PREFORMED LINE PRODUCTS CO
Form 10-K
March 08, 2019

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C.20549

FORM 10-K

Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended December 31, 2018

Commission file number 0-31164

Preformed Line Products Company

(Exact name of registrant as specified in its charter)

Ohio	34 0676895
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

660 Beta Drive

Mayfield Village, Ohio	44143
(Address of Principal Executive Office)	(Zip Code)

(440) 461 5200
(Registrant's telephone number, including area code)

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

Title of each class	Name of each exchange on which registered
Common Shares, $2 par value per share	NASDAQ

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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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 definitions of "accelerated filer," "large 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 is a shell company (as defined in Rule 12b-2 of the Exchange Act). 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

The aggregate market value of voting and non-voting common shares held by non-affiliates of the registrant as of June 30, 2018 was $219,388,500 based on the closing price of such common shares, as reported on the NASDAQ National Market System. As of March 4, 2019, there were 5,062,324 common shares of the Company ($2 par value) outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Definitive Proxy Statement for the Annual Meeting of Shareholders to be held May 7, 2019 are incorporated by reference into Part III, Items 10, 11, 12, 13 and 14.

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Forward-Looking Statements

This Form 10-K and other documents filed with the Securities and Exchange Commission ("SEC") contain forward-looking statements regarding Preformed Line Products Company's (the "Company") and the Company's management's beliefs and expectations. As a general matter, forward-looking statements are those focused upon future plans, objectives or performance (as opposed to historical items) and include statements of anticipated events or trends and expectations and beliefs relating to matters not historical in nature. Such forward-looking statements are subject to uncertainties and factors relating to the Company's operations and business environment, all of which are difficult to predict and many of which are beyond the Company's control. Such uncertainties and factors could cause the Company's actual results to differ materially from those matters expressed in or implied by such forward-looking statements.

The following factors, among others, could affect the Company's future performance and cause the Company's actual results to differ materially from those expressed or implied by forward-looking statements made in this report:

- The overall demand for cable anchoring and control hardware for electrical transmission and distribution lines on a worldwide basis, which has a slow growth rate in mature markets such as the United States ("U.S"), Canada, Australia and Western Europe and may grow slowly or experience prolonged delay in developing regions despite expanding power needs;
- The potential impact of the global economic condition on the Company's ongoing profitability and future growth opportunities in the Company's core markets in the U.S. and other foreign countries where the financial situation is expected to be similar going forward;
- The ability of the Company's customers to raise funds needed to build the facilities their customers require;
- Technological developments that affect longer-term trends for communication lines, such as wireless communication;
- The decreasing demand for product supporting copper-based infrastructure due to the introduction of products using new technologies or adoption of new industry standards;
- The Company's success at continuing to develop proprietary technology and maintaining high quality products and customer service to meet or exceed new industry performance standards and individual customer expectations;
- The Company's success in strengthening and retaining relationships with the Company's customers, growing sales at targeted accounts and expanding geographically;
- The extent to which the Company is successful at expanding the Company's product line or production facilities into new areas or implementing efficiency measures at existing facilities;
- The effects of fluctuation in currency exchange rates upon the Company's foreign subsidiaries' operations and reported results from international operations, together with non-currency risks of investing in and conducting significant operations in foreign countries, including those relating to political, social, economic and regulatory factors;
- The Company's ability to identify, complete, obtain funding for and integrate acquisitions for profitable growth;
- The potential impact of consolidation, deregulation and bankruptcy among the Company's suppliers, competitors and customers and of any legal or regulatory claims;
- The relative degree of competitive and customer price pressure on the Company's products;
- The cost, availability and quality of raw materials required for the manufacture of products and any tariffs that may be associated with the purchase of these products;
- Strikes, labor disruptions and other fluctuations in labor costs;
- Changes in significant government regulations affecting environmental compliances or other litigation matters;
- Security breaches or other disruptions to the Company's information technology structure;
- The telecommunication market's continued deployment of Fiber-to-the-Premises; and
- Those factors described under the heading "Risk Factors" on page 12.

In light of these risks and uncertainties, the Company cautions you not to place undue reliance on these forward-looking statements. Any forward-looking statements that the Company makes in this report speaks only as of the date of such statement, and the Company undertakes no obligation to update any forward-looking statement or to publicly announce the results of any revision to any of those statements to reflect future events or developments. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless specifically expressed as such, and should only be viewed as historical data.

Part I

Item 1. Business

Background

Preformed Line Products Company and its subsidiaries (the "Company") is an international designer and manufacturer of products and systems employed in the construction and maintenance of overhead and underground networks for the energy, telecommunication, cable operators, information (data communication) and other similar industries. The Company's primary products support, protect, connect, terminate and secure cables and wires. The Company also provides solar hardware systems and mounting hardware for a variety of solar power applications. The Company's goal is to continue to achieve profitable growth as a leader in the research, innovation, development, manufacture and marketing of technically advanced products and services related to energy, communications and cable systems and to take advantage of this leadership position to sell additional quality products in familiar markets.

The Company serves a worldwide market through strategically located domestic and international manufacturing facilities. Each of the Company's domestic and international manufacturing facilities have obtained an International Organization of Standardization ("ISO") 9001:2015 Certified Management System Certificate. The ISO 9001:2015 certified management system is a globally recognized certified quality standard for manufacturing and assists the Company in marketing its products throughout the world. The Company's customers include public and private energy utilities and communication companies, cable operators, financial institutions, governmental agencies, contractors and subcontractors, distributors and value-added resellers. The Company is not dependent on a single customer or small group of customers. No single customer accounts for more than 10% of the Company's consolidated revenues.

The Company's products include:

- Energy Products
- Communications Products
- Special Industries Products

Energy Products are used in the energy, communications, cable and special industries (i.e., metal building, tower and antenna industries, the agriculture and arborist industries, and marine systems industry) to support, protect, terminate and secure both power conductor and communication cables and to control cable dynamics (e.g., vibration). Formed wire products are based on the principle of forming a variety of stiff wire materials into a helical (spiral) shape. Advantages of using the Company's helical formed wire products are that they are economical, dependable and easy to use. The Company introduced formed wire products to the power industry over 70 years ago and such products enjoy an almost universal acceptance in the Company's markets. Related hardware products include hardware for supporting and protecting transmission conductors, spacers, spacer-dampers, stockbridge dampers, corona suppression devices and various compression fittings for dead-end applications. Energy products were approximately 66%, 69% and 67% of the Company's revenues in 2018, 2017 and 2016, respectively.

Communications Products, including splice cases, are used to protect fixed line communication networks, such as copper cable or fiber optic cable, from moisture, environmental hazards and other potential contaminants. Communications products were approximately 21%, 22% and 21% of the Company's revenues in 2018, 2017 and 2016, respectively.

Special Industries Products include data communication cabinets, hardware assemblies, pole line hardware, resale products, underground connectors, solar hardware systems, guy markers, tree guards, fiber optic cable markers, pedestal markers and urethane products. They are used by energy, renewable energy, communications, cable and special industries for various applications and are defined as products that complement the Company's core line offerings. Special industries products were approximately 13%, 9% and 12% of the Company's revenues in 2018, 2017 and 2016, respectively.

Corporate History

The Company was incorporated in Ohio in 1947 to manufacture and sell helically shaped "armor rods" which are sets of stiff helically shaped wires applied on an electrical conductor at the point where they are suspended or held. Thomas F. Peterson, the Company's founder, developed and patented a unique method to manufacture and apply these armor rods to protect electrical conductors on overhead power lines. Over the years, Mr. Peterson and the Company developed, tested, patented, manufactured and marketed a variety of helically shaped products for use by the electrical and telephone industries. Although all of Mr. Peterson's patents have now expired, those patents served as the nucleus for licensing the Company's formed wire products abroad.

The success of the Company's formed wire products in the U.S. led to expansion abroad. The first international license agreement was established in the mid-1950s in Canada. In the late 1950s, the Company's products were being sold through joint ventures and licensees in Canada, England, Germany, Spain and Australia. Additionally, the Company began export operations and promoted products into other selected offshore markets. The Company continued its expansion program, bought out most of the original licensees, and, by the mid-1990s, had complete ownership of operations in Australia, Brazil, Canada, Great Britain, South Africa and Spain. By 2002, it also had complete ownership of operations in Mexico and China. The Company's international subsidiaries have the necessary infrastructure (i.e., manufacturing, engineering, marketing and general management) to support local business activities. Each is staffed with local personnel to ensure that the Company is well versed in local business practices, cultural constraints, technical requirements and the intricacies of local client relationships.

In 1968, the Company expanded into the underground telecommunications field by its acquisition of the Smith Company located in California. The Smith Company had a patented line of buried closures and pressurized splice cases. These closures and splice cases protect copper cable openings from environmental damage and degradation. The Company continued to build on expertise acquired through the acquisition of the Smith Company and in 1995 introduced the highly successful COYOTE® Closure line of products. Since 1995, 14 domestic and three international patents have been granted to the Company on the COYOTE Closure. The earliest COYOTE Closure patent was filed April 1995 and expired in April 2015.

In 2007, the Company acquired 83.74% of Belos SA (Belos), located in Bielsko-Biala, Poland. Belos is a manufacturer and supplier of fittings for various voltage power networks. This acquisition complemented the Company's existing line of energy products. From 2008 to 2010, the Company acquired the remaining outstanding shares of Belos.

In 2009, the Company acquired the Dulmison business from Tyco Electronics Group S.A. (Tyco Electronics), which included both the acquisition of equity of certain Tyco Electronics entities and the acquisition of assets from other Tyco Electronics entities. Dulmison was a leader in the supply and manufacturer of electrical transmission and distribution products. Dulmison designed, manufactured and marketed pole line hardware and vibration control products for the global electrical utility industry. Dulmison had operations in Australia, Thailand, Indonesia, Malaysia, Mexico and the United States. The Dulmison business has been fully integrated into the Company's core businesses.

In 2010, the Company acquired Electropar Limited (Electropar), a New Zealand corporation. Electropar designs, manufactures and markets pole line and substation hardware for the global electrical utility industry. Electropar is based in New Zealand with a subsidiary operation in Australia. The acquisition has strengthened the Company's position in the power distribution, transmission and substation hardware markets and expanded the Company's presence in the Asia-Pacific region.

In 2014, the Company acquired Helix Uniformed Limited (Helix), located in Montreal, Quebec, Canada. Helix designs, manufacturers and markets helical products and spacer dampers for the electrical utility industry. The acquisition has diversified the Company's business in Canada, extended its customers access in Canadian markets, expanded its manufacturing footprint and enhanced its engineering capabilities.

The Company's World headquarters is located at 660 Beta Drive, Mayfield Village, Ohio, U.S.A. 44143.

Business

The demand for the Company's products comes primarily from new, maintenance and repair construction for the energy (including solar), telecommunication, data communication and special industries. The Company's customers use many of the Company's products, including formed wire products, to revitalize the aging outside plant infrastructure. Many of the Company's products are used on a proactive basis by the Company's customers to reduce and prevent lost revenue. A single malfunctioning line could cause the loss of thousands of dollars per hour for a power or communication customer. A malfunctioning fiber cable could also result in substantial revenue loss to the Company's customers. Repair construction by the Company's customers generally occurs in the case of emergencies or natural disasters, such as hurricanes, tornados, earthquakes, floods or ice storms. Under these circumstances, the Company quickly provides the repair products to customers.

The Company has adapted the formed wire products' helical technology for use in a wide variety of fiber optic cable applications that have special requirements. The Company's formed wire products are uniquely qualified for these applications due to the gentle gripping over a greater length of the fiber cable. This is an advantage over traditional pole line hardware clamps that compress the cable to the point of possible fatigue and optical signal deterioration.

The Company's protective closures and splice cases are used to protect cable from moisture, environmental hazards and other potential contaminants. The Company's splice cases are easily re-enterable closures that allow utility maintenance workers access to the cables located inside the closure to repair or add communications services. Over the years, the Company has made many significant improvements in splice cases that have greatly increased its versatility and application in the market place. The Company also designs and markets custom splice cases to satisfy specific customer requirements. This has allowed the Company to remain a strong partner with several primary customers and has earned the Company the reputation as a responsive and reliable supplier.

Fiber optic cable was first deployed in the outside plant environment in the early 1980s. Through fiber optic technologies, a much greater amount of both voice and data communication can be transmitted reliably. In addition, this technology solved the cable congestion problem that the large count copper cable was causing in underground, buried and aerial applications. The Company developed and adapted copper closures for use in the emerging fiber optic world. In the late 1980s, the Company developed a series of splice cases designed specifically for fiber optic application. In the mid-1990s, the Company developed its plastic COYOTE® Closure and has since expanded the product line to address Fiber-to-the-Premise (FTTP) applications. The COYOTE Closure is an example of the Company developing a new line of proprietary products to meet the changing needs of its customers.

The Company also designs and manufactures data communication cabinets and enclosures for data communication networks, offering a comprehensive line of fiber optic cross-connect systems. The product line enables reliable, high-speed transmission of data over customers' local area networks.

In 2007, the Company expanded into the renewable energy sector. It provides a comprehensive line of mounting hardware for a variety of solar power applications including residential roof mounting, commercial roofing systems, utility scale ground-mount, top of pole mounting and customized solutions.

Markets

The Company markets its products to the energy, telecommunication, cable, data communication and special industries. While rapid changes in technology have blurred the distinctions between telephone, cable, and data communication, the energy industry is clearly distinct. The Company's role in the energy industry is to supply formed wire products and related hardware used with the electrical conductors, cables and wires that transfer power from the generating facility to the ultimate user of that power. Formed wire products are used to support, protect, terminate and secure both power conductor and communication cables and to control cable dynamics.

Electric Utilities - Transmission. The electric transmission grid is the interconnected network of high voltage aluminum conductors used to transport large blocks of electric power from generating facilities to distribution networks. Currently, there are three major power grids in the U.S.: the Eastern Interconnect, the Western Interconnect and the Texas Interconnect. Virtually all electrical energy utilities are connected with at least one other utility by one of these major grids. The Company believes that transmission grids have been neglected throughout much of the U.S. With demand for power now exceeding supply in some areas, the need for the movement of bulk power from the energy-rich areas to the energy-deficient areas means that new transmission lines will likely be built and many existing lines will likely be refurbished. Connecting renewable energy sources to the grid should also continue to attract new investment to fund transmission infrastructure projects in the future. The Company believes that this may generate opportunities for the Company's products in this market over at least the next several years. In addition, increased construction of international transmission grids is occurring in many regions of the world. However, consolidations in the markets that the Company services with increased global competition, as well as stagnant economic conditions, limited government funding and lower energy prices, may also have an adverse impact on the Company's sales.

Electric Utilities - Distribution. The distribution market includes those utilities that distribute power from a substation where voltage is reduced to levels appropriate for the consumer. Unlike the transmission market, distribution is still handled primarily by local electric utilities. These utilities are motivated to reduce cost in order to maintain and enhance their profitability. The Company believes that its growth in the distribution market will be achieved primarily as a result of incremental gains in market share driven by emphasizing the Company's quality products and service over price. Internationally, particularly in the developing regions, there is increasing political pressure to extend the availability of electricity to additional populations. Through its global network of factories and sales offices, the Company is prepared to take advantage of this new growth in construction.

Renewable Energy. The renewable energy market includes residential consumers, commercial businesses, off-grid operators, and utility companies that have an interest in alternative energy sources. Environmental concerns along with federal, state and local utility incentives have fueled demand for renewable energy systems including solar, wind and biofuel. While low prices of traditional energy sources have slowed or stalled demand in some areas, the industry continues to grow as advancements in technology lead to greater efficiencies which drive down overall system costs. The Company currently provides hardware solutions and system design for solar power applications. The Company markets and sells these products and services to end-users, distributors, installers and integrators.

Communication and Cable. Major developments, including growing competition between the cable and communications industries and increasing overall demand for high-speed communication services, have led to a changing regulatory and competitive environment in many markets throughout the world. The deployment of new access networks and improvements to existing networks for advanced applications continues to gain momentum.

Cable operators, local communication operators and power utilities are building, rebuilding or upgrading signal delivery networks in developed countries. These networks are designed to deliver video and voice transmissions and provide Internet connectivity to individual residences and businesses. Operators deploy a variety of network technologies and architectures to carry broadband and narrowband signals. These architectures are constructed of electronic hardware connected via coaxial cables, copper wires or optical fibers. The Company manufactures closures that these industries use to securely connect and protect these vital networks.

As critical components of the outdoor infrastructure, closures provide protection against weather and vandalism, and permit technicians who maintain and manage the system ready access to the devices. Cable operators and local telephone network operators place great reliance on manufacturers of protective closures because any material damage to the signal delivery networks is likely to disrupt communication services. In addition to closures, the Company supplies the communication and cable industry with its formed wire products to hold, support, protect and terminate the copper wires and cables and the fiber optic cables used by that industry to transfer voice, video or data signals.

The industry has developed technological methods to increase the usage of copper-based products through high-speed digital subscriber lines (DSLs). The popularity of these services, the regulatory environment and the increasingly fierce competition between communications and cable operators has driven the move toward building out the “last mile” in fiber optic networks. FTTP technology supports the next wave in broadband innovation by carrying fiber optic technology into homes and businesses. The Company has been actively developing products that address this market.

Data Communication. The data communication market is driven by the continual demand for increased bandwidth. Growing Internet Service Providers (ISPs), construction in Wide Area Networks (WANs) and demand for products in the workplace are all key elements to the increased demand for the racking and cabinet products offered by the Company. The Company’s products are sold to a number of categories of customers including, (i) ISPs, (ii) large companies and organizations which have their own local area network for data communication, and (iii) distributors of structured cabling systems and components for use in the above markets.

Special Industries. The Company’s formed wire products are also used in other industries which require a method of securing or terminating cables, including the metal building, tower and antenna industries, the agriculture and arborist industries, and various applications within the marine systems industry. Products other than formed wire products are also marketed to other industries. For example, the Company’s urethane capabilities allow it to market products to the light rail industry. The Company continues to explore new and innovative uses of its manufacturing capabilities; however, these markets remain a small portion of overall consolidated sales.

International Operations

The international operations of the Company are essentially the same as its domestic (PLP-USA) business. The Company manufactures similar types of products in its international plants as are sold domestically, sells to similar types of customers and faces similar types of competition (and in some cases, the same competitors). Sources of supply of raw materials are not significantly different internationally. See Note M in the Notes to Consolidated Financial Statements for information and financial data relating to the Company's international operations that represent reportable segments.

While a number of the Company's international plants are in developed countries, the Company believes it has strong market opportunities in developing countries where the need for the transmission and distribution of electrical power is significant, although the pace of this development may remain slow. In addition, as the need arises, the Company is prepared to acquire or establish new manufacturing facilities abroad.

Sales and Marketing

Domestically and internationally, the Company markets its products through a direct sales force and manufacturing representatives. The direct sales force is employed by the Company and works with manufacturers' representatives, as well as key direct accounts and distributors who also buy and resell the Company's products. The manufacturer's representatives are independent organizations that represent the Company as well as other complimentary product lines. These organizations are paid a commission based on the sales amount they generate.

Research and Development

The Company is committed to providing technical leadership through scientific research and product development in order to continue to expand the Company's position as a supplier to the communications and power industries. Research is conducted on a continuous basis using internal experience in conjunction with outside professional expertise to develop state-of-the-art materials for several of the Company's products. These products capitalize on cost-efficiency while offering exacting mechanical performance that meets or exceeds industry standards. The Company's research and development activities have resulted in numerous patents being issued to the Company (see "Patents and Trademarks" below).

Early in its history, the Company recognized the need to understand the performance of its products and the needs of its customers. To that end, the Company developed a 29,000 square foot Research and Engineering Center located at its corporate headquarters in Mayfield Village, Ohio. In 2013, the Company expanded its Research and Engineering Center by an additional 8,000 square feet. Using the Research and Engineering Center, engineers and technicians simulate a wide range of external conditions encountered by the Company's products to ensure quality, durability and performance. The work performed in the Research and Engineering Center includes advanced studies and experimentation with various forms of vibration and environmental changes. This work has contributed significantly to the collective knowledge base of the industries the Company serves and is the subject matter of many papers and seminars presented to these industries.

The Company believes that its Research and Engineering Center is one of the most sophisticated in the world in its specialized field. The Research and Engineering Center also has an advanced prototyping technology machine on-site to develop models of new designs where intricate part details are studied prior to the construction of expensive production tooling. Today, the Company's reputation for vibration testing, tensile testing, fiber optic cable testing, environmental testing, field vibration monitoring and third-party contract testing is a competitive advantage. In addition to testing, the work performed at the Company's Research and Development Center continues to fuel product development efforts. For example, the Company estimates that approximately 14.8% of 2018 revenues were attributed to products developed by the Company in the past five years. In addition, the Company's position in the industry is further reinforced by its long-standing leadership role in many key international technical organizations which are charged with the responsibility of establishing industry-wide specifications and performance criteria, including IEEE (Institute of Electrical and Electronics Engineers), CIGRE (Counsiel Internationale des Grands Reseaux Electriques a Haute Tension), and IEC (International Electromechanical Commission). Research and development costs are expensed as incurred. Research and development costs for new products were $2.4 million in 2018, $2.1 million in 2017 and $2.7 million in 2016.

Patents and Trademarks

The Company applies for patents in the U.S. and other countries, as appropriate, to protect its significant patentable developments. As of December 31, 2018, the Company had in force 40 U.S. patents and 109 international patents in 21 countries and had 13 pending U.S. patent applications and 34 pending international applications. While such domestic and international patents expire from time to time, the Company continues to apply for and obtain patent protection on a regular basis. Patents held by the Company in the aggregate are of material importance in the operation of the Company's business. The Company, however, does not believe that any single patent, or group of related patents, is essential to the Company's business as a whole or to any of its businesses. Additionally, the Company owns and uses a substantial body of proprietary information and numerous trademarks. The Company relies on nondisclosure agreements to protect trade secrets and other proprietary data and technology. As of December 31, 2018, the Company had obtained U.S. registration on 37 trademarks and one trademark application remained pending. International registrations amounted to 242 registrations in 36 countries, with two pending international registrations.

U.S. patents are issued for terms of 20 years beginning with the date of filing of the patent application. Patents issued by international countries generally expire 20 years after filing. U.S. and international patents are not renewable after expiration of their initial term. U.S. and international trademarks are generally perpetual, renewable in 10-year increments upon a showing of continued use. To the knowledge of management, the Company is not subject to any significant allegation or charges of infringement of intellectual property rights by any organization.

In the normal course of business, the Company occasionally makes and receives inquiries with regard to possible patent and trademark infringement. The extent of such inquiries from third parties has been limited generally to verbal remarks to Company representatives. The Company believes that it is unlikely that the outcome of these inquiries will have a material adverse effect on the Company's financial position.

Competition

All of the markets that the Company serves are highly competitive. In each market, the principal methods of competition are price, performance, and service. The Company believes, however, that several factors (described below) provide the Company with a competitive advantage.

- The Company has a strong and stable workforce. This consistent and continuous knowledge base has afforded the Company the ability to provide superior service to the Company's customers and representatives.
- The Company's Research and Engineering Center in Mayfield Village, Ohio and the engineering departments at the Company's subsidiary operations around the world maintain a strong technical support function to develop unique solutions to customer problems.
- The Company is vertically integrated both in manufacturing and distribution and is continually upgrading equipment and processes.
- The Company is sensitive to the marketplace and provides an extra measure of service in cases of emergency, storm damage and other rush situations. This high level of customer service and customer responsiveness is a hallmark of the Company.
- The Company's 26 sales and manufacturing locations ensure close support and proximity to customers worldwide.

Domestically, there are several competitors for formed wire products. Although it has other competitors in many of the countries where it has plants, the Company has leveraged its expertise and is very strong in the global market. The Company believes that it is the world's largest manufacturer of formed wire products for energy and communications markets. However, the Company's formed wire products compete against other pole line hardware products manufactured by other companies.

The Company's primary domestic competitor for pressurized copper closures is Corning. Based on its experience in the industry, the Company believes it maintains a strong market share position.

The fiber optic closure market is one of the most competitive product areas for the Company, with the Company competing against, among others, CommScope Electronics and Corning Cable Systems. There are a number of primary competitors and several smaller niche competitors that compete at all levels in the marketplace. The Company believes that it is one of four leading suppliers of fiber optic closures.

Sources and Availability of Raw Materials

The principal raw materials used by the Company are galvanized wire, stainless steel, aluminum covered steel wire, aluminum rod, plastic resins, glass-filled plastic compounds, neoprene rubbers and aluminum castings. The Company also uses certain other materials such as fasteners, packaging materials and communications cable. The Company believes that it has adequate sources of supply for the raw materials used in its manufacturing processes and it regularly attempts to develop and maintain sources of supply in order to extend availability and encourage competitive pricing of these products.

Most plastic resins are purchased under contracts to stabilize costs and improve delivery performance and are available from a number of reliable suppliers. Wire and aluminum rods are purchased in standard stock diameters and coils under contracts from a number of reliable suppliers. Contracts have firm prices except for fluctuations of base metals and petroleum prices, which result in surcharges when global demand is greater than the available supply.

The Company also relies on certain other manufacturers to supply products that complement the Company's product lines, such as ferrous castings, fiber optic cable and connectors and various metal racks. The Company believes there are multiple sources of supply for these products.

The Company relies on sole source manufacturers for certain raw materials used in production. The current state of economic uncertainty presents a risk that existing suppliers could go out of business. However, there are other potential sources available for these materials, and the Company could relocate the tooling and processes to other manufacturers if necessary.

Raw material costs trended up throughout 2018. The Company expects stable prices on metals and plastics throughout 2019.

Backlog Orders

The Company's backlog was approximately $92.9 million at the end of 2018 and $93.8 million at the end of 2017. All customer orders entered are firm at the time of entry. Substantially all orders are shipped within a two to four-week period unless the customer requests an alternative date.

Seasonality

The Company markets products that are used by utility maintenance and construction crews worldwide. The products are marketed through distributors and directly to end users, who maintain stock to ensure adequate supply for their customers or construction crews. As a result, the Company does not have a wide variation in sales from quarter to quarter.

Environmental

The Company is subject to extensive and changing federal, state, and local environmental laws, including laws and regulations that (i) relate to air and water quality, (ii) impose limitations on the discharge of pollutants into the environment, (iii) establish standards for the treatment, storage and disposal of toxic and hazardous waste, and (iv) require proper storage, handling, packaging, labeling, and transporting of products and components classified as hazardous materials. Stringent fines and penalties may be imposed for noncompliance with these environmental laws. In addition, environmental laws could impose liability for costs associated with investigating and remediating contamination at the Company's facilities or at third-party facilities at which the Company has arranged for the disposal treatment of hazardous materials.

The Company believes it is in compliance in all material respects, with all applicable environmental laws and the Company is not aware of any noncompliance or obligation to investigate or remediate contamination that could reasonably be expected to result in a material liability. The Company does not expect to make any material capital expenditures during 2019 for environmental control facilities. The environmental laws continue to be amended and revised to impose stricter obligations, and compliance with future additional environmental requirements could necessitate capital outlays. However, the Company does not believe that these expenditures will ultimately result in a material adverse effect on its financial position or results of operations. The Company cannot predict the precise effect such future requirements, if enacted, would have on the Company. The Company believes that such regulations would be enacted over time and would affect the industry as a whole.

Employees

At December 31, 2018, the Company had 2,650 employees. Approximately 27% of the Company's employees are located in the U.S.

Available Information

The Company maintains an Internet site at http://www.preformed.com, on which the Company makes available, free of charge, the annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports, as soon as reasonably practicable after the Company electronically files such material with, or furnishes it to, the SEC. The Company's SEC reports can be accessed through the investor relations section of its Internet site. The information found on the Company's Internet site is not part of this or any other report that is filed or furnished to the SEC.

The public may read and copy any materials the Company files with or furnishes to the SEC at the SEC's Public Reference Room at 100 F. Street, NE., Washington, DC 20549. Information on the operation of the Public Reference Room is available by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site that contains reports, proxy and information statements, and other information filed with the SEC by electronic filers. The SEC's Internet site is http://www.sec.gov. The Company also has a link from its Internet site to the SEC's Internet site. This link can be found on the investor relations page of the Company's Internet site.

Item 1A. Risk Factors

Due to the Company's dependency on the energy and telecommunication industries, the Company is susceptible to negative trends relating to those industries that could adversely affect the Company's operating results.

The Company's sales to the energy and telecommunication industries represent a substantial portion of the Company's historical sales. The concentration of revenue in such industries is expected to continue into the foreseeable future. Demand for products to these industries depends primarily on capital spending by customers for constructing, rebuilding, maintaining or upgrading their systems. The amount of capital spending and, therefore, the Company's sales and profitability are affected by a variety of factors, including general economic conditions, access by customers to financing, government regulation, demand for energy and cable services, energy prices and technological factors. As a result, some customers may significantly reduce their spending or may not continue as going concerns, which could have a material adverse effect on the Company's business, operating results and financial condition. In addition, the Company may incur exit-related costs and impairments of goodwill, definite and indefinite-lived intangible assets and property, fixtures and equipment as the Company makes corresponding changes to its business to reflect these changes and uncertainties in the Company's industries and customer demand, and these costs and impairments could have a significant negative impact on the Company's results for the period in which they are incurred. Consolidation presents an additional risk to the Company in that merged customers will rely on relationships with a source other than the Company. Consolidation may also increase the pressure on suppliers, such as the Company, to sell product at lower prices.

The Company's business will suffer if the Company fails to develop and successfully introduce new and enhanced products that meet the changing needs of the Company's customers.

The Company's ability to anticipate changes in technology and industry standards and to successfully develop and introduce new products on a timely basis is a significant factor in the Company's ability to grow and remain competitive. New product development often requires long-term forecasting of market trends, development and implementation of new designs and processes and a substantial capital commitment. The trend toward consolidation of the energy, telecommunication and data communication industries may require the Company to quickly adapt to rapidly changing market conditions and customer requirements. Any failure by the Company to anticipate or respond in a cost-effective and timely manner to technological developments or changes in industry standards or customer requirements, or any significant delays in product development or introduction or any failure of new products to be widely accepted by the Company's customers, could have a material adverse effect on the Company's business, operating results and financial condition as a result of reduced net sales.

The intense competition in the Company's markets, particularly telecommunication, may lead to a reduction in sales and earnings.

The markets in which the Company operates are highly competitive. The level of intensity of competition may increase in the foreseeable future due to anticipated growth in the telecommunication and data communication industries. The Company's competitors in the telecommunication and data communication markets are larger companies with significant influence over the distribution network. The Company may not be able to compete successfully against its competitors, many of which may have access to greater financial resources than the Company. In addition, the pace of technological development in the telecommunication market is rapid and these advances (i.e., wireless, fiber optic network infrastructure, etc.) may adversely affect the Company's ability to compete in this market.

Competitors' introduction of products embodying new technologies or the emergence of new industry standards can render existing products or products under development obsolete or unmarketable and result in lost sales.

The energy and telecommunication industries are characterized by rapid technological change. Satellite, wireless and other communication technologies currently being deployed may represent a threat to copper, coaxial and fiber optic-based systems by reducing the need for wire-line networks. Future advances or further development of these or other new technologies may have a material adverse effect on the Company's business, operating results and financial condition as a result of lost sales.

Price increases or decreased availability of raw materials could result in lower earnings.

The Company's cost of sales may be materially adversely affected by increases in the market prices of the raw materials used in the Company's manufacturing processes. The Company may not be able to pass on price increases in raw materials to the Company's customers through increases in product prices. As a result, the Company's operating results could be adversely affected. In addition, any decrease or delay in the availability of these materials could slow production and delivery to the Company's customers.

The Company's international operations subject the Company to additional business risks that may have a material adverse effect on the Company's business, operating results and financial condition.

International sales account for a substantial portion of the Company's net sales (60%, 61% and 60% in 2018, 2017 and 2016) and the Company expects these sales could increase as a percentage of net sales in the future. Due to its international sales, the Company is subject to the risks of conducting business internationally, including unexpected changes in, or impositions of, legislative or regulatory requirements, which could materially adversely affect U.S. dollar sales or operating expenses, tariffs and other barriers and restrictions, potentially longer payment cycles, greater difficulty in accounts receivable collection, reduced or limited protection of intellectual property rights, potentially adverse taxes and the burdens of complying with a variety of international laws and communications standards. The Company is subject to foreign currency volatility which could materially impact the Company's result, including the impact of hyper-inflationary conditions in certain economies, particularly where exchange controls limit or eliminate the Company's ability to convert from local currency. The Company is also subject to general geopolitical risks, such as political and economic instability, social unrest, terrorism and changes in diplomatic and trade relationships, in connection with its international operations. Additionally. uncertainty relating to the United Kingdom's vote to leave the European Union ("Brexit") could adversely impact the Company. These risks of conducting business internationally may have a material adverse effect on the Company's business, operating results and financial condition.

The Company may not be able to successfully integrate businesses that it may acquire in the future or complete acquisitions on satisfactory terms, which could have a material adverse effect on the Company's business, operating results and financial condition.

A portion of the Company's growth in sales and earnings has been generated from acquisitions. The Company expects to continue a strategy of identifying and acquiring businesses with complementary products. In connection with this strategy, the Company faces certain risks and uncertainties relating to acquisitions. The factors affecting this exposure are in addition to the risks faced in the Company's day-to-day operations. Acquisitions involve a number of special risks, including the risks pertaining to integrating acquired businesses, realizing the benefits of acquired technology and utilizing new personnel. In addition, the Company may incur debt to finance future acquisitions, and the Company may issue securities in connection with future acquisitions that may dilute the holdings of current and future shareholders. Covenant restrictions relating to additional indebtedness could restrict the Company's ability to pay dividends, fund capital expenditures, consummate additional acquisitions and significantly increase the Company's interest expense. Any failure to successfully complete acquisitions or to successfully integrate such strategic acquisitions could have a material adverse effect on the Company's business, operating results and financial condition.

The Company may have interruptions in or lose business due to the uncertainty of the global economy, specifically related to the lack of available funding for the Company's customers.

The demand for the Company's products is significantly affected by the amount of discretionary business and consumer spending, each of which is impacted by the continued uncertainty of the global economy. The Company's operations could be adversely affected by global economic conditions such as recession, political unrest in developing countries, or otherwise. The liquidity and financial position of the Company's customers could also impact their ability to pay in full and/or on a timely basis. This lack of funding could have a negative impact on the Company's results of operations and financial condition.

The Company may be adversely impacted by laws, regulation, and litigation.

The Company is subject to various laws and regulation. For example, extensive environmental regulations related to air and water quality, the discharge of pollutants, the handling of toxic waste and the handling and transport of products and components classified as hazardous impact its daily operations. The introduction of new laws or regulations, or changes in existing laws or regulations, could increase the costs of doing business. At any given time, we may also be subject to litigation or claims related to our products, suppliers, customers, employees, shareholders, distributors, sales representatives, intellectual property or acquisitions, among other things, the disposition of which may have an adverse effect upon our business, financial condition, or results of operation. The outcome of litigation is difficult to assess or quantify. Lawsuits can result in the payment of substantial damages by defendants. If we are required to pay substantial damages and expenses as a result of these or other types of lawsuits, our business and results of operations would be adversely affected. Regardless of whether any claims against us are valid or whether we are liable, claims may be expensive to defend, may cause reputational harm (particularly where any claims relate to significant harm to persons and property) and may divert time and money away from our operations. Insurance may not be available at all or in sufficient amounts to cover any liabilities with respect to these or other matters. A judgment or other liability in excess of our insurance coverage for any claims could adversely affect our business and the results of our operations.

The Company may not be able to successfully manage its intellectual property and may be subject to infringement claims.

The Company relies on a combination of contractual rights and patent, trademark, copyright and trade secret laws to establish and protect its proprietary technology. Third parties may challenge, invalidate, circumvent, infringe or misappropriate the Company's intellectual property, or such intellectual property may not be sufficient to permit the Company to take advantage of current market trends or otherwise to provide competitive advantages, which could result in costly redesign efforts, discontinuance of certain product offerings or other competitive harm. Others, including its competitors may independently develop similar technology, duplicate or design around the Company's intellectual property, and in such cases it could not assert its intellectual property rights against such parties. The Company may also be subject to costly litigation in the event its technology infringes upon or otherwise violate a third party's proprietary rights. Any claim from third parties may result in a limitation on its ability to use the intellectual property subject to these claims. The Company may be forced to litigate to enforce or determine the scope and enforceability of its intellectual property rights, trade secrets and know-how, which is expensive, could cause a diversion of resources and may not prove successful, especially in countries where such rights are more difficult to enforce. The loss of intellectual property protection or the inability to obtain third party intellectual property could harm its business and ability to compete.

Tax matters, including changes in tax rates, disagreements with taxing authorities and imposition of new taxes could impact the Company's results of operations and financial condition.

The Company is subject to income taxes in the U.S. (federal and state) and numerous foreign jurisdictions. Tax laws, regulations, and administrative practices in various jurisdictions may be subject to significant change, with or without notice, due to economic, political, and other conditions, and significant judgment is required in evaluating and estimating the provision and accruals for these taxes. There are many transactions that occur during the ordinary course of business for which the ultimate tax determination is uncertain. The Company's effective tax rates could be affected by numerous factors, including but not limited to, intercompany transactions, the relative amount of its foreign earnings, including earnings being lower than anticipated in jurisdictions where the Company has lower statutory rates and higher than anticipated in jurisdictions where the Company has higher statutory rates, losses incurred in jurisdictions for which the Company is not able to realize the related tax benefit, changes in foreign currency exchange rates, changes in its deferred tax assets and liabilities and any related valuation, and changes in the relevant tax, accounting, and other laws, regulations, administrative practices, principles, and interpretations. In addition, many countries are actively pursuing changes to their tax laws applicable to corporate multinationals, such as the recently enacted U.S. tax reform legislation commonly referred to as the U.S. Tax Cuts and Jobs Act of 2017 (the "Tax Act"). Finally, foreign governments may enact tax laws in response to the Tax Act that could result in further changes to global taxation and materially affect the Company's financial position and results of operations.

The 2017 Tax Act significantly changed the taxation of U.S. based, multinational corporations. Our compliance with the Tax Act requires the use of estimates in our financial statements and exercise of significant judgment in accounting for its provisions. The implementation of the Tax Act requires interpretations and implementing regulations by the U.S. Treasury Department and Internal Revenue Service, as well as state tax authorities. The legislation could be subject to potential amendments and technical corrections, any of which could materially lessen or increase certain adverse impacts of the legislation. As regulations and guidance evolve with respect to the Tax Act, and as we gather information and perform more analysis, our results may differ from previous estimates and may materially affect our financial position.

The Company employs information technology systems to support its business, and any material breach, interruption or failure may adversely impact the Company’s business.

The Company employs information technology systems to support its business. Security breaches and other disruptions to the Company’s information technology infrastructure could interfere with the Company’s operations, and compromise information belonging to the Company and its customers, suppliers and employees, exposing the Company to liability which could adversely impact the Company’s business and reputation. In the ordinary course of business, the Company relies on information technology networks and systems, some of which are managed by third parties, to process, transmit and store electronic information, and to manage or support a variety of business processes and activities. Additionally, the Company collects and stores certain data, including proprietary business information, and may have access to confidential or personal information in certain of its businesses that is subject to privacy and security laws, regulations and customer-imposed controls. Despite the Company’s cybersecurity measures and oversight of such matters by the Board of Directors, which are continuously reviewed and upgraded, the Company’s information technology networks and infrastructure may still be vulnerable to damage, disruptions or shutdowns due to attack by hackers or breaches, employee error or malfeasance, power outages, computer viruses, telecommunication or utility failures, systems failures, service providers including cloud services, natural disasters or other catastrophic events. It is possible for such vulnerabilities to remain undetected for an extended period, up to and including several years. Any such events could result in legal claims or proceedings, liability or penalties under privacy laws, disruption in operations, and damage to the Company’s reputation, which could adversely affect the Company’s business.

Item 1B. Unresolved Staff Comments

The Company does not have any unresolved staff comments.

Item 2. Properties

The Company currently owns or leases 26 facilities, which together contain approximately 2.1 million square feet of manufacturing, warehouse, research and development, sales and office space worldwide. Most of the Company's international facilities contain space for offices, research and engineering (R&E), warehousing and manufacturing with manufacturing using a majority of the space. The following table provides information regarding the Company's principal facilities:

		Number of Facilities				Total Approximate Square Feet	
Segment	Location	Manufacturing	Warehouse	R&E	Office	Owned	Leased
United States	United States	2	2	1	3	704,900	
Americas	Brazil	1	1	1	1	167,600	
	Argentina	1	1		1		26,400
	Canada	2	2	1	2	124,400	
	Mexico	1	1		2	113,000	1,100
Asia-Pac	Australia	1	1	1	4	122,900	78,300
	China	1	1	1	1	132,100	
	Indonesia	2	1		2	60,100	20,300
	Malaysia	1	1				18,600
	Thailand	1	3		1	80,000	49,500
	New Zealand	1	2	1	2		39,600
EMEA	Great Britain	1	1	1	1	89,400	
	South Africa	1	1	1	1	68,800	
	Spain	1	1	1	1	63,300	10,800
	Poland	1	1	1	1	175,000	

Item 3. Legal Proceedings

The Company can be party to a variety of pending legal proceedings and claims arising in the normal course of business, including, but not limited to, litigation relating to employment, workers' compensation, product liability, environmental and intellectual property. The Company has liability insurance to cover many of these claims.

Although the outcomes of these matters are not predictable with certainty, the Company records a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. In the event the Company determines that a loss is not probable, but is reasonably possible, and the likelihood to develop what the Company believes to be a reasonable range of potential loss exists, the Company will include disclosure related to such matters. To the extent that there is a reasonable possibility the losses could exceed amounts already accrued, the

Company will adjust the accrual in the period in which the determination is made, disclose an estimate of the additional loss or range of loss and if the amount of such adjustment cannot be reasonably estimated, disclose that an estimate cannot be made.

The Company and its subsidiaries Helix Uniformed Ltd. (“Helix”) and Preformed Line Products (Canada) Limited (“PLPC Canada”), were each named, jointly and severally, with each of SNC-Lavalin ATP, Inc. (“SNC ATP”), HD Supply Canada Inc., by its trade names HD Supply Power Solutions and HD Supply Utilities (“HD Supply”), and Anixter Power Solutions Canada Inc. (the corporate successor to HD Supply, “Anixter” and, together with the Company, PLPC Canada, Helix, SNC ATP and HD Supply, the “Defendants”) in a complaint filed by Altalink, L.P. (the “Plaintiff”) in the Court of Queen’s Bench of Alberta in Alberta, Canada in November 2016 (the “Complaint”).

The Complaint states that Plaintiff engaged SNC ATP to design, engineer, procure and construct numerous power distribution and transmission facilities in Alberta (the “Projects”) and that through SNC ATP and HD Supply (now Anixter), spacer dampers manufactured by Helix were procured and installed in the Projects. The Complaint alleges that the spacer dampers have and may continue to become loose, open and detach from the conductors, resulting in damage and potential injury and a failure to perform the intended function of providing spacing and damping to the Project. The Plaintiffs were initially seeking an estimated $56.0 million Canadian dollars in damages jointly and severally from the Defendants, representing the costs of monitoring and replacing the spacer dampers and remediating property damage, due to alleged defects in the design and construction of, and supply of materials for, the Projects by SNC ATP and HD Supply/Anixter and in the design of the spacer dampers by Helix. The Plaintiffs reduced their demand for damages to $29.4 million Canadian dollars on June 1, 2018.

The Company believes the claims against it are without merit and intends to vigorously defend against such claims. The Company is unable to predict the outcome of this case and cannot reasonably estimate a potential range of loss. However, if the matter is to be determined in a manner adverse to the Company, it could have a material effect on the Company’s financial results.

The Company is not a party to any other pending legal proceedings that the Company believes would, individually or in the aggregate, have a material adverse effect on its financial condition, results of operations or cash flows.

Item 4. Mine Safety Disclosures

Not applicable

Item 4A. Executive Officers of the Registrant

Each executive officer is elected by the Board of Directors, serves at its pleasure and holds office until a successor is appointed, or until the earliest of death, resignation or removal.

Name	Age	Position
Robert G. Ruhlman	62	Chairman, President and Chief Executive Officer
Dennis F. McKenna	52	Chief Operating Officer
William H. Haag	55	Vice President - Asia Pacific Region
John M. Hofstetter	54	Vice President - Sales and Global Communications Markets
Tim O'Shaughnessy	48	Vice President - Human Resources
J. Ryan Ruhlman	35	Vice President - Marketing and Business Development
David C. Sunkle	60	Vice President - Research and Engineering and Manufacturing
Caroline S. Vaccariello	52	General Counsel and Corporate Secretary
Michael A. Weisbarth	54	Vice President - Finance and Treasurer

The following sets forth the name and recent business experience for each person who is an executive officer of the Company at March 1, 2019:

Robert G. Ruhlman was elected Chairman in July 2004. Mr. Ruhlman has served as Chief Executive Officer since July 2000 and as President since 1995 (positions he continues to hold). Mr. Ruhlman is the father of J. Ryan Ruhlman, Vice-President – Marketing and Business Development and a Director of the Company, and of Maegan A. R. Cross, also a Director of the Company.

Dennis F. McKenna was elected Chief Operating Officer in January 2019. Prior to that, Mr. McKenna served as Executive Vice President Global Business Development since January 2015 where he expanded his role to include worldwide marketing and business development strategies. Prior to that, he was elected Vice President—Marketing and Global Business Development in April 2004.

William H. Haag was elected Vice President – Asia Pacific Region in January 2018. Prior to that, Mr. Haag served as the Company's Vice President—International Operations since April 1999.

John M. Hofstetter was elected Vice President – Sales and Global Communications Markets and Business Development in April 2012.

Tim O'Shaughnessy was elected Vice President - Human Resources in January 2019. Prior to that, Mr. O'Shaughnessy served as the Company's Director of Human Resources since 2017 where he was promoted from his previous role of International Human Resource Manager which he began in 2013. Mr. O'Shaughnessy previously held various roles within the Finance organization since joining the Company in 2005.

J. Ryan Ruhlman was elected to the Company's Board of Directors in July 2015 and as Vice President – Marketing and Business Development in December 2015, which expanded his role to include new acquisition and market opportunities. Prior to that, he was promoted to Director Marketing and Business Development in January 2015 including responsibilities for Special Industries, Distribution and Transmission Markets, as well as Marketing Communications. Mr. Ruhlman is the son of Robert G. Ruhlman, the Chief Executive Officer and Chairman of the Company, and the brother of Maegan A. R. Cross, a Director of the Company.

David C. Sunkle was elected Vice President-Research and Engineering in January 2007. In addition, Mr. Sunkle has taken on the role of Vice President – Manufacturing since July 2008.

Caroline S. Vaccariello was elected General Counsel and Corporate Secretary in January 2007.

Michael A. Weisbarth was elected Vice President - Finance and Treasurer in May 2017. Prior to that, Mr. Weisbarth served as the Company's Controller and Treasurer since September 2014. Previous to his employment with the Company, Mr. Weisbarth served as the Controller from April 2013 to April 2014 and as the Vice President, Finance/Controller from April 2008 to April 2013 of AssuraMed, Inc., a division of Cardinal, Inc.

Part II

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

The Company's common shares are traded on NASDAQ under the trading symbol "PLPC". As of March 4, 2019, the Company had approximately 1,900 shareholders of record. The following table sets forth for the periods indicated (i) the high and low closing sale prices per share of the Company's common shares as reported by the NASDAQ and (ii) the amount per share of cash dividends paid by the Company.

	Year ended December 31					
	2018			2017		
Quarter	High	Low	Dividend	High	Low	Dividend
First	$84.40	$59.95	$ 0.20	$57.87	$45.06	$ 0.20
Second	92.00	61.90	0.20	54.19	45.22	0.20
Third	90.54	70.28	0.20	68.64	46.00	0.20
Fourth	74.50	50.13	0.20	84.97	68.53	0.20

While the Company expects to continue to pay dividends of a comparable amount in the near term, the declaration and payment of future dividends will be made at the discretion of the Company's Board of Directors in light of the current needs of the Company. Therefore, there can be no assurance that the Company will continue to make such dividend payments in the future.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (1)	Weighted-average exercise price of outstanding options, warrants and rights (1)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column a) (2)
Equity compensation plans approved by security holders	262,422	$ 56.39	844,998
Equity compensation plans not approved by security holders	0	$ 0.00	0
Total	262,422		844,998

(1) Of these shares, 230,922 were issued in the form of restricted stock units, which have no exercise price. Accordingly, such shares were not included in the weighted average exercise price.

(2) The Company's Long-Term Incentive Plan of 2008 was replaced in May 2016 by the 2016 Incentive Plan. Up to 900,000 of the 1,000,000 shares initially authorized may be issued in the form of restricted shares or units under the new plan. See Note H in the Notes to Consolidated Financial Statements for information relating to the Company's 2016 Incentive Plan.

Performance Graph

Set forth below is a line graph comparing the cumulative total return of a hypothetical investment in the Company’s common shares with the cumulative total return of hypothetical investments in the NASDAQ Composite Index and the Peer Group Index based on the respective market price of each investment at December 31, 2013, December 31, 2014, December 31, 2015, December 31, 2016, December 31, 2017, and December 31, 2018, assuming in each case an initial investment of $100 on December 31, 2013, and reinvestment of dividends.

	2013	2014	2015	2016	2017	2018
PREFORMED LINE PRODUCTS CO	100.00	75.72	59.53	83.70	103.78	80.18
NASDAQ MARKET INDEX	100.00	114.62	122.81	133.19	172.11	165.84
PEER GROUP INDEX	100.00	99.53	95.06	116.90	133.61	109.39

Purchases of Equity Securities

On December 13, 2017, the Board of Directors authorized a plan to repurchase up to an additional 228,138 of Preformed Line Products Company common shares, resulting in a total of 250,000 shares available for repurchase with no expiration date. The following table includes repurchases for the three months ended December 31, 2018:

Period (2018)	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that may yet be Purchased under the Plans or Programs
October	0	$ 0.00	51,548	198,452
November	0	$ 0.00	51,548	198,452
December	770	$ 49.78	52,318	197,682
Total	770			

Item 6. Selected Financial Data

	2018	2017	2016	2015	2014
	(Thousands of dollars, except per share data)				
Net Sales and Income					
Net sales	$420,878	$378,212	$336,634	$354,666	$388,185
Operating income	32,934	26,108	21,479	12,349	21,238
Income before income taxes	32,588	25,806	20,953	11,706	21,410
Net income	26,581	12,654	15,255	6,675	12,861
Per Share Amounts					
Net income - basic	$5.28	$2.48	$2.95	$1.25	$2.39
Net income - diluted	5.21	2.47	2.95	1.24	2.39
Dividends declared	0.80	0.80	0.80	0.80	0.80
Shareholders' equity	49.56	47.35	43.68	41.94	45.01
Other Financial Information					
Current assets	$214,263	$207,130	$189,107	$188,497	$200,663
Total assets	358,797	359,785	340,937	324,573	353,967
Current liabilities	69,487	62,833	55,455	51,891	55,327
Long-term debt (including current portion)	26,408	36,046	44,391	31,864	31,865
Capital leases	110	169	236	268	173
Shareholders' equity	249,370	238,537	223,543	218,984	242,925

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

This Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is intended to help the readers of our financial statements better understand our results of operations, financial condition and present business environment. The MD&A is provided as a supplement to, and should be read in conjunction with, our audited consolidated financial statements and related notes included elsewhere in this report.

The MD&A is organized as follows:

- Overview
- Recent Developments
- Market Overview
- Preface
- Results of Operations
- Working Capital, Liquidity and Capital Resources
- Critical Accounting Policies and Estimates
- Recently Adopted Accounting Pronouncements
- New Accounting Standards to be Adopted

OVERVIEW

Preformed Line Products Company (the "Company", "PLPC", "we", "us", or "our") was incorporated in Ohio in 1947. We are an international designer and manufacturer of products and systems employed in the construction and maintenance of overhead and underground networks for the energy, telecommunication, cable operators, information (data communication), and other similar industries. Our primary products support, protect, connect, terminate, and secure cables and wires. We also provide solar hardware systems, mounting hardware for a variety of solar power applications, and fiber optic and copper splice closures. PLPC is respected around the world for quality, dependability and market-leading customer service. Our goal is to continue to achieve profitable growth as a leader in the research, innovation, development, manufacture, and marketing of technically advanced products and services related to energy, communications and cable systems and to take advantage of this leadership position to sell additional quality products in familiar markets. We have 26 sales and manufacturing operations in 18 different countries.

We report our segments in four geographic regions: PLP-USA (including corporate), The Americas (includes operations in North and South America without PLP-USA), EMEA (Europe, Middle East & Africa) and Asia-Pacific in accordance with accounting standards codified in Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 280, "Segment Reporting". Each segment distributes a full range of our primary products. Our PLP-USA segment is comprised of our U.S. operations manufacturing our traditional products primarily supporting our domestic energy, telecommunications and solar products. Our other three segments, The Americas, EMEA and Asia-Pacific, support our energy, telecommunications, data communication and solar products in each respective geographical region.

The segment managers responsible for each region report directly to the Company's Chief Executive Officer, who is the chief operating decision maker, and are accountable for the financial results and performance of their entire segment for which they are responsible. The business components within each segment are managed to maximize the results of the entire operating segment and the Company rather than the results of any individual business component of the segment.

We evaluate segment performance and allocate resources based on several factors primarily based on sales and net income.

RECENT DEVELOPMENTS

On February 28, 2019, the Company acquired SubCon Electrical Fittings GmbH ("SubCon"), headquartered in Dornbirn, Austria with manufacturing operations in Brno, Czech Republic. The acquisition is not considered material as assets acquired are less than 5% of our total consolidated assets. The acquisition of SubCon will strengthen our position in the global substation market and will expand our operational presence in Europe.

MARKET OVERVIEW

Our business continues to be highly concentrated in the energy and communications markets. During the past several years, industry consolidation continued as distributor and service provider integrations occurred in our major markets. The fluctuation of foreign currencies coupled with the varying degrees of recovery throughout the global economy has led to a challenging environment to sustain consistent sales levels over the past few years. Prior to 2018, there had been a lack of commitment by developed countries to upgrade and strengthen their electrical grids and communication networks, despite the growing need. Low oil prices, increasing commodity prices and changes in governmental leadership in certain markets have affected construction projects worldwide which suggests inherent uncertainty going forward.

In 2018, sales in the energy market continued to increase in the number and scale of transmission projects in North America while there was a continued decline in solar projects in the region. We believe that our leadership position in the market and ability to deliver reliable products quickly will enable us to take advantage of prospects for continued growth as transmission grids are enhanced and extended.

Our international business is more concentrated in the energy and communications markets where we experienced our most significant top line growth in 2018. Historically, our international sales were primarily related to the medium voltage distribution segment of the energy market, but have grown through acquisition and new product development to include a significant contribution from the transmission and telecommunications markets. We believe that we are well positioned to supply the needs of the world’s diverse energy market requirements as a result of our strategically located operations and array of product designs and technologies.

As economic conditions evolve, we believe our efforts internationally will lead to growth in our communications business from opportunities where deployment of fixed line and wireless telecommunications services and broadband penetration rates remain low as a percentage of the total population.

PREFACE

Our consolidated financial statements are prepared in conformity with U.S. generally accepted accounting principles (GAAP). Our discussions of the financial results include non-GAAP measures (e.g., foreign currency impact) to provide additional information concerning our financial results and provide information that we believe is useful to the readers of our financial statements in the assessment of our performance and operating trends.

Our financial statements are subject to fluctuations in the exchange rates of foreign currencies in relation to the U.S. dollar. As foreign currencies weaken against the U.S. dollar, our sales and costs decrease as the foreign currency-denominated financial statements translate into fewer U.S. dollars. In total, foreign currencies weakened against the U.S. dollar in 2018 in contrast to the currencies strengthening in 2017. The fluctuations of foreign currencies during the year ended December 31, 2018 had an unfavorable impact on net sales of $5.7 million as compared to a favorable impact of $5.2 million in 2017. On a reportable segment basis, the unfavorable and favorable impact of foreign currency translation on net sales and net income for the years ended December 31, 2018 and 2017, respectively, was as follows:

	Foreign Currency Translation Impact			
	Net Sales		Net Income (Loss)	
(Thousands of dollars)	2018	2017	2018	2017

The Americas	$ (8,173)	$ 1,688	$ (311)	$ 67
EMEA	2,443	1,651	157	69
Asia-Pacific	75	1,897	(22)	21
Total	$ (5,655)	$ 5,236	$ (176)	$ 157

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The effect of currency translation had an unfavorable impact on net income in the year ended December 31, 2018 of $.2 million and a favorable impact on net income in 2017 of $.2 million. There was an incremental $.3 million in losses on foreign currency translation on operating income for the year ended December 31, 2018. There was a transaction loss of $1.5 million in the year ended December 31, 2018 as compared to a transaction gain for the year ended December 31, 2017 of $.3 million as summarized in the following table:

	Foreign Currency Translation Impact	
	Year Ended December 31	
(Thousands of dollars)	2018	2017
Operating income	$ 32,934	$ 26,108
Translation loss	295	0
Transaction loss (gain)	1,528	(348)
Operating income excluding currency impact	$ 34,757	$ 25,760

Despite the continued changes in the current global economy, we believe our business fundamentals and our financial position are sound and strategically well-positioned. We remain focused on assessing our global market opportunities and overall manufacturing capacity in conjunction with the requirements of local manufacturing in the markets that we serve. If necessary, we will utilize our global manufacturing network to manage costs, while driving sales and delivering value to our customers. We have continued to invest in the business to improve efficiency, develop new products, increase our capacity and become an even stronger supplier to our current and new customers. We currently have a bank debt to equity ratio of 14.2% and can borrow needed funds at a competitive interest rate under our credit facility. Debt decreased $1.5 million as of December 31, 2018, driving the decrease in our bank debt to equity ratio, compared to 15.5% at December 31, 2017. See Note E in the Notes to Consolidated Financial Statements for more information related to our debt position.

The following table sets forth a summary of the Company’s consolidated income statements and the percentage of net sales for the years ended December 31, 2018 and 2017. The Company’s past operating results are not necessarily indicative of future operating results.

	Year Ended December 31				
(Thousands of dollars)	2018		2017		Change
Net sales	$420,878	100.0 %	$378,212	100.0 %	$42,666
Cost of products sold	288,647	68.6	259,584	68.6	29,063
GROSS PROFIT	132,231	31.4	118,628	31.4	13,603
Costs and expenses	99,297	23.6	92,520	24.5	6,777
OPERATING INCOME	32,934	7.8	26,108	6.9	6,826
Other expense	(346)	(0.1)	(302)	(0.1)	(44)
INCOME BEFORE INCOME TAXES	32,588	7.7	25,806	6.8	6,782
Income taxes	6,007	1.4	13,152	3.5	(7,145)
NET INCOME	$26,581	6.3 %	$12,654	3.3 %	$13,927

2018 RESULTS OF OPERATIONS COMPARED TO 2017

Net sales. In 2018, net sales were $420.9 million, an increase of $42.7 million, or 11%, compared to 2017. Excluding the unfavorable effect of currency translation, net sales increased 13% as summarized in the following table:

(Thousands of dollars)	Year Ended December 31 2018	2017	Change	Change Due to Currency Translation	Change Excluding Currency Translation	% Change
Net sales						
PLP-USA	$169,040	$147,646	$21,394	$ 0	$ 21,394	14 %
The Americas	66,868	69,764	(2,896)	(8,173)	5,277	8
EMEA	69,773	63,916	5,857	2,443	3,414	5
Asia-Pacific	115,197	96,886	18,311	75	18,236	19
Consolidated	$420,878	$378,212	$42,666	$ (5,655)	$ 48,321	13 %

The increase in PLP-USA net sales of $21.4 million, or 14%, was primarily due to a volume increase in energy product sales. International net sales for the year ended December 31, 2018 were unfavorably affected by $5.7 million when local currencies were converted to U.S. dollars. The following discussion of changes in net sales excludes the effect of currency translation. The Americas net sales of $66.9 million increased $5.3 million, or 8%, primarily due to higher volume in energy and communication product sales. EMEA net sales of $69.8 million increased $3.4 million, or 5%, primarily due to volume increases in energy products in the region. The Asia-Pacific net sales of $115.2 million increased $18.2 million, or 19%, compared to 2017. The increase in net sales is primarily due to a sales volume increase in energy, communication and special industries products.

Gross Profit. Gross profit of $132.2 million for 2018 increased $13.6 million, or 12%, compared to 2017. Excluding the unfavorable effect of currency translation, gross profit increased $16.2 million, or 14%, as summarized in the following table:

(Thousands of dollars)	Year Ended December 31			Change Due to Currency Translation	Change Excluding Currency Translation	% Change
	2018	2017	Change			
Gross profit						
PLP-USA	$59,012	$49,884	$9,128	$ 0	$ 9,128	18 %
The Americas	25,570	24,584	986	(3,259)	4,245	17
EMEA	19,747	19,473	274	705	(431)	(2)
Asia-Pacific	27,902	24,687	3,215	(34)	3,249	13
Consolidated	$132,231	$118,628	$13,603	$ (2,588)	$ 16,191	14 %

PLP-USA gross profit of $59.0 million increased by $9.1 million compared to 2017 mostly due to an increase in sales volume and a shift in mix toward higher margin products. International gross profit for the year ended December 31, 2018 was unfavorably impacted by $2.6 million when local currencies were translated to U.S. dollars. The following discussion of gross profit changes excludes the effects of currency translation. The Americas gross profit increase of $4.2 million was primarily the result of product margin improvement in the region due to a favorable shift in sales mix toward higher margin products combined with the $5.3 million improvement in sales. EMEA gross profit decreased $.4 million despite the $3.4 million increase in sales in the region, primarily in lower margin energy products. Asia-Pacific's gross profit increased $3.2 million as sales mix shifted to higher margin products combined with an increase in sales of $18.2 million.

Costs and expenses. Costs and expenses of $99.3 million for the year ended December 31, 2018 increased $6.8 million, or 7%, compared to 2017. Excluding the favorable effect of currency translation, costs and expenses increased $9.1 million, or 10%, as summarized in the following table:

(Thousands of dollars)	Year Ended December 31			Change Due to Currency Translation	Change Excluding Currency Translation	% Change
	2018	2017	Change			

Costs and expenses						
PLP-USA	$47,866	$44,197	$3,669	$ 0	$ 3,669	8 %
The Americas	14,053	13,264	789	(2,799)	3,588	27
EMEA	15,198	13,945	1,253	511	742	5
Asia-Pacific	22,180	21,114	1,066	(4)	1,070	5
Consolidated	$99,297	$92,520	$6,777	$ (2,292)	$ 9,069	10 %

PLP-USA costs and expenses of $47.9 million increased $3.7 million, or 8%. PLP-USA's year-over-year increase was attributable to higher personnel related expenses, including benefits of $2.1 million, and a $1.1 million incremental loss in net foreign currency transaction exchange effect. Additionally, higher commission expense of $.2 million as a result of increased sales, increased travel and entertainment expenses of $.2 million and increased professional fees of $.2 million contributed to the year-over-year increase. Foreign currency exchange losses were primarily related to translating into U.S. dollars its foreign currency denominated loans, trade receivables and royalty receivables from its foreign subsidiaries at the December 2018 year-end exchange rates. International costs and expenses for the year ended December 31, 2018 were favorably impacted by $2.3 million when local currencies were translated to U.S. dollars. The following discussions of costs and expenses exclude the effect of currency translation. The Americas costs and expenses increase of $3.6 million was primarily due to a net loss on foreign currency transactional exchange of $1.9 million, higher personnel related costs of $1.6 million and higher professional fee expense of $.1 million. EMEA costs and expenses of $15.2 million increased $.7 million mainly due to higher personnel related costs. Asia-Pacific costs and expenses of $22.2 million increased $1.1 million primarily due to higher personnel related expenses of $1.0 million and increased professional fees of $.1 million.

Other income (expense). Other expense of $.3 million for the year ended December 31, 2018 remained flat as compared to 2017.

Income taxes. Income taxes for the years ended December 31, 2018 and 2017 were $6.0 million and $13.2 million, respectively, based on pre-tax income of $32.6 million and $25.8 million, respectively. The effective tax rate for the years ended December 31, 2018 and 2017 was 18.4% and 51.0%, respectively, compared to the U.S. federal statutory rate of 21% and 35% for the years ended December 31, 2018 and 2017, respectively. Our effective tax rate is affected by recurring items, such as tax rates in foreign jurisdictions, which differ from the U.S. federal statutory income tax rate, and the relative amount of income earned in those jurisdictions where such earnings are permanently reinvested. It is also affected by discrete items that may occur in any given period but are not consistent from year to year. The following items had the most significant impact on the difference between our statutory U.S. federal income tax rate of 21% and 35% for 2018 and 2017, respectively and our effective tax rate:

2018

1. A $1.2 million, or 3.6%, decrease resulting primarily from a final measurement of the provisional amount of the Deemed Repatriation Transition Tax (“Transition Tax”) and other U.S. permanent items and state and local income taxes.
2. A $.7 million, or 2.1%, decrease resulting from a net increase of the prior year provisional adjustment of our deferred taxes due to the result of U.S. federal statutory rate decrease included in the Tax Cuts and Jobs Act of 2017.
3. A $1.1 million, or 3.1%, increase resulting from earnings in jurisdictions with higher tax rates than the U.S. federal statutory rate where such earnings are permanently reinvested.

2017

1. A $2.5 million, or 9.6%, increase resulting primarily from a $2.6 million charge as a result of the Deemed Repatriation Transition Tax (“Transition Tax”) and partially offset by other U.S. permanent items and state and local income taxes.
2. A $3.2 million, or 12.2%, increase resulting from the net reduction in our deferred taxes due to the result of a U.S. federal statutory rate decrease included in the Tax Cuts and Jobs Act.
3. A $1.5 million, or 5.8%, decrease resulting from earnings in jurisdictions with lower tax rates than the U.S. federal statutory rate where such earnings are permanently reinvested.

Net income. As a result of the preceding items, net income for the year ended December 31, 2018 was $26.6 million, compared to $12.7 million for 2017. Excluding the effect of currency translation, net income increased $14.1 million as summarized in the following table:

(Thousands of dollars)	Year Ended December 31					
	2018	2017	Change	Change Due to Currency Translation	Change Excluding Currency Translation	% Change
Net income (loss)						
PLP-USA	$9,900	$(2,367)	$12,267	$ -	$ 12,267	NM

The Americas	8,479	8,169	310	(311)	621	8
EMEA	3,527	4,088	(561)	157	(718)	(18)
Asia-Pacific	4,675	2,764	1,911	(22)	1,933	70
Consolidated	$26,581	$12,654	$13,927	$ (176)	$ 14,103	111 %

NM – Not meaningful

PLP-USA's net income of $9.9 million was an increase of $12.3 million year over year, mainly due to the current year favorable income tax expense impact resulting from the newly enacted Tax Act of $6.7 million combined with a year-over-year increase in operating income of $5.6 million. International net income for the year ended December 31, 2018 was favorably affected by approximately $.2 million when local currencies were converted to U.S. dollars. The following discussion of net income excludes the effect of currency translation. The Americas net income of $8.5 million increased $.6 million mainly as a result of a $.7 million increase in operating income, slightly offset by a $.1 million increase in income tax expense. EMEA net income decreased $.7 million as a result of a $1.1 million decrease in operating income offset by a year-over-year decrease in income taxes of $.4 million. Asia-Pacific net income improved $1.9 million mainly as a result of a $2.2 million increase in operating income offset by an increase in income tax expense for the region of $.3 million.

2017 RESULTS OF OPERATIONS COMPARED TO 2016

The following table sets forth a summary of the Company's consolidated income statements and the percentage of net sales for the years ended December 31, 2017 and 2016.

	Year Ended December 31				
(Thousands of dollars)	2017		2016		Change
Net sales	$378,212	100.0 %	$336,634	100.0 %	$41,578
Cost of products sold	259,584	68.6	227,220	67.5	32,364
GROSS PROFIT	118,628	31.4	109,414	32.5	9,214
Costs and expenses	92,520	24.6	87,935	26.1	4,585
OPERATING INCOME	26,108	6.9	21,479	6.4	4,629
Other income (expense)	(302)	(0.1)	(526)	(0.2)	(224)
INCOME BEFORE INCOME TAXES	25,806	6.8	20,953	6.2	4,853
Income taxes	13,152	3.5	5,698	1.7	7,454
NET INCOME	$12,654	3.3 %	$15,255	4.5 %	$(2,601)

Net sales. In 2017, net sales were $378.2 million, an increase of $41.6 million, or 12%, compared to 2016. Excluding the favorable effect of currency translation, net sales increased 11% as summarized in the following table:

	Year Ended December 31					
(Thousands of dollars)	2017	2016	Change	Change Due to Currency Translation	Change Excluding Currency Translation	% Change
Net sales						
PLP-USA	$147,646	$135,260	$12,386	$ 0	$ 12,386	9 %
The Americas	69,764	60,049	9,715	1,688	8,027	13
EMEA	63,916	56,411	7,505	1,651	5,854	10
Asia-Pacific	96,886	84,914	11,972	1,897	10,075	12
Consolidated	$378,212	$336,634	$41,578	$ 5,236	$ 36,342	11 %

The increase in PLP-USA net sales of $12.4 million, or 9%, was primarily due to a volume increase in transmission and distribution products. International net sales for the year ended December 31, 2017 were favorably affected by $5.2 million when local currencies were converted to U.S. dollars. The following discussion of changes in net sales excludes the effect of currency translation. The Americas net sales of $69.8 million increased $8.0 million, or 13%, primarily due to higher volume in energy and telecommunication sales. EMEA net sales of $63.9 million increased $5.9 million, or 10%, primarily due to volume increases in the telecommunication sales and transmission projects in the region. The Asia-Pacific net sales of $96.9 million increased $10.1 million, or 12%, compared to 2016. The increase in net sales is primarily related to sales volume increases in transmission sales, partially offset by a decrease in solar sales.

Gross Profit. Gross profit of $118.6 million for 2017 increased $9.2 million, or 8%, compared to 2016. Excluding the favorable effect of currency translation, gross profit increased $8.1 million, or 7%, as summarized in the following table:

(Thousands of dollars)	Year Ended December 31 2017	2016	Change	Change Due to Currency Translation	Change Excluding Currency Translation	% Change
Gross profit						
PLP-USA	$49,884	$47,294	$2,590	$ 0	$ 2,590	5 %
The Americas	24,584	20,863	3,721	340	3,381	16
EMEA	19,473	20,368	(895)	435	(1,330)	(7)
Asia-Pacific	24,687	20,889	3,798	325	3,474	17
Consolidated	$118,628	$109,414	$9,214	$ 1,100	$ 8,115	7 %

PLP-USA gross profit of $49.9 million increased by $2.6 million compared to 2016 mostly due to a shift in sales mix toward higher margin products. International gross profit for the year ended December 31, 2017 was favorably impacted by $1.1 million when local currencies were translated to U.S. dollars. The following discussion of gross profit changes excludes the effects of currency translation. The Americas gross profit increase of $3.4 million was primarily the result of product margin improvement in the region due to a favorable shift in sales mix toward higher margin products combined with the $8.0 million improvement in sales. Higher personnel costs throughout the region due to inflation were a slight offset to the margin improvement. EMEA gross profit decreased $1.3 million despite the $5.9 million increase in sales in the region, primarily in lower margin energy products. Asia-Pacific's gross profit increased $3.5 million as mix shifted to higher margin products combined with an increase in sales of $10.1 million.

Costs and expenses. Costs and expenses of $92.5 million for the year ended December 31, 2017 increased $4.6 million, or 5.2%, compared to 2016. Excluding the unfavorable effect of currency translation, costs and expenses increased $3.7 million, or 4%, as summarized in the following table:

(Thousands of dollars)	Year Ended December 31 2017	2016	Change	Change Due to Currency Translation	Change Excluding Currency Translation	% Change
Costs and expenses						
PLP-USA	$44,197	$42,770	$1,427	$ 0	$ 1,427	3 %
The Americas	13,264	12,720	544	281	263	2
EMEA	13,945	12,476	1,469	278	1,191	10
Asia-Pacific	21,114	19,969	1,145	314	831	4
Consolidated	$92,520	$87,935	$4,585	$ 873	$ 3,712	4 %

PLP-USA costs and expenses of $44.2 million increased $1.4 million, or 3%. Higher personnel related expenses, which include healthcare and benefits of $2.7 million and higher commission expense of $1.0 million, were partially offset by the non-recurrence of a $1.0 million charge in 2016 related to the lease expiration of the Company aircraft, a $.6 million improvement in net foreign currency transaction exchange effect combined with lower bad debt expense of $.5 million and various net expense decreases of $.2 million. Foreign currency exchange gains were primarily related to translating into U.S. dollars its foreign currency denominated loans, trade receivables and royalty receivables from its foreign subsidiaries at the December 2017 year-end exchange rates. International costs and expenses for the year ended December 31, 2016 were unfavorably impacted by $.9 million when local currencies were translated to U.S. dollars. The following discussions of costs and expenses exclude the effect of currency translation. The Americas costs and expenses increase of $.2 million was primarily due to a net loss on foreign currency transactional exchange of $1.0 million, partially offset by lower bad debt expense of $.5 million and lower professional fee expense of $.3 million. EMEA costs and expenses of $13.9 million increased $1.2 million due to a net loss on foreign currency transactional exchange of $.4 million, higher personnel related costs of $.3 million, increased professional expense of $.1 million, increased commission expense of $.1 million combined with various net expense increases of $.3 million. Asia-Pacific costs and expenses of $21.1 million increased $.8 million primarily due to higher personnel related expenses of $1.6 million, partially offset by lower commission expense of $.3 million and reduced professional fees of $.3 million combined with various net expense reductions of $.2 million.

Other income (expense). Other expense for the year ended December 31, 2017 decreased $.2 million compared to 2016.

Income taxes. Income taxes for the years ended December 31, 2017 and 2016 were $13.2 million and $5.7 million, respectively, based on pre-tax income of $25.8 million and $21.0 million, respectively. The effective tax rate for the years ended December 31, 2017 and 2016 was 51.0% and 27.2%, respectively, compared to the U.S. federal statutory rate of 35%. Our effective tax rate is affected by recurring items, such as tax rates in foreign jurisdictions, which differ from the U.S. federal statutory income tax rate, and the relative amount of income earned in those jurisdictions where such earnings are permanently reinvested. It is also affected by discrete items that may occur in any given period but are not consistent from year to year. The following items had the most significant impact on the difference between our statutory U.S. federal income tax rate of 35% and our effective tax rate:

2017

4. A $2.5 million, or 9.6%, increase resulting primarily from a $2.6 million charge as a result of the Transition Tax and partially offset by other U.S. permanent items and state and local income taxes.
5. A $3.2 million, or 12.2%, increase resulting from the net reduction in our deferred taxes due to the result of U.S. federal statutory rate decrease included in the Tax Act.
6. A $1.5 million, or 5.8%, decrease resulting from earnings in jurisdictions with lower tax rates than the U.S. federal statutory rate where such earnings are permanently reinvested.

2016

3. A $.4 million, or 2.0%, decrease resulting from losses in certain jurisdictions where no tax benefit was previously recognized.
4. A $.5 million, or 2.2%, increase resulting primarily from incremental tax from the repatriation of foreign earnings, partially offset by other U.S. permanent items and state and local income taxes.
3. A $.2 million, or 0.9%, decrease of unrecognized tax benefits due to expiration of statutes of limitations.
4. A $1.5 million, or 7.1%, decrease resulting from earnings in jurisdictions with lower tax rates than the U.S. federal statutory rate where such earnings are permanently reinvested.

Net income. As a result of the preceding items, net income for the year ended December 31, 2017 was $12.7 million, compared to $15.3 million for 2016. Excluding the effect of currency translation, net income decreased $2.8 million as summarized in the following table:

(Thousands of dollars)	Year Ended December 31					
	2017	2016	Change	Change Due to Currency Translation	Change Excluding Currency Translation	% Change
Net income (loss)						
PLP-USA	$(2,367)	$2,007	$(4,374)	$ 0	$ (4,374)	(218)%
The Americas	8,169	5,881	2,288	71	2,217	38
EMEA	4,088	6,243	(2,155)	95	(2,250)	(36)
Asia-Pacific	2,764	1,124	1,640	21	1,619	(144)
Consolidated	$12,654	$15,255	$(2,601)	$ 187	$ (2,788)	(18)%

PLP-USA net income of $2.0 million was flat year over year. International net income for the year ended December 31, 2016 was unfavorably affected by $1.5 million when local currencies were converted to U.S. dollars. The following discussion of net income excludes the effect of currency translation. The Americas net income increased $3.5 million as a result of a $5.0 million increase in operating income, offset by an income tax expense increase of $1.5 million. EMEA net income increased $2.1 million as a result of a $2.5 million increase in operating income offset by an increase in income taxes of $.4 million. Asia-Pacific net (loss) income improved $4.5 million mainly as a result of a $3.9 million increase in operating income, combined with the non-recurrence of a prior year receivable settlement of $.8 million, offset by a lower year over year net tax benefit for the region, which was $.2 million lower.

WORKING CAPITAL, LIQUIDITY AND CAPITAL RESOURCES

Management Assessment of Liquidity

We measure liquidity on the basis of our ability to meet short-term and long-term operating needs, fund additional investments, including acquisitions, and make dividend payments to shareholders. Significant factors affecting the management of liquidity are cash flows from operating activities, capital expenditures, cash dividends, business acquisitions and access to bank lines of credit.

Our investments include expenditures required for equipment and facilities as well as expenditures in support of our strategic initiatives. In 2018, we used cash of $9.5 million for capital expenditures. We ended 2018 with $43.9 million of cash, cash equivalents and restricted cash ("cash"). Our cash is held in various locations throughout the world. At December 31, 2018, the majority of our cash is held outside the U.S.

We expect the majority of accumulated non-U.S. cash balances will remain outside of the U.S. and that we will meet U.S. liquidity needs through future cash flows, use of U.S. cash balances, external borrowings, or some combination of these sources.

We complete comprehensive reviews of our significant customers and their creditworthiness by analyzing financial statements for customers where we have identified a measure of increased risk. We closely monitor payments and developments that may signal possible customer credit issues. We currently have not identified any potential material impact on our liquidity from customer credit issues.

Our financial position remains strong and our current ratio at December 31, 2018 and 2017 was 3.1 to 1 and 3.3 to 1, respectively. Total debt at December 31, 2018 was $35.5 million. At December 31, 2018, our unused availability under our line of credit was $49.8 million and our bank debt to equity percentage was 14.2%. On March 13, 2018, the Company extended the term on its $65 million credit facility from June 30, 2019 to June 30, 2021. All other terms remain the same, including the interest rate at LIBOR plus 1.125% unless its funded debt to Earnings before Interest, Taxes and Depreciation ratio exceeds 2.25 to 1, then the LIBOR spread becomes 1.500%. As of December 31, 2018, the Company's Polish subsidiary had borrowed $.9 million at a rate of 1.125% plus the Warsaw Interbank Offer Rate with a term expiring June 30, 2021. As of December 31, 2018, the interest rates on the U.S. and Polish line of credit agreement were 3.63% and 2.77%, respectively. As of December 31, 2018, the Company's Australian subsidiary had borrowed $2.1 million at a rate of 1.125% plus the Australian Bank Bill Swap Bid Rate with a term expiring June 30, 2021. As of December 31, 2018, the interest rate on the Australian line of credit agreement was 2.96%. Under the credit facility, at December 31, 2018, the Company had utilized $15.2 million with $49.8 million available under the line of credit net of long-term outstanding letters of credit. The PLP-USA line of credit provides for $5.0 million to be available to the Company's subsidiaries. The line of credit agreement contains, among other provisions, requirements for maintaining levels of net worth and profitability. At both December 31, 2018 and 2017, the Company was in compliance with all covenants.

We own a corporate aircraft with a remaining balance due on the loan of $11.0 million, of which $1.4 million is classified as short-term, with a term expiring in 2026. The loan is secured by the purchased aircraft.

We expect that our major source of funding for 2019 and beyond will be our operating cash flows, our existing cash and cash equivalents as well as our line of credit agreement. We earn a significant amount of our operating income outside the United States, which, except for current earnings in certain jurisdictions, is deemed to be indefinitely reinvested in foreign jurisdictions. We currently do not intend nor foresee a need to repatriate these funds. We believe our future operating cash flows will be more than sufficient to cover debt repayments, other contractual obligations, capital expenditures and dividends for the next 12 months and thereafter for the foreseeable future. In addition, we believe our borrowing capacity provides substantial financial resources, if needed, to supplement funding of capital expenditures and/or acquisitions. We also believe that we can expand our borrowing capacity, if necessary, however, we do not believe we would increase our debt to a level that would have a material adverse impact upon results of operations or financial condition.

Sources and Uses of Cash

Cash at December 31, 2018 decreased $1.7 million compared to December 31, 2017. Net cash provided by operating activities was $23.0 million. The most significant net investing and financing uses of cash were payments of long-term debt of $85.5 million, capital expenditures of $9.5 million, a combined net purchase of marketable securities and a company-owned life insurance policy of $4.7 million, share repurchases of $4.2 million and dividends paid of $4.2 million, partially offset by net debt and notes payable proceeds of $85.5 million. Currency had a negative $1.6 million impact on cash when translating foreign denominated financial statements to U.S. dollars.

Net cash provided by operating activities for the year ended December 31, 2018 and 2017 was $23.0 million and $33.8 million, respectively. The $10.8 million decrease was primarily a result of an increase in cash usage for operating assets (net of operating liabilities) of $24.4 million, which included a $5.3 million contribution to the pension plan, partially offset by an increase in net income of $13.9 million.

Net cash used in investing activities of $14.0 million for the year ended December 31, 2018 represents an increase of $11.5 million when compared to cash used in investing activities for the year ended December 31, 2017. The increased use of cash was primarily related to a reduction in cash provided from fixed-term deposits of $8.5 million along with net cash used of $4.7 million related to the purchase of marketable securities and a company-owned life insurance policy, partially offset by a decrease in cash used for capital expenditures of $1.7 million.

Cash used in financing activities for the year ended December 31, 2018 was $9.1 million compared to a use of $19.6 million in the year ended December 31, 2017. The $10.5 million improvement was primarily a result of a net favorable change in debt transactions of $7.9 million in 2018 as compared to 2017 and a net year-over-year decrease in cash used in capital stock transactions of $2.6 million.

We have commitments under operating leases primarily for office and manufacturing space, transportation equipment, office and computer equipment and capital leases primarily for equipment.

Contractual obligations and other commercial commitments are summarized in the following tables:

	Payments Due by Period				
Contractual Obligations	Total	Less than 1 year	1-3 years	4-5 years	After 5 years
(Thousands of dollars)					
Notes payable to bank (A)	$9,042	$9,042	$0	$0	$0
Long-term debt (B)	26,408	1,508	18,223	2,930	3,747
Capital leases	189	60	89	40	0
Operating leases	12,998	2,225	3,408	1,086	6,279
Purchase commitments	634	634	0	0	0
Pension contribution and other retirement plans (C)	0	0	0	0	0

	Amount of Commitment Expiration by Period				
Other Commercial Commitments	Total	Less than 1 year	1-3 years	4-5 years	After 5 years
(Thousands of dollars)					
Letters of credit	$2,508	$2,508	$-	$-	$-
Guarantees	4,855	1,558	1,491	1,012	794

(A) Interest on short-term debt is included in the table at interest rates from 2.83% to 9.40% in effect at December 31, 2018.

(B)

Interest on long-term debt is included in the table at interest rates from 2.71% to 4.60% based on the variable interest rates in effect at December 31, 2018.

(C) The Company does not expect to make contributions to the Company's defined benefit pension plan in 2019. Future expected amounts beyond one year have not been disclosed as such amounts are subject to change based on performance of the assets in the plan as well as the discount rate used to determine the obligation.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our discussion and analysis of our financial condition and results of operations are based upon the consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amount of assets and liabilities, revenues and expenses and related disclosure of contingent assets and liabilities at the date of the consolidated financial statements. Actual results may differ from these estimates under different assumptions or conditions.

Critical accounting policies are defined as those that are reflective of significant judgment and uncertainties, and potentially may result in materially different outcomes under different assumptions and conditions.

Revenue Recognition

Net sales include products and shipping and handling charges, net of estimates for product returns. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring products. All revenue is recognized when the Company satisfies the performance obligations under the contract and control of the product is transferred to the customer, primarily based on shipping terms. Revenue for shipping and handling charges are recognized at the time the products are shipped to, delivered to or picked up by the customer. The Company estimates product returns based on historical return rates.

Receivable Allowances

We maintain an allowance for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. We record estimated allowances for uncollectible accounts receivable based upon the number of days the accounts are past due, the current business environment, and specific information such as bankruptcy or liquidity issues of customers. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. The allowance for doubtful accounts represents approximately less than 3.5% and 3.8% of our trade receivables balance at December 31, 2018 and 2017, respectively.

Excess and Obsolescence Reserves

We provide excess and obsolescence reserves to state inventories at the lower of cost or estimated net realizable value. We identify inventory items that have had no usage or are in excess of the usages over the historical 12 to 24 months. A management team with representatives from marketing, manufacturing, engineering and finance reviews these inventory items, determines the disposition of the inventory and assesses the net realizable value based on their knowledge of the product and market conditions. These conditions include, among other things, future demand for product, product utility, unique customer order patterns or unique raw material purchase patterns, changes in customer and quality issues. The allowance for excess and obsolete inventory was 9.6% and 10.6% for the years ended December 31, 2018 and December 31, 2017, respectively. If the impact of market conditions deteriorates from those projected by management, additional inventory reserves may be necessary.

Impairment of Long-Lived Assets

We record impairment losses on long-lived assets used in operations when events and circumstances indicate that the assets are impaired and the undiscounted cash flows estimated to be generated by those assets are less than the carrying value of those items. Our cash flows are based on historical results adjusted to reflect the best estimate of future market and operating conditions. The net carrying value of assets not recoverable is then reduced to fair value. The estimates of fair value represent the best estimate based on industry trends and reference to market rates and transactions.

Goodwill

We perform our annual impairment test for goodwill utilizing a discounted cash flow methodology, market comparables, and an overall market capitalization reasonableness test in computing fair value by reporting unit. We then compare the fair value of the reporting unit with its carrying value to assess if goodwill has been impaired. Based on the assumptions as to growth, discount rates and the weighting used for each respective valuation methodology, results of the valuations could be significantly changed. However, we believe that the methodologies and weightings used are reasonable and result in appropriate fair values of the reporting units.

Our measurement date for our annual impairment test is October 1 of each year. We performed our annual impairment tests for goodwill as of October 1, 2018. We did not have any impairment for goodwill for the years ended December 31, 2018 or 2017. See Note J for additional information.

Deferred Tax Assets

Deferred taxes are recognized at currently enacted tax rates for temporary differences between the financial reporting and income tax basis of assets and liabilities and operating loss and tax credit carryforwards. We establish a valuation allowance to record our deferred tax assets at an amount that is more-likely-than-not to be realized. In the event we were to determine that we would be able to realize our deferred tax assets in the future in excess of their recorded amount, an adjustment to the valuation allowance would increase income in the period such determination was made. Likewise, should we determine that we would not be able to realize all or part of our net deferred tax assets in the future, an adjustment to the valuation allowance would be charged to expense in the period such determination was made.

Uncertain Tax Positions

We identify tax positions taken on the federal, state, local and foreign income tax returns filed or to be filed. A tax position can include: a reduction in taxable income reported in a previously filed tax return or expected to be reported on a future tax return that impacts the measurement of current or deferred income tax assets or liabilities in the period being reported; a decision not to file a tax return; an allocation or a shift of income between jurisdictions; the characterization of income or a decision to exclude reporting taxable income in a tax return; or a decision to classify a transaction, entity or other position in a tax return as tax exempt. We determine whether a tax position is an uncertain or a routine business transaction tax position that is more-likely-than-not to be sustained at the full amount upon examination.

Under FASB ASC 740 ("ASC 740"), "Tax Benefits from Uncertain Tax Positions" that reduce our current or future income tax liability are reported in our financial statements only to the extent that each benefit is recognized and measured under a two-step approach. The first step requires us to assess whether each tax position based on its technical merits and facts and circumstances as of the reporting date, is more-likely-than-not to be sustained upon examination. The second step measures the amount of tax benefit that we would recognize in the financial statements based on a cumulative probability approach. A tax position that meets the more-likely-than-not threshold that is not highly certain is measured based on the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement with the tax authority, assuming that the tax authority has examined the position and has full knowledge of all relevant information.

ASC 740 requires subjectivity to identify outcomes and to assign probability in order to estimate the settlement amount. We provide estimates in order to determine settlement amounts. During the year ended December 31, 2018, we did not record any activity for uncertain tax positions. At December 31, 2018, there was no reserve requirement for uncertain tax positions.

Pensions

We record obligations and expenses related to a pension benefit plan based on actuarial valuations, which include key assumptions on discount rates, expected returns on plan assets and compensation increases. These actuarial assumptions are reviewed annually and modified as appropriate. The effect of modifications is generally recorded or amortized over future periods. The discount rate of 4.25% at December 31, 2018 reflects an analysis of yield curves as of the end of the year and the schedule of expected cash needs of the plan. The expected long-term return on plan assets of 8.0% reflects the plan's historical returns and represents our best estimate of the likely future returns on the plan's asset mix. We believe the assumptions used in recording obligations under the plans are reasonable based on prior experience, market conditions and the advice of plan actuaries. However, an increase in the discount rate would decrease the plan obligations and the net periodic benefit cost, while a decrease in the discount rate would increase the plan obligations and the net periodic benefit cost. In addition, an increase in the expected long-term return on plan assets would decrease the net periodic pension cost, while a decrease in expected long-term return on plan assets would increase the net periodic pension cost.

RECENTLY ADOPTED ACCOUNTING PRONOUNCEMENTS

In March 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-05, "Income Taxes (Topic 740), Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118." The ASU adds various Securities and Exchange Commission ("SEC") paragraphs pursuant to the issuance of the December 2017 SEC Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act ("SAB 118"), which was effective immediately. For additional details regarding SAB 118, refer to Note G "Income Taxes."

In March 2017, the FASB issued ASU 2017-07, "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost," which requires that an employer report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit cost are required to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations, if one is presented. The Company adopted ASU 2017-07 as of January 1, 2018. The adoption did not have a material impact on the Company's consolidated statements of operations and since prior period reclassifications were deemed immaterial, the Company elected to not make a retrospective adjustment to prior period income statements.

In November 2016, the FASB issued ASU 2016-18, "Statement of Cash Flows (Topic 230): Restricted Cash." The amendments in this Update require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. The Company adopted ASU 2016-18 as of January 1, 2018 using a retrospective transition method to each period presented. The cash, cash equivalents and restricted cash balance on the Company's consolidated cash flow includes $.3 million and $1.2 million of restricted cash as of December 31, 2018 and December 31, 2017, respectively. Restricted cash is included in Other assets on the Company's consolidated balance sheet in each period presented. The adoption of ASU 2016-18 did not have a material impact on the Company's consolidated financial statements. Refer to Note E "Debt Arrangements" for additional details regarding the Company's restricted cash.

In October 2016, the FASB issued ASU 2016-16, "Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory." ASU 2016-16 modifies the recognition of income tax expense resulting from intra-entity transfers of assets other than inventory. Pursuant to this amendment, entities should recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. This amendment eliminates the exception for an intra-entity transfer of assets other than inventory. The Company adopted ASU 2016-16 as of January 1, 2018 with no material impact on the Company's consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities", which changes how companies recognize, measure, present and make disclosures about certain financial assets and financial liabilities. Under this guidance, entities have to measure certain equity investments, including available-for-sale securities, at fair value and recognize any changes in fair value in net income. ASU 2016-01 is effective for financial statements issued for fiscal years beginning after December 15, 2017, and interim periods therein. The Company adopted ASU 2016-01 effective January 1, 2018. Refer to Note K "Fair Value of Financial Assets and Liabilities" for additional details regarding the Company's marketable securities.

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers (Topic 606)," or ASU 2014-09. ASU 2014-09 requires an entity to recognize revenue in a manner that depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To achieve that core principle, the amendment provides five steps that an entity should apply when recognizing revenue. The amendment also specifies the accounting of some costs to obtain or fulfill a contract with a customer and expands the disclosure requirements around contracts with customers. In August 2015, the FASB issued ASU No. 2015-14 deferring the effective date of the amendment to annual reporting periods beginning after December 15, 2017, including interim periods therein.

The Company implemented changes to processes and controls to meet the standard's reporting and disclosure requirements and adopted ASU 2014-09 as of January 1, 2018 using the modified retrospective transition method applied to contracts that were not yet completed at that date. Results for reporting periods beginning after January 1, 2018 are presented under Topic 606, while prior period amounts are not adjusted and continue to be presented based on the Company's historic accounting policy. The cumulative impact of adopting ASU 2014-09 as of January 1, 2018 did not have a material impact on the Company's consolidated financial statements. Further, the Company does not expect the impact of the adoption of ASU 2014-09 to be material to its consolidated financial statements on an ongoing basis. Refer to Note L "Revenue" for additional details regarding the Company's revenue recognition policy.

NEW ACCOUNTING STANDARDS TO BE ADOPTED

In February 2018, the FASB issued ASU 2018-02, "Income Statement (Topic 220), Reporting Comprehensive Income: Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." The FASB issued the update to provide amended guidance to allow a reclassification from Accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Act. Additionally, under the new guidance an entity will be required to provide certain disclosures regarding stranded tax effects. The guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those years, and the guidance may be applied either in the period of adoption or retrospectively to each period (or periods) in which the effect of the change in the U.S. federal income tax rate in the Tax Act is recognized. Early adoption is permitted. The Company is currently assessing the impact, if any, that the ASU will have on the Company's consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)." The amendments in this Update require the recognition of assets and liabilities arising from lease transactions on the balance sheet and the disclosure of key information about leasing arrangements. Accordingly, a lessee will recognize a lease asset for its right to use the underlying asset and a lease liability for the corresponding lease obligation for leases classified as operating leases under previous guidance. Both the asset and liability will initially be measured at the present value of the future minimum lease payments over the lease term. Subsequent measurement, including the presentation of expenses and cash flows, will depend on the classification of the lease as either a finance or an operating lease. Initial costs directly attributable to negotiating and arranging the lease will be included in the asset. For leases with a term of 12 months or less, a lessee can make an accounting policy election by class of underlying asset to not recognize an asset and corresponding liability. Lessees will also be required to provide additional qualitative and quantitative disclosures regarding the amount, timing and uncertainty of cash flows arising from leases. These disclosures are intended to supplement the amounts recorded in the financial statements and provide additional information about the nature of an organization's leasing activities.

This ASU is required to be applied using a modified retrospective adoption method with the option of applying the guidance either retrospectively to each prior comparative reporting period presented or retrospectively at the beginning of the period of adoption. This ASU is effective for interim and annual periods on January 1, 2019, and the Company will apply the transitional package of practical expedients allowed by the standard to not reassess the identification, classification and initial direct costs of leases commencing before this ASU's effective date; however, the Company will not elect the hindsight transitional practical expedient. The Company also will apply the practical expedient to not separate lease and non-lease components to new leases as well as existing leases through transition. The Company will elect an accounting policy to not apply recognition requirements of the guidance to short-term leases.

In July of 2018, the FASB issued ASU 2018-11, "Targeted Improvements to ASC 842," which includes an option to not restate comparative periods in transition and elect to use the effective date of ASC 842, Leases, as the initial application of transition. The amendments in Topic 842 are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018, with early adoption permitted.

The Company established a cross-functional implementation team and is finalizing policy elections, the discount rate to be used on January 1, 2019, data and business processes and controls to support recognition and disclosure under the new standard. As discussed above, the primary impact upon adoption will be the recognition of right of use assets and lease obligations, on a discounted basis, of our minimum lease obligations as disclosed in Note F "Leases". The adoption of this ASU is not expected to have a material impact on the Company's results of operations, cash flows or debt covenants.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

The Company operates manufacturing facilities and offices around the world and uses fixed and floating rate debt to finance the Company's global operations. As a result, the Company is subject to business risks inherent in non-U.S. activities, including political and economic uncertainty, import and export limitations and market risk related to changes in interest rates and foreign currency exchange rates. The Company believes that the political and economic risks related to the Company's international operations are mitigated due to the geographic diversity in which the Company's international operations are located.

Effective July 1, 2018, Argentina was designated as a highly inflationary economy as the projected three-year cumulative inflation rate exceeded 100%. As such, beginning July 1, 2018, the functional currency for the Company's Argentina subsidiary became the U.S. dollar. The impact to the Company's Consolidated financial statements was not material and is included in the December 31, 2018 results. Revenue from operations in Argentina was less than 2% of total consolidated net sales for the year ended December 31, 2018.

As of December 31, 2018, the Company had no foreign currency forward exchange contracts outstanding. The Company does not hold derivatives for trading purposes.

The Company's primary currency rate exposures are related to foreign denominated debt, intercompany debt, forward exchange contracts, foreign denominated receivables and payables and cash and short-term investments. A hypothetical 10% change in currency rates would have a favorable/unfavorable impact on fair values on such instruments of \$6.0 million and on income before tax of \$2.7 million.

The Company is exposed to market risk, including changes in interest rates. The Company is subject to interest rate risk on its variable rate revolving credit facilities and term notes, which consisted of borrowings of \$35.5 million at December 31, 2018. A 100 basis point increase in the interest rate would have resulted in an increase in interest expense of approximately \$.3 million for the year ended December 31, 2018.

Included in the Company's accounting for defined benefit pension plan ("Plan") are assumptions on future discount rates and the expected return on Plan assets. The Company considers current market conditions, including changes in interest rates and Plan asset investment returns. Actuarial assumptions may differ materially from actual results due to changing market and economic conditions or higher or lower withdrawal rates. These differences may result in a significant impact to the amount of net pension expense or income recorded in the future.

A discount rate is used to determine the present value of future payments. In general, our liability increases as the discount rate decreases and decreases as the discount rate increases. The discount rate used to determine the future benefit obligation was 4.25% at both years ended December 31, 2018 and 2017. The discount rate is a significant factor in determining the amounts reported. A 50 basis point change in the discount rate of 4.25% used at December 31, 2018 would have a \$.1 million effect on the Plan's projected benefit obligation.

The Company developed the expected return on Plan assets by considering various factors which include targeted asset allocation percentages, historical returns, and expected future returns. The Company assumed an expected rate of return of 8.0% in both 2018 and 2017. A 50 basis point change in the expected rate of return would have a \$.3 million effect on the Plan's subsequent year's net periodic pension cost.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders

of Preformed Line Products Company

Opinion on the Financial Statements

We have audited the accompanying Consolidated Balance Sheets of Preformed Line Products and subsidiaries (the Company) as of December 31, 2018 and 2017, and the related Statements of Consolidated Income, Comprehensive Income, Cash Flows, and Shareholders' Equity for each of the three years in the period ended December 31, 2018 and the related notes and financial statement schedule listed in the Index at Item 15(a) (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the consolidated financial position of the Company at December 31, 2018 and 2017, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 8, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2008

Cleveland, Ohio

March 8, 2019

PREFORMED LINE PRODUCTS COMPANY

CONSOLIDATED BALANCE SHEETS

	December 31	
	2018	2017
	(Thousands of dollars, except share and per share data)	
ASSETS		
Cash and cash equivalents	$ 43,609	$ 44,358
Accounts receivable, less allowances of $3,178 ($3,325 in 2017)	73,139	73,972
Inventories - net	85,259	77,886
Prepaids	6,205	3,434
Prepaid taxes	3,169	5,266
Other current assets	2,882	2,214
TOTAL CURRENT ASSETS	214,263	207,130
Property, plant and equipment - net	102,955	108,598
Intangibles - net	8,458	10,020
Goodwill	15,621	16,544
Deferred income taxes	6,900	7,774
Other assets	10,600	9,719
TOTAL ASSETS	$ 358,797	$ 359,785
LIABILITIES AND SHAREHOLDERS' EQUITY		
Trade accounts payable	$ 26,414	$ 25,141
Notes payable to banks	9,042	864
Current portion of long-term debt	1,448	1,448
Accrued compensation and amounts withheld from employees	11,153	11,461
Accrued expenses and other liabilities	12,582	14,686
Accrued profit-sharing and other benefits	6,982	6,284
Dividends payable	1,051	1,046
Income taxes payable	815	1,903
TOTAL CURRENT LIABILITIES	69,487	62,833
Long-term debt, less current portion	24,960	34,598
Unfunded pension obligation		