be disclosed by the Company that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive and financial officers, as appropriate to allow timely decisions regarding required disclosure. Pursuant to Rule 13a-15(b) of the Exchange Act the Company has performed, under the supervision and with the participation of the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, an evaluation of the effectiveness of the Company's disclosure controls and procedures as of the end of the period covered by this report. Based upon that evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of September 30, 2022.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended September 30, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Annual Report on Internal Control Over Financial Reporting

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting (as defined by Exchange Act rules 13a-15(f) and 15d-15(f)) for the Company. With the participation of the Chief Executive Officer and Chief Financial Officer, management conducted an evaluation of the effectiveness of the Company's internal control over financial reporting based on the framework and criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations (COSO) of The Treadway Commission (2013). Based on the Company's assessment, management has concluded that, as of September 30, 2022, the Company's internal control over financial reporting is effective based on those criteria.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. 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.

The Company's effectiveness of internal control over financial reporting as of September 30, 2022 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in its attestation report which is included herein.

Michael L. Shor
President & Chief Executive Officer
November 17, 2022

Daniel W. Maudlin
Vice President of Finance and Chief Financial Officer
November 17, 2022

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance

The information included under the caption "Business—Executive Officers of the Company" in this Annual Report on Form 10-K, and under the captions "Election of Directors", "Corporate Governance—Code of Ethics", "Corporate Governance—Corporate Governance Committee and Director Nominations", "Corporate Governance—Board Committee Structure", "Corporate Governance—Family Relationships" and "Corporate Governance—Independence of the Board of Directors and Committee Members" in the Proxy Statement to be issued in connection with the 2023 meeting of the Company's stockholders is incorporated herein by reference.

Item 11. Executive Compensation

The information included under the captions "Executive Compensation", "Corporate Governance—Compensation Committee Interlocks and Insider Participation" and "Corporate Governance—Director Compensation Program" in the Proxy Statement to be issued in connection with the 2023 meeting of the Company's stockholders is incorporated herein by reference in response to this item.

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

The information contained under the captions "Security Ownership of Certain Beneficial Owners" and "Security Ownership of Management" in the Proxy Statement to be issued in connection with the 2023 meeting of the Company's stockholders is incorporated herein by reference in response to this item. For additional information regarding the Company's stock option plans, please see Note 12 in the Notes to Consolidated Financial Statements in this report.

Equity Compensation Plan Information

The following table provides information as of September 30, 2022 regarding shares of the Company's common stock issuable pursuant to its stock option and restricted stock plans:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the second column)
Equity compensation plans approved by security holders[1]	697,220	$ 34.75	578,889 [2]

(1) For a description of the Company's equity compensation plans, see Note 12 to the Consolidated Financial Statements in Item 8.

(2) Includes (i) 216,105 shares of stock options or stock appreciation rights and (ii) 362,784 shares of restricted stock, restricted stock units, performance shares or performance units.

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

The information contained under the caption "Corporate Governance—Independence of Board of Directors and Committee Members" and under "Conflict of Interest and Related Party Transactions" in the Proxy Statement to be issued in connection with the 2023 meeting of the Company's stockholders is incorporated herein by reference in response to this item.

Item 14. Principal Accountant Fees and Services

The information included under the caption "Ratification of the Appointment of Independent Registered Public Accounting Firm" in the Proxy Statement to be issued in connection with the 2023 meeting of the Company's stockholders is incorporated herein by reference in response to this item.

Part IV

Item 15. Exhibits and Financial Statement Schedules

(a) *Documents filed as part of this Report.*

1. *Financial Statements:*

   The Consolidated Financial Statements of Haynes International, Inc. and its subsidiaries are set forth under Item 8 in this Annual Report on Form 10-K.

2. *Financial Statement Schedules:*

   Financial Statement Schedules are omitted as they are not required, are not applicable or the information is shown in the Notes to the Consolidated Financial Statements.

3. *Exhibits:*

   The following Index to Exhibits sets forth the exhibits filed or furnished as part of this Annual Report on Form 10-K.

INDEX TO EXHIBITS

Exhibit Number	Description
3.1	Second Restated Certificate of Incorporation of Haynes International, Inc. (incorporated by reference to Exhibit 3.1 to the Haynes International, Inc. Registration Statement on Form S-1, Registration No. 333-140194).
3.2	Amended and Restated By-laws of Haynes International, Inc. (incorporated by reference to Exhibit 3.2 to the Haynes International, Inc. Quarterly Report on Form 10-Q filed May 3, 2018).
4.1	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.01 to the Haynes International, Inc. Quarterly Report on Form 10-Q filed February 8, 2010).
4.2	Description of Registrant's Securities (incorporated by reference to Exhibit 4.2 to the Haynes International, Inc. Annual Report on Form 10-K filed November 18, 2021).
10.1+	Form of Termination Benefits Agreements by and between Haynes International, Inc. and certain of its employees, conformed to give effect to all amendments thereto through September 30, 2011 (incorporated by reference to Exhibit 10.1 to the Company's Annual Report on Form 10-K filed November 17, 2011).
10.2+	Form of Director Indemnification Agreement between Haynes International, Inc. and certain of its directors named in the schedule to the Exhibit (incorporated by reference to Exhibit 10.21 to the Haynes International, Inc. Registration Statement on Form S-1, Registration No. 333-140194).
10.3	Conversion Services Agreement by and between the Company and Titanium Metals Corporation, dated November 17, 2006 (incorporated by reference to Exhibit 10.22 to the Haynes International, Inc. Registration Statement on Form S-1, Registration No. 333-140194). Portions of this exhibit have been omitted pursuant to a request for confidential treatment and filed separately with the Securities and Exchange Commission.
10.4	Access and Security Agreement by and between the Company and Titanium Metals Corporation, dated November 17, 2006 (incorporated by reference to Exhibit 10.23 to the Haynes International, Inc. Registration Statement on Form S-1, Registration No. 333-140194).
10.5+	Summary of 2022 Management Incentive Plan (incorporated by reference to Item 5.02 of the Haynes International, Inc. Form 8-K filed November 30, 2021).
10.6+	Haynes International, Inc. 2016 Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 to the Haynes International, Inc. Current Report on Form 8-K filed March 7, 2016).
10.7+	Form of Restricted Stock Award Agreement between Haynes International, Inc. and certain of its directors, issued pursuant to the Haynes International, Inc. 2016 Incentive Compensation Plan (incorporated by reference to Exhibit 10.22 to the Haynes International, Inc. Annual Report on Form 10-K filed November 16, 2017).

Exhibit Number	Description
10.8+	Form of Performance Share Award Agreement between Haynes International, Inc. of certain of its officers, issued pursuant to the Haynes International, Inc. 2016 Incentive Compensation Plan (incorporated by reference to Exhibit 10.23 to the Haynes International, Inc. Annual Report on Form 10-K filed November 16, 2017).
10.9+	Form of Non-Qualified Stock Option Agreement between Haynes International, Inc. and certain of its officers, issued pursuant to the Haynes International, Inc. 2016 Incentive Compensation Plan (incorporated by reference to Exhibit 10.24 to the Haynes International, Inc. Annual Report on Form 10-K filed November 16, 2017).
10.10+	Form of Restricted Stock Award Agreement between Haynes International, Inc. and certain of its officers and other employees, issued pursuant to the Haynes International, Inc. 2016 Incentive Compensation Plan (incorporated by reference to Exhibit 10.25 to the Haynes International, Inc. Annual Report on Form 10-K filed November 16, 2017).
10.11+	Form of Indemnification Agreement between the Company and certain of its officers (incorporated by reference to Exhibit 10.24 the Haynes International Annual Report on Form 10K filed November 15, 2018).
10.12+	Executive Employment Agreement, effective as of September 1, 2018, by and between the Company and Michael L. Shor (incorporated by reference to Exhibit 10.25 to the Haynes International, Inc. Annual Report on Form 10-K filed November 15, 2018).
10.13+	Amendment No. 1 to Executive Employment Agreement between Haynes International, Inc. and Michael L. Shor (incorporated by reference to Exhibit 99.1 to the Current Report on Form 8-K filed January 13, 2022).
10.14+	Form of Amendment No 1 to Termination Benefits Agreements with the Company's Named Executive Officers (incorporated by reference to Exhibit 99.2 to the Current Report on Form 8-K filed January 13, 2022)
10.15+	Haynes International, Inc. 2020 Incentive Compensation Plan (incorporated by reference to Exhibit 99.1 to the Haynes International, Inc. Current Report on Form 8-K filed February 27, 2020).
10.16+	Amendment No. 1 to Haynes International, Inc. 2020 Incentive Compensation Plan (incorporated by reference to Appendix A to the Company's Definitive Proxy Statement for the 2022 Annual Meeting of Stockholders filed January 21, 2022).
10.17+	Form of Restricted Stock Award Agreement between Haynes International, Inc. and certain of its directors, issued pursuant to the Haynes International, Inc. 2020 Incentive Compensation (incorporated by reference to Exhibit 10.18 to the Haynes International, Inc. Annual Report on Form 10-K filed November 18, 2021).
10.18+	Form of Performance Share Award Agreement between Haynes International, Inc. and certain of its officers, issued pursuant to the Haynes International, Inc. 2016 Incentive Compensation (incorporated by reference to Exhibit 10.19 to the Haynes International, Inc. Annual Report on Form 10-K filed November 18, 2021).
10.19+	Form of Non-Qualified Stock Option Agreement between Haynes International, Inc. and certain of its officers, issued pursuant to the Haynes International, Inc. 2016 Incentive Compensation Plan (incorporated by reference to Exhibit 10.20 to the Haynes International, Inc. Annual Report on Form 10-K filed November 18, 2021).
10.20+	Form of Restricted Stock Award Agreement between Haynes International, Inc. and certain of its officers and other employees, issued pursuant to the Haynes International, Inc. 2016 Incentive Compensation Plan (incorporated by reference to Exhibit 10.21 to the Haynes International, Inc. Annual Report on Form 10-K filed November 18, 2021).
10.21	Credit Agreement, dated as of October 19, 2020, by and among Haynes International, Inc., the Lenders party thereto and JPMorgan Chase Bank, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.1 to the Haynes International, Inc. Current Report on Form 8-K filed October 20, 2020).
10.22	Amendment No. 1 to the Credit Agreement, dated as of August 30, 2022, by and among Haynes International, Inc., the Lenders party thereto and JPMorgan Chase Bank, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.1 to the Haynes International, Inc. Current Report on Form 8-K filed September 2, 2022).
21.1	Subsidiaries of the Registrant (incorporated by reference to Exhibit 21.1 to the Haynes International, Inc. Annual Report on Form 10-K filed November 15, 2018).
23.1*	Consent of Deloitte & Touche LLP.
31.1*	Rule 13a-14(a)/15d-4(a) Certification of Chief Executive Officer
31.2*	Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer
32.1**	Section 1350 Certifications

Exhibit Number	Description
101*	The following materials from the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2022 formatted in Inline Extensible Business Reporting Language (iXBRL): (i) the Consolidated Balance Sheets; (11) the Consolidated Statements of Operations; (iii) the Consolidated Statements of Comprehensive Income (Loss); (iv) the Consolidated Statements of Stockholders Equity; (v) the Consolidated Statements of Cash Flows; and (vi) related notes.
104*	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Filed herewith.
** Furnished herewith.
\+ Denotes management contract or compensation plan, contract or arrangement.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

HAYNES INTERNATIONAL, INC.

By: /s/ MICHAEL L. SHOR
Michael L. Shor
President and Chief Executive Officer
Date: November 17, 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/ MICHAEL L. SHOR Michael L. Shor	President and Chief Executive Officer; Director (Principal Executive Officer)	November 17, 2022
/s/ DANIEL W. MAUDLIN Daniel W. Maudlin	Vice President of Finance and Chief Financial Officer (Principal Financial Officer)	November 17, 2022
/s/ DAVID S. VAN BIBBER David S. Van Bibber	Controller and Chief Accounting Officer (Principal Accounting Officer)	November 17, 2022
/s/ ROBERT H. GETZ Robert H. Getz	Chairman of the Board, Director	November 17, 2022
/s/ DONALD C. CAMPION Donald C. Campion	Director	November 17, 2022
/s/ DAWNE S. HICKTON Dawne S. Hickton	Director	November 17, 2022
/s/ LARRY O. SPENCER Larry O. Spencer	Director	November 17, 2022