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

FORM 10-K

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2018

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to_____

Commission File Number: 1-09447

KAISER ALUMINUM CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**94-3030279**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
27422 Portola Parkway, Suite 200 Foothill Ranch, California	**92610-2831**
(Address of principal executive offices)	(Zip Code)

(949) 614-1740

(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 stock, par value $0.01 per share	Nasdaq Stock Market LLC

Securities registered pursuant to section 12(g) of the Act:

None

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

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

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 þ No o

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 þ No o

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 registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment of this Form 10-K. o

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

Large accelerated filer þ	Accelerated filer o
Non-accelerated filer o	Smaller reporting company o
	Emerging growth company o

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. o

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

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant as of the last business day of the registrant's most recently completed second fiscal quarter (June 30, 2018) was approximately $1.7 billion.

As of February 15, 2019, there were 16,093,993 shares of the Common Stock of the registrant outstanding.

Documents Incorporated by Reference. Certain portions of the registrant's definitive proxy statement related to the registrant's 2019 annual meeting of stockholders are incorporated by reference into Part III of this Annual Report on Form 10-K.

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PART I

Forward-Looking Statements

This Annual Report on Form 10-K (this "Report") contains statements which constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements appear throughout this Report, including Item 1. "Business – Business Operations," Item 1A. "Risk Factors," and Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations." These forward-looking statements can be identified by the use of forward-looking terminology such as "believes," "expects," "may," "estimates," "will," "should," "plans" or "anticipates," or the negative of the foregoing or other variations or comparable terminology, or by discussions of strategy.

Readers are cautioned that any such forward-looking statements are not guarantees of future performance and involve significant risks and uncertainties and that actual results may vary from those in the forward-looking statements as a result of various factors. These factors include: the effectiveness of management's strategies and decisions; general economic and business conditions, including cyclicality and other conditions in the aerospace, automotive and other end markets we serve; developments in technology; new or modified statutory or regulatory requirements; changing prices and market conditions; and other factors discussed in Item 1A. "Risk Factors" and elsewhere in this Report. No assurance can be given that these are all of the factors that could cause actual results to vary materially from the forward-looking statements.

Readers are urged to consider these factors carefully in evaluating any forward-looking statements and are cautioned not to place undue reliance on these forward-looking statements. The forward-looking statements included herein are made only as of the date of this Report and we undertake no obligation to update any information contained in this Report or to publicly release any revisions to any forward-looking statements that may be made to reflect events or circumstances that occur, or that we become aware of, after the date of this Report except as required by law.

Item 1. *Business*

Availability of Information

We file Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Proxy Statements, any amendments to those reports and other information with the Securities and Exchange Commission ("SEC"). You may obtain the documents that we file electronically from the SEC's website at http://www.sec.gov. Our filings with the SEC are made available free of charge on our website at http://www.kaiseraluminum.com as soon as reasonably practicable after we file or furnish the materials with the SEC. News releases, announcements of upcoming earnings calls and events in which our management participates or hosts with members of the investment community, and an archive of webcasts of such earnings calls and investor events and related investor presentations, are also available on our website. Information on our website is not incorporated into this Report unless expressly noted.

Business Overview

Kaiser Aluminum Corporation, a Delaware corporation, manufactures and sells semi-fabricated specialty aluminum mill products for the following end market applications: aerospace and high strength ("Aero/HS products"); automotive ("Automotive Extrusions"); general engineering ("GE products"); and other industrial ("Other products"). Our fabricated aluminum mill products include flat-rolled (plate and sheet), extruded (rod, bar, hollows and shapes), drawn (rod, bar, pipe, tube and wire) and certain cast aluminum products. The sophistication of our products is due to the metallurgy and physical properties of the metal and the special characteristics that are required for particular end uses. We strategically choose to serve technically challenging applications for which we can deploy our core metallurgical and process technology capabilities to produce highly engineered mill products with differentiated characteristics that present opportunities for us to receive premium pricing and to create long-term profitable growth.

With respect to the global market for flat-rolled aluminum mill products, our focus is on heat treat plate and sheet for applications that require higher strength and other desired product attributes that cannot be achieved by common alloy rolled products. The primary end market applications of flat-rolled heat treat plate and sheet are Aero/HS products (which we sell globally) and GE products (which we predominantly sell within North America).

Similarly, in the areas of aluminum extrusions, we focus on demanding Aero/HS products, Automotive Extrusions and GE products that require high strength, machinability or other specific properties where we can create and maintain a defensible competitive position because of our technical expertise, strong production capability and high product quality. We primarily serve North American demand for extruded mill products.

Our rolling mill in Spokane, Washington ("Trentwood") produces heat treat plate and sheet for aerospace and general engineering end market applications. Our 11 extrusion/drawing facilities, 10 of which are in the United States and one of which is in Canada, serve aerospace, automotive or general engineering applications. In 2018, our consolidated Net sales totaled $1.6 billion on 652.4 million pounds shipped from these 12 focused facilities. Our newest facility, which we acquired on September 19, 2018, is located in Columbia, New Jersey and focuses on multi-material additive manufacturing ("3D Printing") and machining technologies for aerospace and defense, automotive, high tech and general industrial applications. We employed approximately 2,860 people at December 31, 2018.

A fundamental part of our business model is to remain neutral to the impact from fluctuations in the market price for aluminum, thereby earning profit predominately from the conversion of aluminum into semi-fabricated mill products. We refer to this as "metal price neutrality." We purchase primary and scrap, or recycled, aluminum, our main raw material, at prices that fluctuate on a monthly basis, and our pricing policies generally allow us to pass the underlying cost of metal through to our customers so that we remain neutral to metal pricing. However, for some of our higher value added revenue products sold on a spot basis, competitive dynamics may limit the amount and/or delay the timing of selling price increases to recover our increased aluminum costs, resulting in a lag up to several months during which we may be exposed to metal price risk. As a result, we can experience an adverse impact when metal prices increase, and a favorable impact to us when metal prices decline, as we and our competitors tend to defer adjusting pricing unless market dynamics require such in a declining metal cost environment. Additionally, we sometimes enter into firm-price customer sales agreements that specify a firm underlying metal price plus a conversion price. Spot sales with lagged metal price pass through and firm-price sales agreements create metal price exposure for us, which we mitigate through a hedging program with an objective to remain metal price neutral.

We have long-standing relationships with our customers, which consist primarily of blue-chip companies including leading aerospace and automotive manufacturers, tier one aerospace and automotive suppliers and metal service centers. Approximately 52% of our shipments is sold direct to manufacturers or tier one suppliers and approximately 48% is sold to metal service centers. In our served markets, we seek to be the supplier of choice by pursuing "Best in Class" customer satisfaction driven by quality, availability, service and delivery performance. We strive to differentiate our product portfolio through our broad product offering and our KaiserSelect® products, which are engineered and manufactured to deliver enhanced product characteristics with improved consistency, so as to result in better performance, lower waste and, in many cases, lower production cost for our customers.

We further strive to enhance the efficiency of product flow to our customers and our status as a supplier of choice by tightly integrating the management of our operations across multiple production facilities, product lines and target markets. Additionally, our strategy to be a supplier of choice and low cost producer is facilitated by a culture of continuous improvement that is facilitated by the Kaiser Production System ("KPS"), an integrated application of tools such as Lean Manufacturing, Six Sigma and Total Productive Manufacturing. Using KPS, we seek to continuously reduce our own manufacturing costs and eliminate waste throughout the value chain.

We strive to strengthen our competitive position through strategic capital investments aimed at increasing our capacity and expanding our manufacturing capabilities. For more than a decade, we have made aggregate organic investments of more than $700.0 million, or approximately two times depreciation. During that time, we have nearly tripled our capacity for heat treat plate at Trentwood, and have expanded our capabilities to capitalize on growth in our end markets for Aero/HS and GE products. We have also made significant investments to expand capacity and enhance our capabilities across our automotive platform to facilitate sales growth in Automotive Extrusions. In addition, we have invested, and continue to invest, to enhance manufacturing cost efficiency, to improve product quality and to promote operational security across our platform.

We believe our recent capital projects, which have been focused on further enhancing manufacturing cost efficiency and improving product quality, are critical to maintaining and strengthening our position in an increasingly competitive market environment. Details of these capital projects are discussed in Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Report under the caption, "Liquidity and Capital Resources."

Because we recognize that we operate in cyclical markets, another key component of our business model is to maintain financial strength and flexibility throughout the business cycle so that even in economic downturns we can proactively pursue strategic growth with financial and competitive strength. We manage and monitor our financial strength through routine analysis of our liquidity position under scenarios of varying business and economic cycles.

Kaiser Aluminum was founded by Henry J. Kaiser in 1946 with the lease and eventual purchase of three aluminum facilities from the United States government. Over the ensuing decades, Kaiser Aluminum grew to become a fully-integrated aluminum company involved in all aspects of the aluminum industry. From 2000 to 2010, as a result of a strategic reassessment of our competitive positions in the upstream and downstream portions of the aluminum industry, we divested or closed our non-

strategic bauxite mining, alumina refining and primary aluminum operations and focused on downstream operations where we had a competitive advantage. Consequently, we no longer participate in commodity segments within the aluminum industry and focus solely on the production of semi-fabricated specialty aluminum products for major suppliers and manufacturers for applications in our chosen aerospace/high strength, automotive, general engineering and other industrial end market applications.

Business Operations

Overview

Our business focuses on producing rolled, extruded and drawn aluminum products used principally for aerospace and defense, automotive and general engineering products that include consumer durables, electronics and products for electrical and machinery and equipment applications. See "*Selected Operational and Financial Information"* within Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Report for selected shipment and sales information for our fabricated aluminum products by end market application.

Aero/HS Products. Our Aero/HS products include heat treat plate and sheet, hard alloy extruded shapes, cold finish rod and bar, seamless drawn tube and billet used for a wide variety of end uses in the global aerospace and defense industries. Typical applications are structural aircraft components that must perform consistently under extreme variations in temperature and pressure due to frequent take-offs, landings and changes in altitude. Required physical properties include high tensile strength, superior fatigue resistance and exceptional durability even in harsh environments. We use high-strength 2000- and 7000-series alloys and apply a variety of thermal practices to manufacture our Aero/HS products to meet the demanding specifications required for such safety-critical applications. While competing materials such as titanium and composites have displaced aluminum for certain applications on several newer aircraft designs, aluminum continues to be the material used most extensively for structural aerospace and defense applications because it is light weight, can meet demanding performance requirements and is cost effective relative to other materials. Overall, the aerospace and defense industries' consumption of fabricated aluminum products is driven by factors that include airframe build rates, the mix of aircraft models being built and defense spending. Unanticipated changes in build rates and mix of aircraft models being built can trigger restocking or destocking throughout the long aerospace supply chain, temporarily impacting demand for our Aero/HS products. Growth in demand for aerospace plate has exceeded demand growth for other forms of Aero/HS products as aircraft manufacturers have migrated to monolithic component design, where a single piece of aluminum, usually a plate, is heavily machined to form a desired part rather than creating the same part by assembling sub-components made of aluminum sheet, extrusions or forgings that are affixed to one another using rivets, bolts or welds. As more applications convert to monolithic design, we expect aerospace plate demand to continue to grow at a pace higher than our other Aero/HS products.

Automotive Extrusions. Automotive Extrusions consist of extruded aluminum products for many North American automotive applications. Examples of the variety of extruded products that we supply to the automotive industry include extruded products for the body-in-white structural components, crash management systems, anti-lock braking systems and drawn tube for drive shafts. For some Automotive Extrusions, we perform limited fabrication, including sawing and cutting to length. Demand for Automotive Extrusions is determined based upon automotive build rates in North America and aluminum content. In recent years, automotive original equipment manufacturers ("OEMs") and their suppliers have, at an increasing pace, been converting many automotive components that historically were made of steel to aluminum to decrease weight without sacrificing structural integrity and safety performance and thereby achieve greater fuel efficiency standards mandated by stringent United States' Corporate Average Fuel Economy ("CAFE") regulations. We believe fuel efficiency standards along with consumer preference for larger vehicles will continue to drive growth in demand for aluminum extruded components in passenger vehicles as a replacement for the heavier weight of steel components. Our Automotive Extrusions are designed and produced to provide specific mechanical properties and performance attributes required in automotive applications across a broad mix of North American OEMs and automotive platforms. We believe that these attributes are not easily replicated by our competitors and are important to our customers, who are typically tier one automotive suppliers.

GE Products. Our broad portfolio of GE products consists primarily of 6000-series alloy plate, sheet, rod, bar, tube, wire and standard extruded shapes. The 6000-series alloy is an extremely versatile, medium-strength, heat treatable alloy that can be both extruded and rolled. Our GE products have a wide range of uses and applications, many of which involve further fabrication for numerous transportation and other industrial end market applications where machining of plate, rod and bar is intensive. For example, our GE products are used to produce armor for military vehicles, ordnances, manufacturing cells for semiconductor production, numerous electronic devices, after-market motor sport parts, tooling plate, parts for machinery and equipment, bolts, screws, nails and rivets. Demand growth and cyclicality for GE products tend to mirror broad economic patterns and

industrial activity in North America. Demand is also impacted by the destocking and restocking of inventory throughout the supply chain.

Other Products. Other products consist of extruded, drawn and cast billet aluminum products for a variety of North American industrial end uses. Demand for Other products tends to mirror broad economic patterns and industrial activity in North America. We continue to redirect our resources and production capacity to focus on strategic Aero/HS products, Automotive Extrusions and GE products, and away from our Other products.

Manufacturing Processes

We use two main processes, flat rolling and extrusion/drawing, to produce our fabricated products in the desired forms and dimensions and with the desired physical properties. Both processes start by heating aluminum, a rolling ingot or extrusion billet, to an elevated temperature at which the metal is malleable and then applying pressure in a manner that both forces the metal into a desired shape and begins the "working" of the metal to enhance its strength and related properties.

Flat Rolling. Our manufacturing process for aluminum flat-rolled products uses ingot, a large rectangular slab of aluminum, as the starter material. The ingot is processed through a series of rolling operations that can be done at elevated (hot) or room (cold) temperatures. Finishing steps may include heat treatment, annealing, stretching, leveling or slitting to achieve the desired metallurgical, dimensional and/or performance characteristics. Aluminum flat-rolled products are manufactured in a variety of alloys, a range of tempers (hardness), gauges (thickness) and widths and various finishes. Flat-rolled aluminum semi-finished products are classified as sheet (under 0.25 inches in thickness) or plate (0.25 inches or greater in thickness).

Extrusion/Drawing. Our extrusion process begins with a cast billet, which is an aluminum cylinder of varying length and diameter cut from a cast log. After heating the billet to make the metal malleable, it is placed into an extrusion press and squeezed (extruded) through a die that gives the material the desired two-dimensional cross section. The material can be quenched as it leaves the press, or processed through a post-extrusion heat treatment cycle, to control the material's physical properties. The extrusion is straightened, typically by stretching, and then cut to length before being hardened in aging ovens. Drawing is a fabrication operation in which extruded tubes and rods are pulled through a die, or drawn. The primary purpose of drawing is to reduce the diameter and wall thickness while improving physical properties and dimensions. Material may go through multiple drawing steps to achieve the final dimensional specifications. Extruded and drawn semi-fabricated products are manufactured in a variety of alloys and a range of tempers (hardness).

Additionally, some of our locations have remelt and casting operations to produce the ingot or log for flat rolling or extrusion. To produce the ingot or log, we purchase primary aluminum, recycled scrap aluminum segregated by alloys and other metals (including copper, zinc and magnesium) that are necessary to create various aluminum alloys. We also recycle internally generated scrap from our own manufacturing processes. Initially in solid form, aluminum is heated in a vessel to a temperature at which it melts. While in molten form, additional metals (aluminum alloyed scrap, alloy metals, primary aluminum or high purity aluminum) are introduced to achieve the proper mixture of chemical elements for a particular alloy. When the desired chemical composition of the molten metal has been achieved, it is poured into a mold in which the molten metal cools in a controlled manner and solidifies into a rolling ingot or extrusion log. The size of the mold determines the dimensions of the rolling ingot or extrusion log. Our casting operations at our facilities in Kalamazoo, Michigan, London, Ontario, Los Angeles, California, Newark, Ohio and Sherman, Texas produce extrusion log and cut billet for their operations and for our other facilities that do not have casting operations. Trentwood casts rolling ingot for its own consumption.

On September 19, 2018, we acquired Imperial Machine & Tool Co. ("IMT"), a leader in 3D Printing and machining technologies for aerospace and defense, automotive, high-tech and general industrial applications. IMT focuses on challenging, multi-discipline additive manufacturing projects along with intricate multi-axis computer numerical control machining on many of its printed structures critical to yielding quality end-use components.

A description of the manufacturing processes and category of products at each of our production facilities at December 31, 2018 is shown below:

Location	Types of Products	Manufacturing Process
Chandler, Arizona (Extrusion)	Aero/HS, GE	Extrusion
Chandler, Arizona (Tube)	Aero/HS	Extrusion/Drawing
Columbia, New Jersey	Aero/HS, Auto, GE, Other	Additive Manufacturing/Machining
Florence, Alabama	Aero/HS, GE, Other	Drawing
Jackson, Tennessee	Aero/HS, Auto, GE	Extrusion/Drawing
Kalamazoo, Michigan	Auto, GE	Extrusion
London, Ontario (Canada)	Auto	Extrusion
Los Angeles, California	GE, Other	Extrusion
Newark, Ohio	Aero/HS, GE	Extrusion/Rod Rolling
Richland, Washington	GE	Extrusion
Richmond, Virginia (Bellwood)	Auto, GE	Extrusion/Drawing
Sherman, Texas	Auto, GE, Other	Extrusion
Spokane, Washington (Trentwood)	Aero/HS, GE	Flat Rolling

As reflected by the table above, many of our facilities employ the same basic manufacturing process and produce the same types of products. We make a significant effort to tightly integrate the management of our multiple manufacturing locations, product lines and end market applications to most efficiently and effectively serve the needs of our customers. We centralize purchasing of our primary and scrap, or recycled, aluminum requirements and related alloying agents in order to better manage price, credit and other benefits. Our sales force and the management thereof are also significantly integrated as many customers purchase a number of different products that are produced at different plant facilities. We believe that integration of our operations allows us to capture efficiencies while allowing our facilities to remain highly focused on their specific processes and end market applications.

Raw Materials

To make our fabricated products, we purchase primary aluminum and scrap, or recycled, aluminum from third party suppliers in varying percentages depending on various market factors, including price and availability. The price we pay for primary aluminum is typically based on the average Midwest Transaction Price ("Midwest Price"), which reflects the primary aluminum supply/demand dynamics in North America. The average Midwest Price is comprised of the average London Metal Exchange ("LME") plus average Midwest premium. The average LME and the average Midwest premium for 2018, 2017 and 2016 were $0.96 + $0.19, $0.89 + $0.09 and $0.73 + $0.07, respectively. Scrap aluminum is typically purchased at a discount to the Midwest Price but can require additional processing.

In addition to selling fabricated aluminum products to third parties, certain of our production facilities supply log, billet or other intermediate material to certain of our other facilities for further value added production. As examples, our London, Ontario facility supplies billet to our Richmond, Virginia facility, and our Newark, Ohio facility supplies log and billet to our Jackson, Tennessee facility.

Pricing, Metal Price Risk Management and Hedging

As noted above, we purchase primary and scrap, or recycled, aluminum, our principal raw material, on a floating price basis typically based on the average Midwest Price. Our pricing of fabricated aluminum products is generally intended to lock in a conversion margin (representing the value added from the fabrication process(es)) and to pass metal price fluctuation through to our customers. In order to meet our objective to be metal price neutral, we manage the risk of fluctuations in the price of aluminum through our pricing policies and use of financial derivatives. Our three principal pricing mechanisms are as follows:

- *Spot price.* A majority of our customers for GE products and some of our customers for Aero/HS products pay a product price that incorporates the spot price of primary aluminum (LME plus Midwest premium) in effect at the time of shipment to a customer. Spot prices for these products change regularly based on competitive dynamics. Fluctuation in the underlying aluminum price is a significant factor influencing changes in competitive spot prices. Through spot

pricing, we generally can pass metal price risk through to customers. For some of our higher value added revenue products sold on a spot basis, however, the pass through of metal price movements can lag by several months (the timing of which depends in part on market conditions), with a favorable impact to us when metal prices decline and an adverse impact to us when metal prices increase. We, from time to time, enter into hedging transactions with third parties to minimize the impact to us of metal price swings for these higher value added revenue products.

- *Index-based price.* The pricing structure of our typical automotive and aerospace contracts calls for our customer to pay a product price that incorporates a monthly index-based price for primary aluminum, such as the average Midwest Price for primary aluminum. Index-based pricing typically allows us to pass metal price risk through to the customer and applies to virtually all of our Automotive Extrusions sales and the majority of our Aero/HS products sales.
- *Firm-price.* Some of our customers who commit to volumes and timing of delivery pay a firm-price, creating metal price risk that we must hedge. We are able to limit exposure to metal price risks created by firm-price customer sales contracts by using third-party hedging instruments. Total fabricated product shipments for which we were subject to price risk were, in millions of pounds, 200.6, 185.6 and 213.7 during 2018, 2017 and 2016, respectively.

All metal procurement and hedging activities are managed centrally to minimize transaction costs, monitor consolidated net exposures and respond promptly to changes in market factors. Hedging activities are conducted in compliance with a policy approved by our Board of Directors and administered by our hedging committee (members of which include our principal executive officer, principal financial officer and principal accounting officer).

Sales, Marketing and Distribution

Industry sales for fabricated products fluctuate in response to competitive and market dynamics. Sales are made directly to customers by our sales personnel located in the United States, Canada, Western Europe and China and by independent sales agents in other regions of Asia, Latin America and the Middle East. Our sales and marketing efforts are focused on the markets for Aero/HS products, Automotive Extrusions, GE products and Other products.

Aero/HS Products. We sell our Aero/HS products to metal service centers, as well as directly to aerospace manufacturers and tier one suppliers. Sales are made primarily under long-term agreements as well as on an order-by-order basis. We serve this market with a North American sales force focused on Aero/HS and GE products and our sales personnel in Western Europe and China.

Automotive Extrusions. Our Automotive Extrusions are sold primarily to tier one automotive suppliers. Almost all sales of Automotive Extrusions occur through direct channels using a North American direct sales force that works closely with our technical sales support organization.

GE Products. A majority of our GE products are sold to large metal service centers in North America on an order-by-order basis, with orders primarily consisting of standard catalog type items shipped with a relatively short lead-time. We service this market with a North American sales force focused on GE and Aero/HS products.

Other Products. Other products are primarily sold directly to industrial end users on an order-by-order basis using a North American direct sales force.

Customers

In 2018, we had over 740 customers, of which, our two largest customers were Reliance Steel & Aluminum Co. ("Reliance") and The Boeing Company ("Boeing"). While the loss of Reliance or Boeing as customers could have a material adverse effect on us, we believe that our long-standing relationship with each is good and that the risk of losing either as a customer is remote. See Note 16 of Notes to Consolidated Financial Statements included in this Report for information about our significant concentrations.

Research and Development

We operate three research and development centers. Our Rolling and Heat Treat Center and our Metallurgical Analysis Center are both located at Trentwood. The Rolling and Heat Treat Center has complete hot rolling, cold rolling and heat treat capabilities to simulate, in small lots, processing of flat-rolled products for process and product development on an experimental scale. The Metallurgical Analysis Center consists of a full metallographic laboratory and a scanning electron microscope to support research and development programs as well as respond to plant technical service requests. The third center, our Solidification and Casting Center, is located in Newark, Ohio and has a developmental casting unit capable of

casting billets and ingots for extrusion and rolling experiments. The casting unit is also capable of casting full size billets and ingots for processing on the production extrusion presses and rolling mills.

A significant amount of our research and development is devoted to product and process development within our production operations, largely focused on controlling the manufacturing process to improve product quality, ensure consistency and enhance one or more specific product attributes. This has resulted in the creation and delivery of our highly differentiated KaiserSelect® products.

The recent acquisition of IMT with its facility in Columbia, New Jersey provides us with significant technology and intellectual property that complements our metallurgical and application engineering expertise to further advance our capability to deliver highly engineered solutions for our customers. IMT's multi-material expertise in aluminum, titanium, tantalum, molybdenum, nickel alloys, tungsten, cobalt chromium and stainless steel offers a differentiated approach by combining traditional machining know-how and related technical capabilities with additive manufacturing expertise to drive innovative solutions.

We hold numerous patents, trademarks, trade secrets and copyrights that relate to the design, use and marketing of products. We consider this intellectual property to be important, but no single property is material to the overall conduct of our business.

Competition

The fabricated aluminum industry is highly competitive. We focus our fabricating operations on technically challenging applications for flat-rolled heat treat plate and sheet and extruded/drawn products that allow us to apply our core metallurgical and process technology capabilities to produce highly engineered products with differentiated characteristics. We seek to further differentiate ourselves from our competitors by providing a broad product offering and striving to deliver "Best in Class" customer satisfaction.

Our primary competitors in the global market for Aero/HS products are Arconic, Inc., Constellium N.V. and Aleris Corporation. In serving our North American customers for both Automotive Extrusions and GE products, our primary competitors are Arconic, Inc. and Norsk Hydro ASA, and for certain of these products, we also compete with smaller, regional participants. In North America, we also compete with general engineering heat treat plate products imported from South Africa, Europe and China. Some of our competitors are substantially larger, have greater financial resources and may have other strategic advantages.

Because many of our products are used in safety critical applications, our customers have demanding standards for product quality and consistency that make it difficult to become a qualified supplier. Suppliers must pass a rigorous qualification process to sell to both airframe and automotive manufacturers and must also make significant investments in infrastructure and specialized equipment to supply products for these high strength applications. Further, sophisticated manufacturing processes make it difficult to become a qualified supplier, even with proper equipment. For example, producing heat treat plate and sheet products, particularly for aerospace applications, requires technological expertise that only a few companies have developed through significant investment in research and development and decades of operating experience.

Employees

At December 31, 2018, we employed approximately 2,860 people, of which approximately 2,800 were employed in our manufacturing locations and approximately 60 were employed in our corporate office in Foothill Ranch, California.

The table below shows each manufacturing location, the primary union affiliation, if any, and the expiration date for the current union contracts as of December 31, 2018. As indicated below, union affiliations are with the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, AFL-CIO, CLC ("USW"), International Association of Machinists ("IAM") and International Brotherhood of Teamsters ("Teamsters"). See Note 16 of Notes to Consolidated Financial Statements in this Report for additional information about concentration of labor subject to collective bargaining agreements.

Location	Union	Contract Expiration Date
Chandler, Arizona (Extrusion)	Non-union	—
Chandler, Arizona (Tube)	USW	Apr 2021
Columbia, New Jersey	Non-union	—
Florence, Alabama	USW	Mar 2020
Jackson, Tennessee	Non-union	—
Kalamazoo, Michigan	USW	Feb 2021
London, Ontario (Canada)	USW Canada	Feb 2022
Los Angeles, California	Teamsters	Apr 2022
Newark, Ohio	USW	Sep 2020
Richland, Washington	Non-union	—
Richmond, Virginia (Bellwood)	USW/IAM	Nov 2020/Nov 2020
Sherman, Texas	IAM	Apr 2022
Spokane, Washington (Trentwood)	USW	Sep 2020

Environmental Matters

We are subject to a number of environmental laws and regulations, to potential fines or penalties assessed for alleged breaches of such environmental laws and regulations and to potential claims and litigation based upon such laws and regulations.

We have established procedures for regularly evaluating environmental loss contingencies. Our environmental accruals represent our undiscounted estimate of costs reasonably expected to be incurred based on presently enacted laws and regulations, existing requirements, currently available facts, existing technology and our assessment of the likely remediation actions to be taken. See Note 9 of Notes to Consolidated Financial Statements included in this Report.

Legal Structure

Our current corporate structure is summarized as follows:

- We directly own 100% of the issued and outstanding shares of capital stock of Kaiser Aluminum Investments Company, a Delaware corporation ("KAIC"), which functions as an intermediate holding company.
- We directly own 100% of the ownership interest in Kaiser Aluminum Beijing Trading Company, which was formed in China for the primary purpose of engaging in market development and commercialization and distribution of our products in Asia.
- KAIC owns 100% of the ownership interests of each of:
    - Kaiser Aluminum Fabricated Products, LLC, a Delaware limited liability company ("KAFP"), which directly holds the assets and liabilities associated with our manufacturing operations (excluding those assets and liabilities associated with our Columbia, New Jersey and London, Ontario facilities and certain of the assets and liabilities associated with our operations in the State of Washington) and owns 100% of the ownership interest of:
        - Kaiser Aluminum Washington, LLC, a Delaware limited liability company, which holds certain of the assets and liabilities associated with our operations in the State of Washington.
    - Kaiser Aluminum Canada Limited, an Ontario corporation, which holds the assets and liabilities associated with our London, Ontario facility;
    - Kaiser Aluminum Mill Products, Inc., a Delaware corporation, which engages in market development and commercialization and distribution of our products in the United Kingdom;
    - Trochus Insurance Co., Ltd., a corporation formed in Bermuda, which has historically functioned as a captive insurance company;

- Kaiser Aluminum France, SAS, a corporation formed in France for the primary purpose of engaging in market development and commercialization and distribution of our products in Europe; and
- Imperial Machine & Tool, Co, a New Jersey corporation, which holds certain of the assets and liabilities associated with our Columbia, New Jersey facility and owns 100% of the ownership interest of:
    - Solid Innovations, LLC, a Pennsylvania limited liability company, which holds certain of the assets and liabilities associated with our Columbia, New Jersey facility.

Item 1A. ***Risk Factors***

In addition to the factors discussed elsewhere in this Report, the risks described below are those that we believe are material to our company. The occurrence of any of the events discussed below could significantly and adversely affect our business, prospects, financial position, results of operations and cash flows as well as the trading price of our securities.

We operate in a highly competitive industry.

We compete with others in the fabricated products segment of the aluminum industry based upon quality, availability, price, customer service and delivery performance. Some of our competitors are substantially larger than we are, have greater financial resources than we do, operate more facilities than we do, are geographically closer to our customers than we are, employ more efficient or advanced technologies than we do, or have other strategic advantages. Additionally, new parties may become capable of manufacturing similar products and qualifying them with our customers, which could lead to further competitive pressure. Competitors' facilities located in certain other countries may have a manufacturing cost advantage compared to our facilities, which are located in the United States and Canada. Such foreign competitors may sell products similar to our products at lower prices as a result of having lower manufacturing costs or due to currency exchange rates that periodically favor foreign competition. Some foreign competitors may also dump their products in the United States and Canada in violation of existing trade laws. We may not be able to compete by differentiating ourselves based on the quality, availability and delivery of our products or our customer service. Additionally, we may not be able to reduce our cost structure and our selling prices to be competitive with others, and tariffs introduced to protect manufacturers in the United States and Canada from foreign price competition may not be fully effective. Increased competition could cause a reduction in our shipment volumes, our product pricing or both shipment volumes and product pricing, which could have an adverse effect on our financial position, results of operations and cash flows.

We depend on a core group of significant customers.

In 2018, Reliance and Boeing were our two largest customers, representing approximately 25% and 15%, respectively, of our net sales. Our five largest customers in total accounted for approximately 54% of our 2018 net sales. Most of these customers have one or more sizable sales agreements with us. If one or more of these customers experienced a prolonged period of adverse demand, depressed business activity or financial distress, if any of these customers breached or sought relief from its contractual obligations under its sales agreements with us or if any of these customer relationships otherwise ended or materially deteriorated and such lost business was not successfully replaced, our financial position, results of operations and cash flows could be adversely affected.

We experience fluctuation in certain costs that we cannot pass through to our customers and face pressure from our customers on pricing.

We generally are unable to pass fluctuations of certain costs through to our customers, including the cost of energy, certain raw materials and freight. Further, cost cutting initiatives that many of our customers have adopted generally result in downward pressure on pricing. If we are unable to generate sufficient productivity improvements and cost savings in the future to offset reductions in our selling prices and increases in our costs that we cannot pass through to our customers, our financial position, results of operations and cash flows could be adversely affected.

Our industry is very sensitive to foreign economic, regulatory and political factors that may adversely affect our business.

We import primary aluminum from, and manufacture fabricated products used in, foreign countries. Our financial position, results of operations and cash flows could be adversely affected by numerous factors in the politically and economically diverse jurisdictions: (i) from which our input materials are sourced; (ii) in which we operate; (iii) in which our customers operate; or (iv) in which our products are consumed or further fabricated. Such factors include but are not limited to:

- the adoption of tariffs, duties and other forms of taxation;

- trade disputes;
- the implementation of controls on imports, exports or prices;
- the imposition of currency restrictions;
- inflation relative to the United States and related fluctuations in currency and interest rates;
- government regulation in the countries in which we operate, service customers or purchase raw materials;
- civil unrest and labor problems;
- the nationalization or appropriation of rights or other assets; and
- acts or threats of war or terrorism.

The commercial aerospace industry is cyclical and downturns in the commercial aerospace industry could adversely affect our business.

We derive a significant portion of our revenue from products sold to the aerospace industry. Notwithstanding a secular growth trend spanning nearly two decades, the aerospace industry has historically been highly cyclical. Numerous factors that influence demand for new commercial aircraft could result in cancellations or deferrals of aircraft orders and a global decrease in new commercial aircraft deliveries. These factors include but are not limited to: (i) declines or reduced growth trends in global travel and airline passenger traffic; (ii) the rate of replacement of older aircraft with more fuel efficient aircraft; (iii) changing airline strategies affecting preferences for single-aisle aircraft models as opposed to twin-aisle or jumbo aircraft models; (iv) airline industry profitability; (v) the state of regional and global economies; (vi) concerns regarding terrorism or the threat of terrorism; (vii) concerns regarding pandemics of infectious disease; and (viii) safety concerns with newly introduced aircraft. Despite existing backlogs, adverse developments in any one or more of these influencing factors may lead to reduced demand for new aircraft that utilize our products, which could adversely affect our financial position, results of operations and cash flows.

Reductions in demand for our products may be more severe than, and may occur prior to, reductions in demand for our customers' products.

Most of our products undergo further fabrication by other parties before being deployed in their end uses. In particular, our Aero/HS products undergo numerous stages of further fabrication or assembly by a number of parties in the supply chain, often over the course of many months. The lead time from when we sell our Aero/HS product to when the finished product is installed on an aircraft often exceeds a year. Due to this long lead time, demand for our products may increase prior to demand for our customers' products or may decrease when our customers experience or anticipate softening demand for their products. Our customers typically respond to reduced demand for their products by depleting their inventory until their inventory falls to a new desired level. This causes a greater reduction in demand for our products than our customers experience for their products. Further, the reduction in demand for our products can be exacerbated if our customers' inventory levels had been higher than normal, if production is delayed for specific commercial airframe models, if our customers previously had purchased products from us at committed sales contract volumes that exceeded their actual need or for other reasons. The amplified reduction in demand for our products while our customers consume their inventory to meet their business needs (destocking) may adversely affect our financial position, results of operations and cash flows.

Reductions in defense spending for aerospace and non-aerospace military applications could adversely affect demand for our products.

Our products are used in a wide variety of military applications, including military aircraft, armored vehicles and ordnance. Certain military programs are used by the U.S. armed forces, as well as by the defense forces of our allied foreign powers. Military programs that currently use or in the future could use our products may be subject to changes in military strategy and government priorities. Further, while many of the U.S. government programs span several years, they are often funded annually, and funding is generally subject to congressional appropriations. When U.S. and foreign allied governments are faced with competing national priorities, there can be significant pressure to reduce defense spending, which could reduce the demand for our products and adversely affect our financial position, results of operations and cash flows.

Our customers may reduce their demand for aluminum products in favor of alternative materials.

Our products compete with other materials for use in various customer applications. For instance, the commercial aerospace industry has used and continues to evaluate the further use of titanium, composites and carbon fiber materials as alternatives to

aluminum to reduce aircraft weight and increase fuel efficiency. Additionally, while the automotive industry has continued to increase use of aluminum in vehicle production to reduce vehicle weight and increase fuel efficiency, manufacturers may revert to steel or other materials for certain applications and rely on improved drivetrain technology, more efficient engines, aerodynamics or other measures to achieve fuel efficiency goals. The willingness of customers to use materials other than aluminum could adversely affect the demand for our products, particularly our Aero/HS products and Automotive Extrusions, and thus could adversely affect our financial position, results of operations and cash flows.

Our customers may reduce their demand for our products if the government relaxes fuel efficiency standards or if oil prices remain low for a protracted period of time.

Efficient use of fossil fuels partially drives demand for aluminum in transportation applications. The U.S. Environmental Protection Agency ("EPA"), other federal regulatory agencies and regulatory agencies of certain states have generally sought to limit growth of fossil fuel usage by establishing stricter fuel efficiency standards. However, the environmental agendas of prior administrations could be reversed and previously established fuel efficiency standards could be relaxed by administrations that place less emphasis on environmental issues. Additionally, in periods of lower oil prices, the economic benefits of replacing older aircraft and automobiles with more fuel-efficient models are less compelling. A relaxation of fuel efficiency standards by the regulatory agencies or an extended period of moderate oil prices could reduce demand for new more efficient aircraft and automobiles, which could adversely affect the demand for our products and have an adverse effect on our financial position, results of operations and cash flows.

Downturns in the automotive and ground transportation industries could adversely affect our business.

The demand for our Automotive Extrusions and many of our general engineering and other industrial products is dependent on the production of cars, light trucks, SUVs and heavy duty vehicles and trailers in North America. The automotive industry is highly cyclical, as new vehicle demand is dependent on consumer spending and is tied closely to the overall strength of the North American economy. Even with the automotive industry's growing use of aluminum to reduce vehicle weight, weak demand for, or lower production of, new cars, light trucks, SUVs and heavy duty vehicles and trailers could adversely affect the demand for our products and have an adverse effect on our financial position, results of operations and cash flows.

Changes in consumer demand for particular motor vehicles could adversely affect our business.

Sensitivity to fuel prices and consumer preferences can influence consumer demand for motor vehicles that have a higher content of the aluminum Automotive Extrusions that we supply. The loss of business with respect to, or a lack of commercial success of, one or more particular vehicle models for which we are a significant supplier could have an adverse impact on our financial position, results of operations and cash flows.

We may experience difficulties in the launch or production ramp-up of new products which could adversely affect our business.

As we ramp up manufacturing processes for newly introduced products, we may experience difficulties, including manufacturing disruptions, delays or other complications, which could adversely impact our ability to serve our customers, our reputation, our costs of production and, ultimately, our financial position, results of operations and cash flows.

Unplanned events may interrupt our production operations, which may adversely affect our business.

The production of fabricated aluminum products is subject to unplanned events such as explosions, fires, inclement weather, natural disasters, accidents, equipment failures, labor disruptions, transportation interruptions and supply interruptions. Operational interruptions could significantly curtail the production capacity of a facility for a period of time. We have redundant capacity and capability to produce many of our extruded products within our manufacturing platform to mitigate our business risk from such interruptions, but interruptions at Trentwood where our production of plate and sheet is concentrated, could significantly compromise our ability to meet our customers' needs. Delayed delivery of our products to customers who require on-time delivery from us may cause customers to purchase alternative products at a higher cost, reschedule their own production or incur other incremental costs. Customers may be able to pursue financial claims against us for their incremental costs, and we may incur costs to correct such problems in addition to any liability resulting from such claims. Interruptions may also harm our reputation among actual and potential customers, potentially resulting in a loss of business. To the extent these losses are not covered by insurance, our financial position, results of operations and cash flows could be adversely affected by such events.

We may not be able to successfully implement our productivity enhancement and cost reduction initiatives that are necessary to offset competitive price pressure.

Over time, we have experienced pricing pressure on many of our products and anticipate continued pricing pressure in the future. Ongoing and heightened competitive price pressure makes it increasingly important for us to be a low cost producer. Although we have undertaken and expect to continue to undertake productivity enhancement and cost reduction initiatives, including significant investments in our facilities to improve our manufacturing efficiency, cost and product quality, we cannot make assurances that we will complete all of these initiatives, that we will fully realize the estimated cost savings from such activities, that short-to-medium term improvements from new efficiencies and lower cost structure achieved will become permanent or that we will be able to continue to reduce cost and increase productivity over the long term.

Our investment and other expansion projects may not be completed, start up as scheduled or deliver the expected capacity and other benefits.

Our ability to complete our investment and expansion projects and the timing and costs of doing so are subject to various risks associated with all major construction projects, many of which are beyond our control, including technical or mechanical problems and economic conditions. Additionally, the start-up of operations after such projects have been completed can be complicated and costly. If we are unable to fully complete these projects, if the actual costs for these projects exceed our expectations, if the start-up phase after completion is more complicated than anticipated or if the capacity and other benefits of these projects are less than anticipated, our financial position, results of operations and cash flows could be adversely affected.

Our business could be adversely affected by increases in the cost of aluminum.

Our largest inputs to produce fabricated aluminum products are primary aluminum and recycled scrap aluminum. Primary aluminum pricing fluctuates in response to global supply and demand and also reflects the impact of duties and tariffs imposed by the United States and certain other countries. Recycled scrap aluminum is generally priced at a discount to primary aluminum that loosens and tightens in response to regional aluminum scrap supply and demand. The timing and magnitude of changes in market pricing for primary and scrap aluminum are largely unpredictable. Our pricing structures for fabricated aluminum products generally allow us to pass fluctuations in the price of primary aluminum through to our customers so that we can minimize our exposure to metal price risk. However, competitive dynamics for certain of our high value added products may limit the amount or delay the timing of selling price increases on our products to recover our increased aluminum costs, resulting in a time lag during which we may be partially exposed to metal price risk. If these events were to occur, they could have an adverse effect on our financial position, results of operations and cash flows. In addition, if the market price for primary aluminum were to remain high for an extended period of time, the corresponding increase in our selling price for our fabricated products may cause some of our customers to switch to other materials in lieu of our products, causing sales of our fabricated aluminum products to decrease, which could adversely affect our financial position, results of operations and cash flows.

Our business could be adversely affected by the pricing and availability of recycled scrap aluminum.

We can efficiently use certain forms of recycled scrap aluminum in lieu of primary aluminum and alloying metals in our operations because recycled scrap aluminum trades at a discount to primary aluminum. The size of the discount to primary aluminum depends on regional scrap aluminum supply and demand dynamics. Larger discounts, generally available in periods of ample regional scrap aluminum supply relative to demand, enhance the economic advantage to us of using recycled scrap aluminum in lieu of primary aluminum and alloying metals. The timing and magnitude of changes in scrap discounts relative to primary aluminum are largely unpredictable. If the availability of recycled scrap aluminum in our regional markets were to tighten, scrap discounts relative to primary aluminum could decline and the amount of recycled scrap aluminum we could procure for use in our operations could decline, either of which could have an adverse effect on our financial position, results of operations and cash flows.

Reduced pricing for aluminum can reduce our borrowing availability and cause our liquidity to decline.

Lower aluminum prices reduce the market value of our inventory and generally cause a reduction in our accounts receivable as we pass through a lower underlying metal price to our customers. Because the amount we can borrow under our revolving credit facility is determined by the value of our receivables and inventory, which serve as collateral for the facility, a reduction in aluminum prices can reduce our borrowing availability and our liquidity, which could have an adverse effect on our financial position, results of operations and cash flows.

Our hedging programs may limit the income and cash flows we would otherwise expect to receive if our hedging program were not in place and may otherwise affect our business.

In the ordinary course of business, we enter into hedging transactions to limit our exposure to risks relating to changes in the market prices of primary aluminum, certain alloying metals, natural gas and electricity, as well as fluctuations in foreign currency exchange rates. To the extent that market prices or exchange rates at the expiration of these hedging transactions would have been more favorable to us than the fixed prices or rates established by these hedging transactions, our income and cash flows will be lower than they otherwise would have been. Our liquidity could also be adversely affected to the extent we incur margin calls from our hedging counterparties due to the market price of the underlying commodity or the foreign currency exchange rates deviating adversely from fixed, floor or ceiling prices or rates established by our outstanding hedging transactions. Our failure to satisfy certain covenants in the underlying hedging documents or the occurrence of an event of default thereunder could also trigger margin calls that could adversely impact our liquidity, financial position, results of operations and cash flows. Our hedging programs also expose us to the creditworthiness of our hedging counterparties, which is inherently difficult to assess and can change quickly and dramatically. Non-performance by a hedging counterparty could have an adverse effect on our financial position, results of operations and cash flows.

Covenants and events of default in our debt instruments could limit our ability to undertake certain types of transactions and adversely affect our liquidity.

Our revolving credit facility and the indenture governing our 5.875% Senior Notes due 2024 ("5.875% Senior Notes") contain a number of restrictive covenants that impose operating and financial restrictions on us and may limit our ability to engage in acts that may be in our long-term best interest, including restrictions on our ability to:

- incur additional indebtedness and guarantee indebtedness;
- pay dividends or make other distributions or repurchase or redeem capital stock;
- prepay, redeem or repurchase certain debt;
- issue certain preferred stock or similar equity securities;
- make loans and investments;
- sell assets;
- incur liens;
- enter into transactions with affiliates;
- alter the businesses we conduct;
- enter into agreements restricting our subsidiaries' ability to pay dividends; and
- consolidate, merge or sell all or substantially all of our assets.

In addition, restrictive covenants in our revolving credit facility require us in certain circumstances to maintain specified financial ratios and satisfy other financial condition tests. Our ability to meet those financial ratios and tests can be affected by events beyond our control and we may be unable to meet them.

A breach of the covenants or restrictions under our revolving credit facility or under the indenture governing the 5.875% Senior Notes could result in an event of default under the applicable indebtedness. Such a default may allow the creditors to accelerate the related debt. A payment default or an acceleration following an event of default under our revolving credit facility or our indenture for our 5.875% Senior Notes could trigger an event of default under the other indebtedness obligation, as well as any other debt to which a cross-acceleration or cross-default provision applies, which could result in the principal of and the accrued and unpaid interest on all such debt becoming due and payable. In addition, an event of default under our revolving credit facility could permit the lenders under our revolving credit facility to terminate all commitments to extend further credit under that facility. Furthermore, if we were unable to repay any amounts due and payable under our revolving credit facility, those lenders could proceed against the collateral granted to them to secure that indebtedness. In the event our lenders or noteholders accelerate the repayment of our borrowings, we and our subsidiaries may not have sufficient assets to repay that indebtedness.

As a result of these restrictions, we may be:

- limited in how we conduct our business and grow in accordance with our strategy;

- unable to raise additional debt or equity financing to operate during general economic or business downturns; or
- unable to compete effectively or to take advantage of new business opportunities.

In addition, our financial results, our level of indebtedness and our credit ratings could adversely affect the availability and terms of any additional or replacement financing.

More detailed descriptions of our revolving credit facility and the indenture governing our 5.875% Senior Notes are included in filings made by us with the SEC, along with the documents themselves, which provide the full text of these covenants.

Restrictive covenants in our debt instruments contain significant qualifications and exceptions.

While our revolving credit facility and the indenture governing the 5.875% Senior Notes place limitations on our ability to pay dividends or make other distributions, repurchase or redeem capital stock, make loans and investments and incur additional indebtedness, investors should be aware that these limitations are subject to significant qualifications and exceptions. The aggregate amount of payments made or incremental debt incurred in compliance with these limitations could be substantial.

As indicated above, more detailed descriptions of our revolving credit facility and the indenture governing our 5.875% Senior Notes are included in filings made by us with the SEC, along with the documents themselves, which provide the full text of these covenants.

Servicing our debt requires a significant amount of cash and we may not have sufficient cash flow from our business to pay our debt.

Our ability to make scheduled interest and principal payments on our debt obligations or to refinance such obligations depends on our financial condition and operating performance, which are subject to prevailing economic and competitive conditions and to certain financial, business, legislative, regulatory and other factors beyond our control. We may be unable to maintain a level of cash flows from operating activities sufficient to permit us to pay the interest, principal and premium, if any, on our indebtedness.

If our cash flows and capital resources are insufficient to fund our debt service obligations, we could face substantial liquidity problems and could be forced to reduce or delay investments and capital expenditures, dispose of material assets or operations, restructure or refinance our indebtedness or seek additional debt or equity capital. We may not be able to effect any such alternative measures, if necessary, on commercially reasonable terms or at all and, even if successful, those alternative actions may not allow us to meet our scheduled debt service obligations. Our revolving credit facility and the indenture governing the 5.875% Senior Notes restrict our ability to dispose of assets and use the proceeds from those dispositions and may also restrict our ability to raise debt or certain forms of equity capital to be used to repay other indebtedness when it becomes due. We may not be able to consummate asset dispositions or to obtain proceeds in an amount sufficient to meet any debt service obligations then due.

If we cannot make scheduled payments on our debt, we will be in default and holders of the 5.875% Senior Notes could declare all outstanding principal and interest to be due and payable, the lenders under our revolving credit facility could terminate their commitments to loan money, the lenders could foreclose against the assets securing their borrowings and we could be forced into bankruptcy or liquidation.

We are a holding company and depend on our subsidiaries for cash to meet our obligations and pay any dividends.

We are a holding company and conduct all of our operations through our subsidiaries, certain of which are not guarantors of our 5.875% Senior Notes or our revolving credit facility. Accordingly, repayments of our 5.875% Senior Notes and amounts due under our revolving credit facility are dependent on the generation of cash flow by our subsidiaries and their ability to make such cash available to us by dividend, loan, debt repayment or otherwise. Our subsidiaries that are not guarantors of our revolving credit facility or the 5.875% Senior Notes have no obligation to pay amounts due on the revolving credit facility or the 5.875% Senior Notes or to make funds available for that purpose. Our subsidiaries may not be able to, or may not be permitted to, make distributions to enable us to make payments in respect of our indebtedness. Each of our subsidiaries is a distinct legal entity and, under certain circumstances, legal and contractual restrictions may limit our ability to obtain cash from our subsidiaries. In the event that we do not receive distributions from our subsidiaries, we may be unable to make required interest and principal payments on our revolving credit facility, the 5.875% Senior Notes or other indebtedness.

Our inability to receive distributions from our subsidiaries, otherwise generate sufficient cash flows to satisfy our debt obligations or refinance our indebtedness on commercially reasonable terms, or at all, would adversely affect our financial position and results of operations.

Our failure to maintain satisfactory labor relations could adversely affect our business.

At December 31, 2018, approximately 62% of our employees were represented by labor unions under labor contracts with varying durations and expiration dates. Employees at Trentwood and our Newark, Ohio facility are represented by the USW under a single contract that extends through September 2020. The USW also represents employees at five other facilities, two of which have contracts expiring in 2020. As part of any labor negotiation, the future wages, healthcare benefits and excise taxes that may result therefrom, and other benefits that we agree to, could adversely affect our future financial position, results of operations and cash flows. In addition, negotiations could divert management attention, result in unsatisfactory terms and conditions, fail in coming to any agreement at all or result in strikes, work stoppages or other union-initiated work actions, any of which could have an adverse effect on our financial position, results of operations and cash flows. Moreover, the existence of labor agreements may not prevent such union-initiated work actions.

Our participation in multi-employer union pension plans may have an adverse effect on our financial performance.

We participate in several multi-employer pension plans pursuant to our collective bargaining agreements. Our contribution amounts to these plans were established by collective bargaining and, along with benefit levels and related items, will be issues in our future collective bargaining negotiations. Based on the most recent information available to us, we believe some of these plans are underfunded and may require increased contributions from participating employers to fill the funding shortfall in the future. An employer that withdraws or partially withdraws from a multi-employer pension plan may incur a withdrawal liability for the portion of the plan's underfunding that is allocable to the withdrawing employer under very complex actuarial and allocation rules. The failure of a withdrawing employer to fund these obligations can increase the burden of the remaining participating employers to make up the funding shortfall, which could have an adverse effect on our financial position, results of operations and cash flows. The increase or decrease in our contributions to these multi-employer pension plans will depend on our future collective bargaining, actions taken by trustees who manage the plans, actions of other participating employers, government regulations and the actual return on assets held in the plans, among other factors.

The USW has director nomination rights through which it may influence us, and interests of the USW may not align with our interests or the interests of our stockholders, debt holders and other stakeholders.

Pursuant to agreements we have with the USW, the USW has the right, subject to certain limitations, to nominate candidates which, if elected, would constitute 40% of our Board of Directors through December 31, 2020. As a result, the directors nominated by the USW have a significant voice in the decisions of our Board of Directors. It is possible that the USW may seek to extend the term of the agreement and its right to nominate board members beyond 2020.

Environmental compliance, clean up and damage claims may decrease our cash flow and adversely affect our business.

We are subject to numerous environmental laws and regulations with respect to, among other things: air and water emissions and discharges; the generation, storage, treatment, transportation and disposal of solid and hazardous waste; and the release of hazardous or toxic substances, pollutants and contaminants into the environment. Compliance with these environmental laws is and will continue to be costly.

We have accrued and will accrue for costs that are reasonably expected to be incurred based on available information with respect to fines, penalties and expenses for alleged breaches of environmental laws and investigations and environmental clean up activities with respect to our continuing operations and certain of our former operations. However, actual costs could exceed accrued amounts, perhaps significantly, and such expenditures could occur sooner than anticipated, which could adversely affect our financial position, results of operations and cash flows.

Additionally, we may be subject to new claims from governmental authorities or third parties related to alleged injuries to the environment, human health or natural resources, including claims with respect to waste disposal sites, the clean up of sites currently or formerly used by us or exposure of individuals to hazardous materials. New laws or regulations or changes to existing laws and regulations may also be enacted, including government mandated green initiatives and limitations on carbon emissions that increase the cost or complexity of compliance. Costs related to any new investigation, clean-up or other remediation, fines or penalties, resolution of third-party claims or compliance with new or amended laws and regulations may be significant and could have an adverse effect on our financial position, results of operations and cash flows.

Governmental regulation relating to greenhouse gas emissions may subject us to significant new costs and restrictions on our operations.

Laws enacted by the U.S. Congress or policies of the EPA could regulate greenhouse gas emissions through cap-and-trade systems, carbon taxes or other programs under which emitters would be required to buy allowances to offset emissions of greenhouse gas, pay carbon based taxes, make significant capital investments, alter manufacturing practices or curtail production. In addition, several states, including the state of Washington, in which we have manufacturing operations, have considered and continue to consider various greenhouse gas regulation and reduction programs through legislative proposals, executive orders and ballot initiatives. Certain of our manufacturing plants use significant amounts of electricity and natural gas and certain of our plants emit amounts of greenhouse gas above certain minimum thresholds that have or may be imposed. Greenhouse gas regulations could restrict our access to natural gas and limit our ability to use natural gas and increase the price we pay for natural gas and electricity, any one of which could significantly increase our costs, reduce our competitiveness in the global economy or otherwise adversely affect our business, operations or financial results.

We may be subject to risks relating to our information technology systems.

We rely on information technology networks and systems to process, transmit and store electronic information, operate our business and communicate among our locations and with our customers, suppliers and other interested parties. Such information technology systems are subject to interruption or damage from power outages, cyber security breaches and other types of unauthorized access and/or use, and cyberattacks in the form of computer viruses, worms, malicious computer programs, denial-of-service attacks and other illegal or illicit means. Cyberattack and security breach strategies and methods continue to evolve and become more sophisticated. Accordingly, preventing intrusions and detecting successful intrusions and defending against them continues to be more difficult and requires ever-increasing vigilance.

A breach in cyber security could result in manipulation and destruction of sensitive data, cause critical systems to malfunction, be damaged or shut down, and lead to disruption to our operations and production downtimes, potentially for lengthy periods of time. Theft of personal or other confidential data and sensitive proprietary information could also occur as a result of a breach in cyber security, exposing us to costs and liabilities associated with privacy and data security laws in the jurisdictions in which we operate. Additionally, a breach could expose us, our customers, our suppliers and our employees to risks of misuse of such information. Such negative consequences of cyberattacks or security breaches could adversely affect our reputation, competitive position, business or results of operations. The lost profits and increased costs related to cyber or other security threats or disruptions may not be fully insured against or indemnified by other means.

In addition, from time to time we may implement new technology systems or replace and/or upgrade our current information technology systems. These upgrades or replacements may not improve our productivity to the levels anticipated and may subject us to inherent costs and risks associated with implementing, replacing and updating these systems, including potential disruption of our internal control structure, substantial capital expenditures, demands on management time and other risks of delays or difficulties in transitioning to new systems or of integrating new systems into other existing systems. Our inability to prevent information technology system disruptions or to mitigate the impact of such disruptions could have an adverse effect on us.

We may not be able to utilize all of our net operating loss carryforwards.

Our ability to utilize our net operating loss carryforwards and other tax attributes could be limited to the extent they expire before we fully utilize them or if changes in federal or certain state tax laws reduce or eliminate our ability to use them to offset income taxes. Additionally, a change in our ownership, specifically a change in ownership of more than 50% during any period of 36 consecutive months ("ownership change"), as determined under the Internal Revenue Code of 1986 ("Code"), could reduce our ability to fully use our net operating loss carryforwards and other significant tax attributes.

To prevent an unintended ownership change that could compromise our tax attributes, our stockholders have (a) approved an amendment to our certificate of incorporation to implement stock transfer restrictions ("Transfer Restrictions") that will expire in accordance with their terms on May 26, 2019 and (b) ratified a tax asset protection rights plan ("Tax Asset Rights Plan"), which will expire in accordance with its terms on April 7, 2019. While both were designed to preserve our ability to fully utilize our net operating loss carryforwards and other significant tax attributes to offset future taxable income, neither the Transfer Restrictions nor the Tax Asset Rights Plan completely protects us from an ownership change that could limit our use of our net operating loss carryforwards and other valuable tax attributes. Furthermore, as indicated above, both the Transfer Restrictions and the Tax Asset Rights Plan will expire in 2019 and are not expected to be replaced.

After our net operating loss carryforwards and other significant tax attributes are fully utilized or if they become unavailable to us before we fully utilize them, our future income will not be shielded from federal and state income taxation and the funds otherwise available for general corporate purposes would be reduced.

We could engage in or approve transactions involving our common shares that impair the use of our federal income tax attributes.

Section 382 of the Code affects our ability to use our federal income tax attributes, including our net operating loss carryforwards, following a more than 50% change in ownership during any period of 36 consecutive months, an ownership change, as determined under the Code. Certain transactions may be included in the calculation of an ownership change, including transactions involving our repurchase or issuance of our common shares. When we engage in or approve any transaction involving our common shares that may be included in the calculation of an ownership change, our practice is to first perform the calculations necessary to confirm that our ability to use our federal income tax attributes will not be affected. These calculations are complex and reflect certain necessary assumptions. Accordingly, it is possible that we could approve or engage in a transaction involving our common shares that causes an ownership change and inadvertently impairs the use of our federal income tax attributes. Furthermore, we may intentionally pursue a transaction that impairs the use of our federal income tax attributes if our strategy changes.

The Tax Asset Rights Plan and Transfer Restrictions implemented by us to protect our tax attributes could hinder the market for our common stock.

To reduce the risk that an ownership change would jeopardize the preservation of our U.S. federal income tax attributes, including net operating loss carryforwards, for purposes of Sections 382 and 383 of the Code, we adopted the Tax Asset Rights Plan and implemented the Transfer Restrictions as discussed above. The Tax Asset Rights Plan and the Transfer Restrictions may make our stock less attractive to large institutional holders, discourage potential acquirers from attempting to take over our company, limit the price that investors might be willing to pay for shares of our common stock and otherwise hinder the market for our common stock. As discussed above, each of the Tax Asset Rights Plan and the Transfer Restrictions will expire in 2019 and are not expected to be replaced.

The Transfer Restrictions implemented by us to protect our tax attributes may void transactions in our common stock effected by 5% stockholders.

The Transfer Restrictions in our certificate of incorporation restrict the transfer of our equity securities if, as a result of the transfer, either any person would become the owner of 4.99% or more of our stock as determined under Section 382 of the Code ("5% stockholder") or the percentage stock ownership of any 5% stockholder would be increased. Any transfer that violates the Transfer Restrictions is void and will be unwound as provided in our certificate of incorporation. The Transfer Restrictions are subject to exceptions set forth in our certificate of incorporation and will expire in accordance with their terms on May 26, 2019. As discussed above, each of the Tax Asset Rights Plan and the Transfer Restrictions will expire in 2019 and are not expected to be replaced.

We could engage in or approve transactions involving our common shares that adversely affect significant stockholders.

Under the Transfer Restrictions in our certificate of incorporation, prior to May 26, 2019, our 5% stockholders are, in effect, required, and under the Tax Asset Rights Plan, prior to April 7, 2019, encouraged, to seek the approval of, or a determination by, our Board of Directors before they engage in certain transactions involving our common stock. We could engage in or approve transactions involving our common stock that limit our ability to approve future transactions involving our common stock by our 5% stockholders without impairing the use of our federal income tax attributes. In addition, we could engage in or approve transactions involving our common stock that cause stockholders owning less than 5% to become 5% stockholders, resulting in those stockholders having to seek the approval of, or a determination by, our Board of Directors before they could engage in certain future transactions involving our common stock. For example, share repurchases reduce the number of our common shares outstanding and could cause a stockholder holding less than 4.99% of our stock as determined under Section 382 of the Code to become a 5% stockholder even though it has not acquired any additional shares.

Payment of dividends may not continue in the future and our payment of dividends and stock repurchases are subject to restrictions.

Our Board of Directors has declared a cash dividend for each quarter since the summer of 2007. In addition, our Board of Directors has authorized a stock repurchase program. The future declaration and payment of dividends and the purchase of our shares under the repurchase program, if any, are at the discretion of the Board of Directors and will depend on a number of

factors, including our financial and operating results, financial position and anticipated cash requirements. Additionally, our revolving credit facility and the indenture for our 5.875% Senior Notes impose limitations on our ability to pay dividends and repurchase our common shares. We can give no assurance that dividends will be declared and paid, that dividends will not be reduced or that purchases of our shares pursuant to our repurchase program will occur in the future.

Delaware law and our governing documents may impede or discourage a takeover, which could adversely affect the value of our common stock.

Provisions of Delaware law and our certificate of incorporation and bylaws may discourage a change of control of our company or deter tender offers for our common stock. We are currently subject to anti-takeover provisions under Delaware law. These anti-takeover provisions impose various impediments to the ability of a third party to acquire control of us. Additionally, provisions of our certificate of incorporation and bylaws impose various procedural and other requirements, which could make it more difficult for stockholders to effect certain corporate actions. For example, our certificate of incorporation authorizes our Board of Directors to determine the rights, preferences and privileges and restrictions of unissued shares of preferred stock without any vote or action by our stockholders. As a result, our Board of Directors can authorize and issue shares of preferred stock with voting or conversion rights that could adversely affect the voting or other rights of holders of common stock. Our certificate of incorporation also divides our Board of Directors into three classes of directors who serve for staggered terms. A significant effect of a classified Board of Directors may be to deter hostile takeover attempts because an acquirer could experience delays in replacing a majority of directors. Moreover, stockholders are not permitted to call a special meeting.

In addition, while the Transfer Restrictions in our certificate of incorporation and the Tax Asset Rights Plan are designed to reduce the risk that an ownership change could limit our ability to fully utilize our net operating loss carryforwards and other significant tax attributes to offset future taxable income, both could have the effect of delaying or deterring a change of control of our company and may limit the price that investors might be willing to pay for shares of our common stock. The Tax Asset Rights Plan will expire in accordance with its terms on April 7, 2019, and the Transfer Restrictions will expire in accordance with their terms on May 26, 2019.

In addition to the risks discussed above, we are subject to a variety of other risks as a publicly traded U.S. manufacturing company.

As a publicly traded U.S. manufacturing company, we are subject to a variety of other risks, each of which could adversely affect our financial position, results of operations or cash flows, or the price of our common stock. These risks include but are not limited to:

- the effects of global economic uncertainty;
- regulations that subject us to additional capital or margin requirements or other restrictions that make it more difficult to hedge risks associated with our business or increase the cost of our hedging activities;
- the ability to attract and retain key management and other personnel and develop effective succession plans;
- compliance with a wide variety of health and safety laws and regulations and changes to such laws and regulations;
- disputes, legal proceedings or investigations, whether meritorious or not, with respect to a variety of matters, including matters related to personal injury, employees, taxes, contracts and product liability;
- pursuing growth through acquisitions, including the ability to identify acceptable acquisition candidates, finance and consummate acquisitions on favorable terms and successfully integrate acquired assets or businesses;
- the exertion of influence over us, individually or collectively, by a few entities with concentrated ownership of our stock;
- protection of intellectual property, including patents, trademarks, trade secrets and copyrights, from infringement by others and the potential defense of claims, whether meritorious or not, alleging the unauthorized use of the intellectual property of others;
- taxation by multiple jurisdictions and the impact of such taxation on effective tax rate and the amount of taxes paid;
- changes in tax laws and regulations;
- new or modified legislation related to health care;
- compliance with Section 404 of the Sarbanes-Oxley Act of 2002, including the potential impact of compliance failures; and

- failure to meet the expectations of investors, including as a result of factors beyond the control of an individual company.

Item 1B. ***Unresolved Staff Comments***

None.

Item 2. ***Properties***

Information regarding the location, size and ownership of our principal production facilities as of December 31, 2018 is below:

Location	Square footage	Owned or Leased
Chandler, Arizona (Extrusion)	115,000	Leased[1]
Chandler, Arizona (Tube)	101,700	Leased[1]
Columbia, New Jersey	27,200	Owned
Florence, Alabama	252,000	Owned
Jackson, Tennessee	310,000	Owned
Kalamazoo, Michigan	465,000	Leased[2]
London, Ontario (Canada)	311,000	Owned
Los Angeles, California	183,000	Owned
Newark, Ohio	1,293,000	Owned
Richland, Washington	45,000	Leased[3]
Richmond, Virginia (Bellwood)	449,000	Owned
Sherman, Texas	360,000	Owned
Spokane, Washington (Trentwood)	2,874,000	Owned/Leased[4]
Total	6,785,900	

1. The Chandler, Arizona (Extrusion) and Chandler, Arizona (Tube) facilities are each subject to leases with terms that expire in 2023 and 2033, respectively, subject to certain extension rights held by us.

2. The Kalamazoo, Michigan facility is subject to a lease with a 2033 expiration date, subject to certain extension rights held by us.

3. The Richland, Washington facility is subject to a lease with a 2021 expiration date.

4. Trentwood consists of 2,753,000 square feet, which is owned by us, and 121,000 square feet, which is subject to a lease with a 2020 expiration date and a renewal option subject to certain terms and conditions.

Production facilities and equipment are generally in good condition and suitable for their intended uses. For additional information regarding our production facilities, see the table under Item 1. Business "Business Operations - Manufacturing Processes" of this Report.

Our corporate headquarters located in Foothill Ranch, California consists of 36,000 square feet at December 31, 2018 and is subject to a lease that expires in 2019. In February 2019, we exercised our renewal option and extended the lease expiration to 2024.

Item 3. ***Legal Proceedings***

None.

Item 4. ***Mine Safety Disclosures***

Not applicable.

PART II

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

Market Information

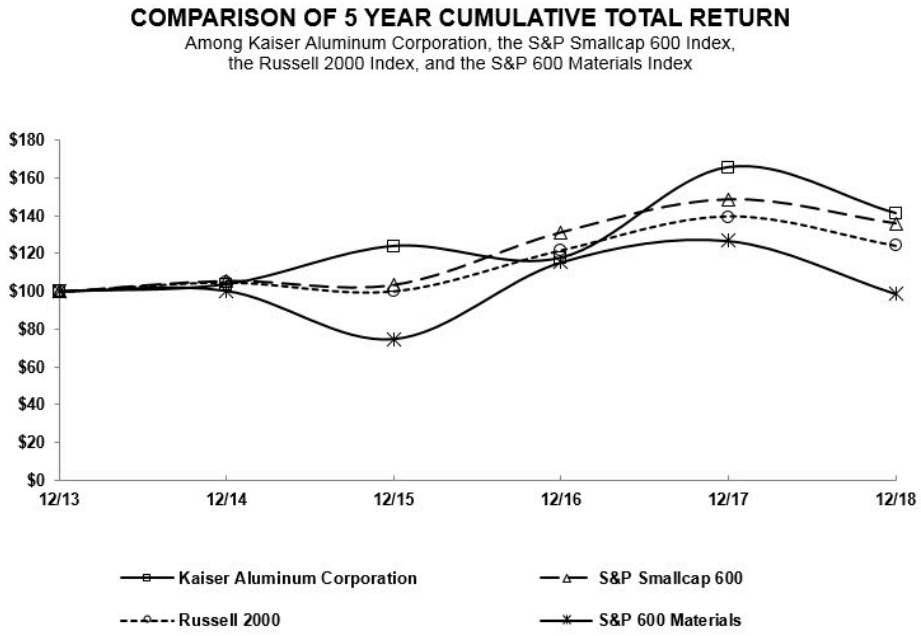
Our outstanding common stock is traded under the ticker symbol "KALU" on the Nasdaq Global Select Market.

Holders

As of February 15, 2019, there were approximately 552 holders of record of our common stock.

Stock Performance Graph

The following graph compares the cumulative total shareholder return on our common stock with: (i) the Russell 2000 index; (ii) the S&P SmallCap 600 index; and (iii) the S&P SmallCap 600 Materials index. We are a component of each of these indices. The graph assumes: (i) an initial investment of $100 as of December 31, 2013 and (ii) reinvestment of all dividends. The performance graph is not necessarily indicative of the future performance of our stock price.



Issuer Repurchases of Equity Securities

The following table provides information regarding our repurchases of our common shares during the quarter ended December 31, 2018:

	Equity Incentive Plans		Stock Repurchase Plan		
	Total Number of Shares Purchased[1]	Average Price per Share	Total Number of Shares Purchased[2]	Average Price per Share	Maximum Dollar Value of Shares that May Yet Be Purchased Under the Program (millions)[2]
October 1, 2018 - October 31, 2018	13	$ 96.69	82,680	$ 99.98	$ 170.0
November 1, 2018 - November 30, 2018	—	—	99,621	96.25	$ 160.4
December 1, 2018 - December 31, 2018	16	97.73	130,410	90.23	$ 148.7
Total	29	$ 97.28	312,711	$ 94.73	N/A

1. Under our equity incentive plans, participants may elect to have us withhold common shares to satisfy minimum statutory tax withholding obligations arising from the recognition of income and the vesting of restricted stock, restricted stock units and performance shares. When we withhold these shares, we are required to remit to the appropriate taxing authorities the market price of the shares withheld by us on the date of withholding. The withholding of common shares by us could be deemed a purchase of such common shares. All such shares withheld by us were canceled on the applicable vesting dates or dates on which income to the employees was recognized, and the number of shares withheld was determined based on the closing price per common share as reported on the Nasdaq Global Select Market on such dates.

2. In April 2017, we announced that our Board of Directors authorized us to repurchase an indeterminate number of shares of our common stock at an aggregate market value of up to $100.0 million. In September 2018, our Board of Directors authorized us to repurchase an indeterminate number of shares of our common stock at an aggregate market value of up to $100.0 million. The September 2018 authorization was in addition to the share repurchase amount authorized in April 2017. Neither authorization has an expiration date.

Item 6. ***Selected Financial Data***

The following table represents our selected financial data. The table should be read in conjunction with Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Item 8. "Financial Statements and Supplementary Data" of this Report (in millions of dollars, except shipments and per share amounts):

	Year Ended December 31,				
	2018	2017	2016	2015	2014
Shipments (mm lbs)	652.4	625.7	614.3	615.4	588.8
Net sales	$ 1,585.9	$ 1,397.5	$ 1,330.6	$ 1,391.9	$ 1,356.1
Net income (loss)[1]	$ 91.7	$ 45.4	$ 91.7	$ (236.6)	$ 71.8
Net income (loss) per share - Basic	$ 5.53	$ 2.67	$ 5.15	$ (13.76)	$ 4.02
Net income (loss) per share - Diluted	$ 5.43	$ 2.63	$ 5.09	$ (13.76)	$ 3.86
Cash dividends declared per common share	$ 2.20	$ 2.00	$ 1.80	$ 1.60	$ 1.40
Capital expenditures	$ 74.1	$ 75.5	$ 76.1	$ 63.1	$ 59.4
Depreciation and amortization expense	$ 43.9	$ 39.7	$ 36.0	$ 32.4	$ 31.1

1. Net income (loss) for 2017 included goodwill impairment and the impact of the Tax Cuts and Jobs Act (see Note 3 and Note 13, respectively, of Notes to Consolidated Financial Statements included in this Report for further details). Net

income (loss) for 2015 included the impact of removing the net assets of the voluntary employees' beneficiary association that provides benefits for eligible retirees represented by certain unions and their surviving spouses and eligible dependents ("Union VEBA") and related deferred tax liabilities from our Consolidated Balance Sheets (see Note 4 of Notes to Consolidated Financial Statements included in this Report for further details).

	December 31,				
	2018	2017	2016	2015	2014
Assets:					
Total assets[1]	$ 1,419.3	$ 1,385.2	$ 1,443.5	$ 1,246.9	$ 1,739.0
Cash and short-term investments	$ 162.3	$ 234.8	$ 286.2	$ 102.5	$ 291.7
Long-term borrowings (at face value), including amounts due within one year	$ 375.0	$ 375.0	$ 375.0	$ 197.8	$ 400.0

1. The 2015 Total assets reflected the removal of the Union VEBA net assets from our Consolidated Balance Sheets during the first quarter of 2015.

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

Management's discussion and analysis of financial condition and results of operations ("MD&A") is designed to provide a reader of our financial statements with a narrative from the perspective of our management on our financial condition, results of operations, liquidity and certain other factors that may affect our future results. Our MD&A is presented in the following sections:

- Management Review of 2018 and Outlook for the Future;
- Results of Operations;
- Liquidity and Capital Resources;
- Contractual Obligations, Commercial Commitments and Off-Balance Sheet Arrangements;
- Critical Accounting Estimates and Policies; and
- New Accounting Pronouncements.

Our MD&A should be read in conjunction with the consolidated financial statements and related notes included in Item 8. "Financial Statements and Supplementary Data" of this Report.

This information contains certain non-GAAP financial measures. A non-GAAP financial measure is defined as a numerical measure of a company's financial performance that excludes or includes amounts so as to be different than the most directly comparable measure calculated and presented in accordance with generally accepted accounting principles ("GAAP") in the statements of income, balance sheets or statements of cash flows of the company. We have provided a reconciliation of non-GAAP financial measures to the most directly comparable financial measure in the accompanying tables. We have also provided discussion of the reasons we believe that presentation of the non-GAAP financial measures provide useful information to investors, as well as any additional ways in which we use the non-GAAP financial measures. The non-GAAP financial measures used within this presentation are value added revenue, operating income excluding non-run-rate items and ratios related thereto. These measures are presented because management uses this information to monitor and evaluate financial results and trends and believes this information to also be useful for investors.

In the discussion of operating results below, we refer to certain items as "non-run-rate items." For purposes of such discussion, non-run-rate items are items that, while they may recur from period-to-period: (i) are particularly material to results; (ii) affect costs primarily as a result of external market factors; and (iii) may not recur in future periods if the same level of underlying performance were to occur. Non-run-rate items are part of our business and operating environment but are worthy of being highlighted for the benefit of readers of our financial statements. Our intent is to allow users of the financial statements to consider our results both in light of and separately from such items. For a reconciliation of operating income excluding non-run-rate items to operating income, see "Results of Operations - *Selected Operational and Financial Information*" below.

Our pricing policies and hedging program are intended to significantly reduce or eliminate the impact on our profitability of fluctuations in underlying metal price so that our earnings are predominantly associated with the conversion of aluminum to semi-fabricated mill products. To allow users of our financial statements to consider the impact of metal cost on our Net sales, we disclose Net sales as well as "value added revenue," which is Net sales less the Hedged Cost of Alloyed Metal. As used in this discussion, "Hedged Cost of Alloyed Metal" is the cost of our metal inputs at the average Midwest Transaction Price of aluminum ("Midwest Price") plus the cost of alloying elements and any realized gains and/or losses on settled hedges related to the metal sold in the referenced period. The average Midwest Price reflects the primary aluminum supply/demand dynamics in North America. For a reconciliation of value added revenue to Net sales, see "Results of Operations - *Selected Operational and Financial Information*" below.

Management Review of 2018 and Outlook for the Future

Review

For the full year 2018, strong demand drove record shipments and value added revenue, up 4% and 5%, respectively, over the prior year. Record commercial airframe builds drove underlying demand growth, and aerospace supply chain destocking began moderating in the second half of 2018, further enhancing demand growth. Aluminum extrusion content continued to increase on solid North American automotive builds, and demand for general engineering ("GE products") and other industrial ("Other products") remained strong throughout the year with normal second half seasonal weakness. Operating income excluding non-run-rate items improved year-over-year as the favorable impact of sales volume and mix was partially offset by an adverse pricing impact due to unrecovered high contained metal and freight costs and Section 232 tariffs.

Our results from the second half of 2018 were a record for the last six months of a year. Aerospace supply chain destocking began to moderate, and underlying commercial airframe demand was strong as build rates continued to grow. In addition, we realized the full impact of proactive price increases implemented during the second quarter of 2018. We have initiated additional price increases in 2019 for certain non-contract GE products and aerospace and high strength products ("Aero/HS products") and, with growing demand and improving prices, we have positive momentum as we begin 2019.

Outlook

As we look to our outlook for Aero/HS products, we expect growing build rates and further moderation in commercial aerospace supply chain destocking as airframe manufacturers continue to address the ongoing greater than eight-year order backlog. In addition, the recent increase in defense spending from U.S. allies strengthens the outlook for the F-35 Joint Strike Fighter program, the F/A-18 Super Hornet and other military applications.

For automotive extrusion applications ("Automotive Extrusions"), we expect 2019 will be a transition year as many of our existing programs are reaching end of life and we have a number of new program launches throughout the year. New program launches are inherently unpredictable due to timing in the launch of the new vehicle for which we are a supplier as there a multitude of other suppliers and processes for the automotive manufacturers to qualify, in addition to uncertainty of market sentiment and consumer acceptance of the new vehicles. While aluminum extrusion content on automotive platforms is expected to continue to increase, 2019 North American build rates are expected to be slightly lower than 2018.

We are cautiously optimistic about underlying demand for our GE products, despite uncertainty around global trade negotiations and economic conditions. As we look forward, we expect continuing strong demand and pricing for our applications.

We are planning significant maintenance activity for the casting complex, hot line and large stretcher at our Trentwood facility in the second quarter of 2019. Based on previous experience involving similar maintenance outages, we estimate an impact to earnings of approximately $15.0 million from incremental maintenance costs and lost production and sales compared to steady-state operations.

Overall, for the full year 2019, we expect strong demand to support a low to mid-single digit percent increase in both shipments and value added revenue year-over-year. We also expect Operating income excluding non-run-rate items as a percentage of Net sales to improve slightly in 2019, with higher shipments and improved pricing more than offsetting the impact of our Trentwood facility maintenance outage. Total capital spending in 2019 is expected to be approximately $80.0 million to $90.0 million.

Results of Operations

Fiscal 2018 Summary

- Our reported operating income for 2018 was $143.6 million, including a net charge of $17.3 million related to items that we considered to be non-run-rate. See "*Selected Operational and Financial Information*" below for further discussion of our operating income before non-run-rate items.
- Our liquidity was approximately $454.3 million as of December 31, 2018, comprised of our cash balances, short-term investments and net borrowing availability under our revolving credit facility (on which there were no outstanding borrowings).
- We invested $74.1 million in capital spending for further capacity expansion, manufacturing cost efficiency, product quality and operational security. See "*Liquidity and Capital Resources - Capital Expenditures and Investments*" below.
- We acquired IMT, a leader in multi-material additive manufacturing and machining technologies, for $43.2 million in cash, net of cash received.
- We paid a total of approximately $37.7 million, or $2.20 per common share, in cash dividends to stockholders, including holders of restricted stock, and dividend equivalents to holders of certain restricted stock units.
- We repurchased 617,151 shares of common stock in 2018 for a total cost of $61.9 million pursuant to a stock repurchase program authorized by our Board of Directors.

Consolidated Selected Operational and Financial Information

The following data should be read in conjunction with our consolidated financial statements and the notes thereto included in Item 8. "Financial Statements and Supplementary Data" of this Report.

Net Sales. We reported Net sales for 2018 of $1,585.9 million, compared to $1,397.5 million for 2017 and $1,330.6 million for 2016. The increase in Net sales during 2018 compared to 2017 reflected a 26.7 million pound (4%) increase in shipment volume and a $0.20/lb (9%) increase in average realized sales price per pound caused primarily by a 0.19/lb (20%) increase in average Hedged Cost of Alloyed Metal prices per pound. The shipment volume increase reflected: (i) a 15.8 million pound (7%) increase in Aero/HS products due to growing underlying demand, aerospace supply chain destocking and the benefit of incremental capacity from recent investments at our Trentwood facility; (ii) a 3.4 million pound (3%) increase in Automotive Extrusions primarily related to higher crash management system shipments; (iii) a 2.2 million pound (1%) increase in GE products; and (iv) a 5.3 million pound (20%) increase in Other products primarily driven by higher truck and trailer shipments. See the table in "*Selected Operational and Financial Information*" below for further details.

The increase in Net sales during 2017 compared to 2016 primarily reflected an 11.4 million pound (2%) increase in shipment volume and $0.06/lb (3%) increase in average realized sales price per pound. Shipment volume increased due primarily to: (i) an 8.1 million pound (9%) increase in Automotive Extrusions primarily related to significantly higher crash management system shipments and (ii) a 14.8 million pound (6%) increase in GE products reflecting the continued solid underlying demand for our general engineering applications, partially offset by a 10.2 million pound (4%) decrease in Aero/HS products due to: (i) aerospace supply chain destocking and (ii) temporary plate capacity constraints due to the installation of upgraded equipment and controls at our Trentwood facility. The increase in average realized sales price per pound reflected a 0.12/lb (14%) increase in average Hedged Cost of Alloyed Metal prices per pound, partially offset by a 0.06/lb (5%) decrease in average value added revenue per pound. The decrease in average value added revenue per pound reflected competitive price pressure on spot sales of Aero/HS and GE products and a leaner value added product mix with less volume of Aero/HS products and more volume of Automotive Extrusions and GE products. See the table in "*Selected Operational and Financial Information*" below for further details.

Cost of Products Sold, Excluding Depreciation and Amortization and Other Items. Cost of products sold, excluding depreciation and amortization and other items ("Cost of Products Sold") for 2018 totaled $1,300.7 million, or 82% of Net sales, compared to $1,085.9 million, or 78% of Net sales, in 2017 and $1,000.8 million, or 75% of Net sales, in 2016. The increase during 2018 compared to 2017 of $214.8 million was comprised of: (i) a $146.7 million increase in Hedged Cost of Alloyed Metal; (ii) an unfavorable impact of $37.1 million related to our adoption of Accounting Standards Update ("ASU") No. 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities* ("ASU 2017-12") (see Note 1 of Notes to Consolidated Financial Statements included in this Report); (iii) $10.4 million of higher freight costs due to new federal regulations; (iv) a $17.6 million increase in net manufacturing conversion and other costs due to higher shipment volume, as discussed in "*Net Sales*" above; and (v) $3.0 million of higher tariff costs on our cross border transactions within our internal supply chain. Of the $146.7 million increase in Hedged Cost of Alloyed Metal, $120.7 million was due to

higher hedged metal prices and $26.0 million was due to higher shipment volume, as discussed in "*Net Sales*" above. The $37.0 million unfavorable impact reflected our adoption of ASU 2017-12 (see Note 1 of Notes to Consolidated Financial Statements included in this Report) as unrealized gain or loss on derivative instruments beginning January 1, 2018 was recognized within Other comprehensive loss, net of tax. See "*Selected Operational and Financial Information*" below for a further discussion of the comparative results of operations for 2018 and 2017.

The increase during 2017 compared to 2016 of $85.1 million was comprised of a $93.6 million increase in Hedged Cost of Alloyed Metal, partially offset by a $7.8 million reduction in net manufacturing conversion and other costs and a favorable impact of $0.7 million related to our adoption of ASU 2017-12. The reduction in net manufacturing conversion and other costs reflected: (i) a $10.9 million favorable impact from efficient raw material usage, primarily due to favorable scrap aluminum pricing and (ii) $1.6 million of lower energy pricing, partially offset by: (i) $3.2 million of higher planned major maintenance expense and (ii) a net $1.5 million manufacturing cost increase as incremental conversion costs associated with higher shipment volume in 2017 were mitigated by favorable manufacturing cost efficiency. Of the $93.6 million increase in Hedged Cost of Alloyed Metal, $83.9 million was due to higher hedged metal prices and $9.7 million was due to higher shipment volume, as discussed in "*Net Sales*" above. See "*Selected Operational and Financial Information*" below for a further discussion of the comparative results of operations for 2017 and 2016.

Lower of Cost or Market Inventory Write-Down. See Note 1 of Notes to Consolidated Financial Statements included in this Report for information on our inventory lower of cost or market value adjustment.

Depreciation and Amortization. Depreciation and amortization for 2018 was $43.9 million compared to $39.7 million for 2017 and $36.0 million for 2016. The $4.2 million increase in Depreciation and amortization in 2018 compared to 2017 was due to various construction-in-progress projects being placed in service during 2018 and the second half of 2017 related primarily to the Trentwood modernization initiative and other manufacturing cost efficiency and product quality initiatives. The $3.7 million increase in Depreciation and amortization in 2017 compared to 2016 was due primarily to various construction-in-progress projects being placed in service during 2017 and the second half of 2016 related to capital upgrades at several of our extrusion facilities to support automotive programs that launched over the next few years and other manufacturing cost efficiency and product quality initiatives.

Selling, General, Administrative, Research and Development ("SG&A and R&D"). SG&A and R&D expense totaled $96.3 million in 2018 compared to $97.5 million in 2017 and $105.0 million in 2016. The decrease during 2018 was due primarily to: (i) a $3.0 million decrease in long-term incentive compensation expense and (ii) a $2.1 million decrease in short-term incentive compensation expense based on performance factors and modifiers, partially offset by a $3.3 million increase in salaries and benefits.

The decrease during 2017 compared to 2016 was due primarily to: (i) a $6.2 million decrease in short-term incentive compensation expense based on performance factors and modifiers; (ii) a $2.0 million decrease in salaries and benefits; and (iii) a $0.6 million decrease in professional fees and services, partially offset by an increase of $1.3 million in long-term incentive compensation expense.

Goodwill Impairment. See Note 3 of Notes to Consolidated Financial Statements included in this Report for further details.

Other Operating Charges, Net. See Note 3 of Notes to Consolidated Financial Statements included in this Report for further details.

Interest Expense. Interest expense represents cash and non-cash interest expense incurred on our revolving credit facility, our 5.875% unsecured senior notes due May 15, 2024 ("5.875% Senior Notes") and our 8.25% senior notes due 2020 ("8.25% Senior Notes"), which were redeemed on June 1, 2016, net of capitalized interest. Interest expense was $22.7 million, $22.2 million and $20.3 million for 2018, 2017 and 2016, respectively, net of $1.7 million, $2.2 million and $2.9 million of interest expense capitalized as part of construction-in-progress, respectively, for the three periods.

Other Expense, Net. See Note 12 of Notes to Consolidated Financial Statements included in this Report for details.

Income Tax Provision. The income tax provision for 2018 was $28.3 million, resulting in an effective tax rate of 23.6%. There was no material difference between the effective tax rate and the projected blended statutory tax rate for 2018.

The income tax provision for 2017 was $87.6 million, resulting in an effective tax rate of 65.9%. The difference between the effective tax rate and the projected blended statutory tax rate for 2017 was primarily due to the passage of H.R.1, commonly referred to as the Tax Cuts and Jobs Act ("Tax Act"). Incremental income tax expense related to the Tax Act included: (i) $29.0 million (or 21.8% of taxable income) related to the write down of deferred tax assets to reflect the new 21% federal corporate tax rate; (ii) $5.9 million (or 4.5% of taxable income) for transition and withholding tax associated with foreign undistributed

earnings, including $2.2 million of foreign withholding tax since our earnings in Canada are no longer permanently reinvested; and (iii) $2.3 million (or 1.7% of taxable income) for certain executive compensation that can no longer be deducted under the Tax Act (see Note 13 of Notes to Consolidated Financial Statements included in this Report for further discussion on the Tax Act).

The income tax provision for 2016 was $55.5 million, resulting in an effective tax rate of 37.7%. There was no material difference between the effective tax rate and the projected blended statutory tax rate for 2016.

As a result of the Tax Act, our long-term effective tax rate is estimated to be in the mid 20% range on a go-forward basis.

Selected Operational and Financial Information

The following data should be read in conjunction with our consolidated financial statements and the notes thereto included in Part II, Item 8. "Financial Statements and Supplementary Data" of this Report.

The table below provides selected operational and financial information for each period presented (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
Operating income	$ 143.6	$ 155.2	$ 181.1
Impact to operating income of non-run-rate items:			
Adjustments to plant-level LIFO[1]	3.1	(3.8)	(0.6)
Mark-to-market (loss) gain on derivative instruments[2]	(17.7)	19.4	18.7
Non-cash lower of cost or market inventory write-down[3]	—	—	(4.9)
Workers' compensation benefit due to discounting	0.5	—	0.3
Goodwill impairment[4]	—	(18.4)	—
Non-cash asset impairment charges	(1.4)	(0.8)	(2.8)
Net periodic post retirement service cost relating to Salaried VEBA	(0.1)	—	—
Environmental expenses[5]	(1.7)	(0.3)	(0.1)
Total non-run-rate items	(17.3)	(3.9)	10.6
Operating income excluding non-run-rate items	$ 160.9	$ 159.1	$ 170.5

1. We manage our business on a monthly last-in, first-out ("LIFO") basis at each plant, but report inventory externally on an annual LIFO basis in accordance with GAAP on a consolidated basis. This amount represents the conversion from GAAP LIFO applied on a consolidated basis to monthly LIFO applied on a plant-by-plant basis.

2. Mark-to-market (loss) gain on derivative instruments for 2018 represents the reversal of mark-to-market (loss) gain on hedges entered into prior to the adoption of ASU 2017-12 and settled in 2018. Operating income excluding non-run-rate items reflects the realized (loss) gain of such settlements.

3. The $4.9 million lower of cost or market inventory write-down in 2016 was due primarily to a decrease in our net realizable value of inventory (less a normal profit margin).

4. See Note 3 of Notes to Consolidated Financial Statements included in this Report for additional information relating to the impairment in 2017 of goodwill and one of our customer relationship intangible assets.

5. Non-run-rate environmental expenses are related to legacy activities at operating facilities prior to July 6, 2006. See Note 9 of Notes to Consolidated Financial Statements included in this Report for additional information relating to the environmental expenses.

As noted above, operating income excluding non-run-rate items for 2018 was $1.8 million higher than operating income excluding such items for 2017 due to: (i) a $21.4 million favorable sales impact driven by higher shipments and product mix; and (ii) a $3.2 million improvement in net manufacturing conversion and other costs, partially offset by: (i) $10.4 million of higher freight costs due to new federal regulations; (ii) $5.2 million of higher overhead and benefit costs; (iii) $3.0 million of higher tariff costs; and (iv) $4.2 million of increased depreciation and amortization expense.

Operating income excluding non-run-rate items for 2017 was $11.4 million lower than operating income excluding such items for 2016. Lower operating income excluding non-run-rate items reflected: (i) a $20.5 million unfavorable sales impact due primarily to a leaner product mix and compressed sales margins, partially offset by favorable price spreads for scrap raw material purchases; (ii) $3.7 million of higher depreciation and amortization expense; and (iii) $3.2 million of higher planned major maintenance expense, partially offset by: (i) a $3.7 million improvement in net manufacturing conversion and other costs; (ii) a $6.3 million decrease in overhead and other benefits and costs; (iii) a $4.4 million decrease in incentive compensation expense; and (iv) $1.6 million of lower energy pricing.

The table below provides our shipment and value added revenue information (in millions of dollars, except shipments and value added revenue per pound) by end market applications for each period presented:

	Year Ended December 31,					
	2018		2017		2016	
Aero/HS Products:						
Shipments (mmlbs)	248.8		233.0		243.2	
	$	**$ / lb**	**$**	**$ / lb**	**$**	**$ / lb**
Net sales	$ 739.4	$ 2.97	$ 653.7	$ 2.81	$ 675.4	$ 2.78
Less: Hedged Cost of Alloyed Metal	(284.4)	(1.14)	(223.4)	(0.96)	(208.5)	(0.86)
Value added revenue	$ 455.0	$ 1.83	$ 430.3	$ 1.85	$ 466.9	$ 1.92
Automotive Extrusions:						
Shipments (mmlbs)	104.4		101.0		92.9	
	$	**$ / lb**	**$**	**$ / lb**	**$**	**$ / lb**
Net sales	$ 239.3	$ 2.29	$ 217.3	$ 2.15	$ 188.8	$ 2.03
Less: Hedged Cost of Alloyed Metal	(122.6)	(1.17)	(99.6)	(0.98)	(77.0)	(0.83)
Value added revenue	$ 116.7	$ 1.12	$ 117.7	$ 1.17	$ 111.8	$ 1.20
GE Products:						
Shipments (mmlbs)	266.9		264.7		249.9	
	$	**$ / lb**	**$**	**$ / lb**	**$**	**$ / lb**
Net sales	$ 546.0	$ 2.05	$ 476.2	$ 1.80	$ 420.1	$ 1.68
Less: Hedged Cost of Alloyed Metal	(313.5)	(1.18)	(261.2)	(0.99)	(208.9)	(0.83)
Value added revenue	$ 232.5	$ 0.87	$ 215.0	$ 0.81	$ 211.2	$ 0.85
Other Products:						
Shipments (mmlbs)	32.3		27.0		28.3	
	$	**$ / lb**	**$**	**$ / lb**	**$**	**$ / lb**
Net sales	$ 61.2	$ 1.89	$ 50.3	$ 1.86	$ 46.3	$ 1.64
Less: Hedged Cost of Alloyed Metal	(37.5)	(1.16)	(27.0)	(1.00)	(23.2)	(0.82)
Value added revenue	$ 23.7	$ 0.73	$ 23.3	$ 0.86	$ 23.1	$ 0.82
Total:						
Shipments (mmlbs)	652.4		625.7		614.3	
	$	**$ / lb**	**$**	**$ / lb**	**$**	**$ / lb**
Net sales	$ 1,585.9	$ 2.43	$ 1,397.5	$ 2.23	$ 1,330.6	$ 2.17
Less: Hedged Cost of Alloyed Metal	(758.0)	(1.16)	(611.2)	(0.97)	(517.6)	(0.85)
Value added revenue	$ 827.9	$ 1.27	$ 786.3	$ 1.26	$ 813.0	$ 1.32

For 2018, Net sales increased by $188.4 million to $1,585.9 million, as compared to 2017, primarily reflecting a 9% increase in total average realized sales price per pound and a 4% increase in shipments. See "*Selected Operational and Financial Information*" above for further discussion.

For 2017, Net sales increased by $66.9 million to $1,397.5 million, as compared to 2016, primarily reflecting a 3% increase in total average realized sales price per pound and a 2% increase in shipments. See "*Selected Operational and Financial Information*" above for further discussion.

Liquidity and Capital Resources

Summary

The following table summarizes our liquidity as of the periods presented (in millions of dollars):

	December 31, 2018	December 31, 2017
Available cash and cash equivalents	$ 125.6	$ 51.1
Short-term investments	36.7	183.7
Borrowing availability under Revolving Credit Facility, net of letters of credit	292.0	291.9
Total liquidity	$ 454.3	$ 526.7

We place our cash in bank deposits and money market funds with high credit quality financial institutions. Cash equivalents consist primarily of investment-grade commercial paper, money market accounts and investments which, when purchased, have a maturity of 90 days or less. Short-term investments represent holdings in investment-grade commercial paper with a maturity at the time of purchase of greater than 90 days.

In addition to our unrestricted cash and cash equivalents described above, we had restricted cash of $14.0 million at December 31, 2018 that was pledged or held as collateral in connection with workers' compensation requirements and certain other agreements. From time to time, such restricted funds could be returned to us or we could be required to pledge additional cash (see Note 15 of Notes to Consolidated Financial Statements included in this Report).

We and certain of our subsidiaries have a credit agreement with JPMorgan Chase Bank, N.A., as administrative agent, and the other financial institutions party thereto ("Revolving Credit Facility") (see Note 8 of Notes to Consolidated Financial Statements included in this Report). There were no borrowings under our Revolving Credit Facility as of December 31, 2018 or December 31, 2017.

Cash Flows

The following table summarizes our cash flows from operating, investing and financing activities for each period presented (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
Total cash provided by (used in):			
Operating activities	$ 150.2	$ 141.5	$ 165.6
Investing activities	$ 31.1	$ (25.5)	$ (276.4)
Financing activities	$ (106.0)	$ (119.4)	$ 94.8

Cash provided by operating activities for the year ended December 31, 2018 included: (i) an increase in accounts payable of $29.2 million driven predominantly by the timing of metal purchases and increase in metal price; (ii) a $21.9 million change in other non-cash changes in assets and liabilities due primarily to a $17.7 million unfavorable impact which reflected our adoption of ASU 2017-12 (see Note 1 of Notes to Consolidated Financial Statements included in this Report) as unrealized gain or loss on derivative instruments beginning January 1, 2018 was recognized within Other comprehensive loss, net of tax; (iii) an increase in trade and other receivables of $22.3 million driven primarily by timing and mix of sales with extended terms and an increase in metal price; and (iv) an increase in inventory of $45.0 million due primarily to higher inventory pounds to satisfy increased demand.

Cash provided by operating activities for the year ended December 31, 2017 reflected: (i) an increase in trade and other receivables of $30.9 million due primarily to the timing of sales and increase in metal price; (ii) an increase in accounts payable of $13.0 million driven predominantly by the timing of metal purchases and increase in metal price; and (iii) a $15.5 million change in other non-cash changes in assets and liabilities due primarily to a $19.4 million favorable impact which reflected our adoption of ASU 2017-12 (see Note 1 of Notes to Consolidated Financial Statements included in this Report) as unrealized gain or loss on derivative instruments beginning January 1, 2018 was recognized within Other comprehensive loss, net of tax.

Cash provided by operating activities for the year ended December 31, 2016 reflected: (i) an increase in trade and other receivables of $26.8 million due primarily to the timing of sales and increase in metal price and (ii) a $17.5 million change in

other non-cash changes in assets and liabilities due primarily to an $18.7 million favorable impact which reflected our adoption of ASU 2017-12 (see Note 1 of Notes to Consolidated Financial Statements included in this Report) as unrealized gain or loss on derivative instruments beginning January 1, 2018 was recognized within Other comprehensive loss, net of tax.

See Statements of Consolidated Cash Flows included in this Report for further details on our cash flows from operating, investing and financing activities for the year ended December 31, 2018, December 31, 2017 and December 31, 2016.

Sources of Liquidity

We believe our available cash and cash equivalents, short-term investments, borrowing availability under the Revolving Credit Facility and funds generated from operations are our most significant sources of liquidity. While we believe these sources will be sufficient to finance our working capital requirements, planned capital expenditures and investments, debt service obligations and other cash requirements for at least the next twelve months, our ability to fund such cash requirements will depend upon our future operating performance (which will be affected by prevailing economic conditions) and financial, business and other factors, some of which are beyond our control.

The table below summarizes recent availability and usage of our Revolving Credit Facility (in millions of dollars except for borrowing rate):

	February 15, 2019	December 31, 2018
Revolving Credit Facility borrowing commitment	$ 300.0	$ 300.0
Borrowing base availability	$ 300.0	$ 300.0
Less: Outstanding borrowings under Revolving Credit Facility	—	—
Less: Outstanding letters of credit under Revolving Credit Facility	(8.0)	(8.0)
Remaining borrowing availability	$ 292.0	$ 292.0
Borrowing rate (if applicable)[1]	5.75%	5.75%

1. Such borrowing rate, if applicable, represents the interest rate for any overnight borrowings under the Revolving Credit Facility.

We do not believe that covenants contained in the Revolving Credit Facility are reasonably likely to limit our ability to raise additional debt or equity should we choose to do so during the next 12 months, nor do we believe it is likely that during the next 12 months we will trigger the availability threshold that would require measuring and maintaining a fixed charge coverage ratio.

See Note 8 of Notes to Consolidated Financial Statements included in this Report for a description of our Revolving Credit Facility.

Debt

See "Contractual Obligations, Commercial Commitments and Off-Balance Sheet Arrangements - *Contractual Obligations and Commercial Commitments*" below for mandatory principal and cash interest payments on the outstanding borrowings under the 5.875% Senior Notes. See Note 8 of Notes to Consolidated Financial Statements included in this Report for further details with respect to the 5.875% Senior Notes and the redemption of our 8.25% Senior Notes.

We do not believe that covenants in the indenture governing the 5.875% Senior Notes are reasonably likely to limit our ability to obtain additional debt or equity financing should we choose to do so during the next 12 months.

Capital Expenditures and Investments

We strive to strengthen our competitive position across our end markets through strategic capital investment. Significant investments over the past decade have positioned us well with increased capacity and expanded manufacturing capabilities while more recent capital projects have focused on further enhancing manufacturing cost efficiency, improving product quality and promoting operational security, which we believe are critical to maintaining and strengthening our position in an increasingly competitive market environment.

See Note 3 of Notes to Consolidated Financial Statements included in this Report for a discussion of our acquisition of IMT on September 19, 2018 for $43.2 million, net of cash received.

Total capital expenditures were $74.1 million, $75.5 million and $76.1 million for 2018, 2017 and 2016, respectively. A significant portion of our capital spending over the past several years related to the Trentwood modernization project, which has focused on equipment upgrades throughout the process flow to reduce conversion costs, increase efficiency and further improve our competitive cost position on all products produced at our Trentwood facility. In addition, a significant portion of the investment has also focused on modernizing legacy equipment and the process flow for thin gauge plate to achieve KaiserSelect® quality enhancements for these Aero/HS and GE products. As a byproduct of the efficiency improvements completed during 2017, we gained incremental manufacturing capacity to enable sales growth in 2018 and beyond. In all three years, we have also invested to support our automotive growth initiative, including upgrades to existing extrusion presses at several of our automotive-focused facilities. The remainder of our capital spending in all three years was allocated among our manufacturing locations on projects expected to reduce operating costs, improve product quality, expand capacity or enhance operational security.

We anticipate our capital spending in 2019 will be approximately $80.0 million to $90.0 million and include continued spending on the Trentwood modernization and spending at multiple locations for efficiency improvements and operational security. Capital investments will be funded using cash generated from operations, available cash and cash equivalents, short-term investments, borrowings under the Revolving Credit Facility and/or other third-party financing arrangements. The level of anticipated capital expenditures may be adjusted from time to time depending on our business plans, our price outlook for fabricated aluminum products, our ability to maintain adequate liquidity and other factors. No assurance can be provided as to the timing of any such expenditures or the operational benefits expected therefrom.

Dividends

We have consistently paid a quarterly cash dividend since the second quarter of 2007 to holders of our common stock, including holders of restricted stock, and have increased the dividend in each year since 2011. Nevertheless, as in the past, the future declaration and payment of dividends, if any, will be at the discretion of our Board of Directors and will depend on a number of factors, including our financial and operating results, financial position and anticipated cash requirements and contractual restrictions under our Revolving Credit Facility, the indenture for our 5.875% Senior Notes or other indebtedness we may incur in the future. We can give no assurance that dividends will be declared and paid in the future.

We also pay quarterly dividend equivalents to the holders of certain restricted stock units. Holders of performance shares are not paid a quarterly dividend equivalent, but instead are entitled to receive, in connection with the issuance of underlying shares of common stock for performance shares that ultimately vest, a one-time payment equal to the dividends such holder would have received if the number of such shares of common stock so issued had been held of record by such holder from the date of grant of such performance shares through the date of such issuance.

See Note 14 and Note 19 of Notes to Consolidated Financial Statements included in this Report for information regarding dividends paid during 2018, 2017 and 2016, and declared subsequent to December 31, 2018.

Repurchases of Common Stock

See Note 14 of Notes to Consolidated Financial Statements included in this Report for information regarding repurchases of common stock in 2018, 2017 and 2016 and the amounts authorized and available for future repurchases of common stock under our stock repurchase program.

See Note 6 of Notes to Consolidated Financial Statements included in this Report for information regarding minimum statutory tax withholding obligations arising during 2018, 2017 and 2016 in connection with the vesting of non-vested shares, restricted stock units and performance shares.

Restrictions Related to Equity Capital

As discussed elsewhere in this Report, to preserve our ability to fully use our net operating loss carryforwards and other significant tax attributes, we: (i) adopted a tax asset protection rights plan ("Tax Asset Rights Plan"), which is designed to deter transfers of our common stock that could result in an ownership change pursuant to Section 382 of the Internal Revenue Code of 1986 ("Code") and (ii) implemented stock transfer restrictions ("Transfer Restrictions"), which restrict transfers of our stock by any person who owns, or would become an owner of, 4.99% or more of our stock as determined under Section 382 of the Code. The Tax Asset Rights Plan will expire in accordance with its terms on April 7, 2019, and the Transfer Restrictions will expire in accordance with their terms on May 26, 2019.

Environmental Commitments and Contingencies

See Note 9 of Notes to Consolidated Financial Statements included in this Report for information regarding our environmental commitments and contingencies.

Contractual Obligations, Commercial Commitments and Off-Balance Sheet Arrangements

Contractual Obligations and Commercial Commitments

The following table and discussion provide a summary of our significant contractual obligations and commercial commitments at December 31, 2018 (in millions of dollars):

		Payments Due by Period			
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
On-Balance Sheet:					
Principal and interest on 5.875% Senior Notes	$ 496.2	$ 22.0	$ 44.0	$ 44.0	$ 386.2
Standby letters of credit	8.3	7.2	1.1	—	—
Uncertain tax liabilities	0.6	—	—	—	—
Deferred compensation plan liability	10.5	3.2	—	—	—
Capital leases	8.2	1.7	2.6	2.1	1.8
Salaried VEBA variable contributions	2.1	2.1	—	—	—
Off-Balance Sheet:					
VEBA administrative fees	0.6	0.3	0.3	—	—
Purchase obligations	394.0	380.5	12.4	1.1	—
Operating leases	38.0	6.1	6.5	4.6	20.8
Commitment fees on Revolving Credit Facility	2.1	1.1	1.0	—	—
Total contractual obligations	$ 960.6	$ 424.2	$ 67.9	$ 51.8	$ 408.8

Principal and Interest on 5.875% Senior Notes. Cash outlays related to our 5.875% Senior Notes consist of our principal obligations and interest obligations based on scheduled interest payments.

Standby Letters of Credit. Of the $8.3 million of standby letters of credit, $0.3 million are cash collateralized and $8.0 million represents letters of credit issued under our Revolving Credit Facility. The letters of credit provide financial assurance of our payment of obligations, primarily related to workers' compensation and environmental compliance. The specific timing of payments with respect to such matters is uncertain. The letters of credit generally automatically renew every 12 months and terminate when the underlying obligations no longer require assurance or upon the maturity of our Revolving Credit Facility in September 2020 (for those letters of credit issued under that facility).

Uncertain Tax Liabilities. At December 31, 2018, we had uncertain tax positions which ultimately could result in tax payments. As the amount of ultimate tax payments beyond 2019 is contingent on the tax authorities' assessment, it is not practical to present annual payment information.

Deferred Compensation Plan Liability. The deferred compensation liability amount relates to our deferred compensation plan for certain key employees. As the distribution amount is contingent upon investment performance, vesting and other eligibility requirements, including retirement dates, it is not practical to present annual payment information unless timing of disbursement is known.

Capital Leases. Capital lease spending represents non-cancelable capital commitments as of December 31, 2018. We expect capital leases to be funded through available cash generated from our operations, cash and cash equivalents, short-term investments, borrowings under our Revolving Credit Facility and/or other third-party financing arrangements.

VEBA Obligations. See Note 4 of Notes to Consolidated Financial Statements included in this Report for additional information regarding our variable cash contributions to the Salaried VEBA.

Purchase Obligations. Cash outlays for purchase obligations consist primarily of commitments to purchase primary aluminum, recycled scrap aluminum, other metals, energy and equipment. We have various contracts with suppliers of metals that require us to purchase minimum quantities of these metals in future years at a price to be determined at the time of purchase based primarily on the underlying metal price at that time. Amounts included in the table are based on minimum required purchase quantities at the metal price at December 31, 2018. We believe the minimum required purchase quantities are lower than our current requirements for these metals. Actual quantities and actual metal prices at the time of purchase could be different. Physical delivery commitments with energy companies are in place to cover our exposure to fluctuations in electricity and natural gas prices and are based on fixed contractual rates and quantities. Equipment purchase obligations are based on scheduled payments to equipment manufacturers.

Operating Leases. Operating leases represent multi-year obligations for certain manufacturing facilities, warehouses, office space and equipment.

Commitment Fees on Revolving Credit Facility. Future commitment fees on our Revolving Credit Facility are estimated based on the amount of unused credit under the facility at December 31, 2018 and assuming no extension of terms beyond the current maturity date of our Revolving Credit Facility, which is in December 2020. No borrowings were outstanding under our Revolving Credit Facility either throughout the year or as of December 31, 2018.

Other Off-Balance Sheet Arrangements

In addition to our off-balance sheet items discussed in the "*Contractual Obligations and Commercial Commitments*" section above:

- See Note 5 of Notes to Consolidated Financial Statements included in this Report for information regarding our participation in multi-employer pension plans.
- See Note 6 of Notes to Consolidated Financial Statements included in this Report for information regarding our long-term employee incentive plans. Additional equity awards are expected to be made to employees and non-employee directors in 2019 and future years.

Critical Accounting Estimates and Policies

Our consolidated financial statements are prepared in accordance with GAAP. In connection with the preparation of our financial statements, we are required to make assumptions and estimates about future events and apply judgments that affect the reported amounts of assets, liabilities, revenue and expenses and the related disclosures. We base our assumptions, estimates and judgments on historical experience, current trends and other factors that management believes to be relevant at the time our consolidated financial statements are prepared. On a regular basis, management reviews the accounting policies, assumptions, estimates and judgments to ensure that our financial statements are presented fairly and in accordance with GAAP. However, because future events and their effects cannot be determined with certainty, actual results could differ from our assumptions and estimates and such differences could be material.

In addition to the accounting estimates we discuss in Note 1 of Notes to Consolidated Financial Statements included in this Report, management believes that the following accounting estimates are critical to aid in fully understanding and evaluating our reported financial results and require management's most difficult, subjective or complex judgments, resulting from the need to make estimates about the effects of matters that are inherently uncertain. Management has reviewed these critical accounting estimates and related disclosures with the Audit Committee of our Board of Directors.

Description	Judgments and Uncertainties	Potential Effect If Actual Results Differ From Assumptions
Revenue Recognition.		
We adopted ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* ("ASU 2014-09") during the quarter ended March 31, 2018 (see Note 1 and Note 11 of Notes to Consolidated Financial Statements included in this Report for details). In accordance with ASU 2014-09, we must decide at the outset of entering into contracts with customers whether our performance obligations as specified in these contracts are satisfied over time or at a point in time. To recognize revenue over time means that we will need to synchronize revenue recognition with progress toward completion of the performance obligation. If we have determined that revenue will be recognized over time for a specific customer order, the earliest point in our production process that we will recognize revenue will be the point that the product cannot be directed to another customer. In most cases, this happens at the time we begin to mold the ingot or billet, either by flat rolling the ingot or by extruding the billet through a die. For custom alloys, we would begin recognizing revenue over time at the point the custom alloy billet is cast. Approximately 65% of our business is recognized over time with the remaining 35% recognized at a point in time.	We follow the input method of recognizing revenue over time. Under this approach, revenue is recognized on products in production based on the cost incurred to date plus a reasonable margin. Cost incurred to date is based on resources consumed, labor hours expended and other costs incurred relative to the total inputs expected in order to satisfy a performance obligation. Reasonable margins are estimated using an average margin of the respective production facility producing the product. For purposes of recognizing revenue over time on products that are in work-in-process ("WIP") as of the period end, we make the assumption that the average margins at the respective production facilities are reasonably close to the individual product margins that are in WIP.	Although we believe that the judgments and estimates around recognizing revenue over time discussed herein are reasonable, actual results could differ and we may be exposed to losses or gains that could be material. A change in our estimated average margins by 5% would have had an impact of approximately $0.3 million to Net income for the year ended December 31, 2018.

Description	Judgments and Uncertainties	Potential Effect If Actual Results Differ From Assumptions
Income Tax.		
We have tax attributes available to offset the impact of future income taxes. We have a process for determining the need for a valuation allowance with respect to these attributes. The process includes an extensive review of both positive and negative evidence including our earnings history, future earnings, adverse recent occurrences, carryforward periods, an assessment of the industry and the impact of the timing differences. We expect to record a full statutory tax provision in future periods and, therefore, the benefit of any tax attributes realized will only affect future balance sheets and statements of cash flows. In accordance with GAAP, financial statements for interim periods include an income tax provision based on the effective tax rate expected to be incurred in the current year. See Note 13 of Notes to Consolidated Financial Statements included in this Report for discussion around uncertainties and amounts recorded relating to the Tax Act.	Inherent within the completion of our assessment of the need for a valuation allowance, we make significant judgments and estimates with respect to future operating results, timing of the reversal of deferred tax assets and current market and industry factors. In order to determine the effective tax rate to apply to interim periods, estimates and judgments are made (by taxable jurisdiction) as to the amount of taxable income that may be generated, the availability of deductions and credits expected and the availability of net operating loss carryforwards or other tax attributes to offset taxable income. Making such estimates and judgments is subject to inherent uncertainties given the difficulty of predicting future tax rates, market conditions, customer requirements, the cost for key inputs such as energy and primary aluminum, overall operating efficiency and other factors. However, if, among other things: (i) actual results vary from our forecasts due to one or more of the factors cited above or elsewhere in this Report; (ii) income is distributed differently than expected among tax jurisdictions; (iii) one or more material events or transactions occur which were not contemplated; or (iv) certain expected deductions, credits or carryforwards are not available, it is possible that the effective tax rate for a year could vary materially from the assessments used to prepare the interim consolidated financial statements. See Note 13 of Notes to Consolidated Financial Statements included in this Report for additional discussion of these matters.	Although we believe that the judgments and estimates discussed herein are reasonable, actual results could differ and we may be exposed to losses or gains that could be material. A change in our effective tax rate by 1% would have had an impact of approximately $1.2 million to Net income for the year ended December 31, 2018.

Description	Judgments and Uncertainties	Potential Effect If Actual Results Differ From Assumptions
Acquisitions, Goodwill and Intangible Assets.		
We account for acquisitions using the acquisition method of accounting, which requires the assets acquired and liabilities assumed to be recorded at the date of acquisition at their respective estimated fair values. We recognize goodwill as of the acquisition date as the excess over the fair values of the identifiable net assets acquired. Goodwill is tested for impairment on an annual basis as well as on an interim basis as events and changes in circumstances occur. Definite-lived intangible assets acquired are amortized over the estimated useful lives of the respective assets, to reflect the pattern in which the economic benefits of the intangible assets are consumed. In the event the pattern cannot be reliably determined, we use a straight-line amortization method. Whenever events or changes in circumstances indicate that the carrying amount of the intangible assets may not be recoverable, the intangible assets will be reviewed for impairment.	The judgments made in determining the estimated fair value assigned to each class of assets acquired and liabilities assumed, as well as asset lives, can significantly impact our results of operations. Fair values and useful lives are determined based on, among other factors, the expected future period of benefit of the asset, the various characteristics of the asset, projected cash flows and the rate used in discounting those cash flows. As the determination of an asset's fair value and useful life involves management making certain estimates and because these estimates form the basis for the determination of whether or not an impairment charge should be recorded, these estimates are considered to be critical accounting estimates.	We do not believe there is a reasonable likelihood that there will be a material change in the estimates or assumptions we use to estimate the fair value of goodwill and intangible assets. Additionally, as of December 31, 2018, we do not believe any of our reporting units are at risk of failing the goodwill impairment test. However, if actual results are not consistent with our estimates and assumptions used in estimating future cash flows and fair values assigned to each class of assets acquired and liabilities assumed, we may be exposed to losses from impairment charges that could be material.

Description	Judgments and Uncertainties	Potential Effect If Actual Results Differ From Assumptions
Salaried VEBA.		
At December 31, 2018, our financial statements include the Salaried VEBA, which we are required to reflect on our financial statements as a defined benefit postretirement plan, despite our limited legal obligations to the Salaried VEBA in regards to that plan. Liabilities and expenses for postretirement benefits are determined using actuarial methodologies and incorporate significant assumptions, including the rate used to discount the future estimated liability, the long-term rate of return ("LTRR") on plan assets and several assumptions relating to the employee workforce (i.e., retirement age and mortality). The most significant assumptions used in determining the estimated year-end obligations include the assumed discount rate and the LTRR. In addition to the above assumptions used in the actuarial valuation, changes in plan provisions could also have a material impact on the net funded status of the Salaried VEBA. Our obligation to the Salaried VEBA is to pay an annual variable contribution amount based on the level of our cash flow. The funding status of the Salaried VEBA has no impact on our annual variable contribution amount. We have no control over any aspect of the plan. We rely on information provided to us by the Salaried VEBA administrator with respect to specific plan provisions such as annual benefits expected to be paid. See Note 4 of Notes to Consolidated Financial Statements included in this Report for additional information on our benefit plans.	Since the recorded obligation represents the present value of expected postretirement benefit payments over the life of the plan, decreases in the discount rate (used to compute the present value of the payments) would cause the estimated obligation to increase. Conversely, an increase in the discount rate would cause the estimated present value of the obligation to decline. The LTRR on plan assets reflects an assumption regarding what the amount of earnings would be on existing plan assets (before considering any future contributions to the plan). Increases in the assumed LTRR would cause the projected value of plan assets available to satisfy postretirement obligations to increase, yielding a reduced net expense of these obligations. A reduction in the LTRR would reduce the amount of projected net assets available to satisfy postretirement obligations and, thus, cause the net expense of these obligations to increase. A change in plan provisions could cause the estimated obligations to change. An increase in annual benefits expected to be paid would increase the estimated present value of the obligations and conversely, a decrease in annual benefits expected to be paid would decrease the estimated present value of the obligations.	The rate used to discount future estimated liabilities of the Salaried VEBA is determined by taking into consideration the rates available at year-end on debt instruments that could be used to settle the obligations of the plan. A change in the discount rate of 1/4 of 1% would impact the accumulated postretirement benefit obligation by approximately $1.7 million, impact service and interest costs by $0.1 million and have an immaterial impact on 2019 expense. The LTRR on plan assets is estimated by considering historical returns and expected returns on current and projected asset allocations. A change in the assumption for LTRR on plan assets of 1/4 of 1% would impact expense by approximately $0.1 million in 2019.

New Accounting Pronouncements

For a discussion of all recently adopted and recently issued but not yet adopted accounting pronouncements, see Note 1 of Notes to Consolidated Financial Statements included in this Report.

Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

Our operating results are sensitive to changes in the prices of primary aluminum, certain alloying metals, natural gas and electricity, and also depend to a significant degree upon the volume and mix of products sold to customers. As discussed more fully in Note 7 of Notes to Consolidated Financial Statements included in this Report, we have historically utilized hedging transactions to lock in a specified price or range of prices for certain products which we sell or consume in our production process, and to mitigate our exposure to changes in energy prices.

Aluminum

See Note 7 of Notes to Consolidated Financial Statements included in this Report for a discussion of our pricing of fabricated aluminum, firm-price arrangements and third-party hedging instruments.

In 2018, 2017 and 2016, settlements of derivative contracts covering 200.6 million pounds, 185.6 million pounds and 213.7 million pounds, respectively, hedged shipments sold on pricing terms that created metal price risk for us. At December 31, 2018, we had derivative contracts with respect to approximately 119.6 million pounds, 17.6 million pounds and 1.0 million pounds to hedge sales to be made in 2019, 2020 and 2021, respectively, on pricing terms that create metal price risk for us.

Based on the aluminum derivative positions held by us to hedge firm-price customer sales agreements, we estimate that a $0.10 per pound decrease in the London Metal Exchange ("LME") market price of aluminum as of December 31, 2018 and December 31, 2017, with all other variables held constant, would have resulted in an unrealized mark-to-market loss of $13.8 million and $16.4 million, respectively, with corresponding changes to the net fair value of our aluminum derivative positions. Additionally, we estimate that a $0.01 per pound decrease in the Midwest premium for aluminum as of December 31, 2018 and December 31, 2017, with all other variables held constant, would have resulted in an unrealized mark-to-market loss of $1.0 million and $1.6 million, respectively, with corresponding changes to the net fair value of our aluminum derivative positions.

Alloying Metals

We are exposed to the risk of fluctuating prices of certain alloying metals, especially copper and zinc, to the extent that changes in their prices do not highly correlate with price changes for aluminum. Copper, zinc and certain other metals are used in our remelt operations to cast rolling ingot and extrusion billet with the proper chemistry for our products. From time to time, we enter into forward contract swaps with third parties to mitigate our risk from fluctuations in the prices of copper and zinc ("Alloying Metals"). As of December 31, 2018, we had forward swap contracts with settlement dates designed to align with the timing of scheduled purchases of Alloying Metals by our manufacturing facilities. See Note 7 of Notes to Consolidated Financial Statements included in this Report for additional information relating to these hedges. We estimate that a $0.10 per pound decrease in the LME market price of zinc as of December 31, 2018 and December 31, 2017, with all other variables held constant, would have resulted in an unrealized mark-to-market loss of $0.6 million and $0.2 million, respectively, with corresponding changes to the net fair value of our Alloying Metals hedges. We estimate that a $0.10 per pound decrease in the Commodity Exchange, Inc. market price of copper as of December 31, 2018 and December 31, 2017, with all other variables held constant, would have resulted in an unrealized mark-to-market loss of $0.3 million and $0.1 million, respectively, with corresponding changes to the net fair value of our Alloying Metals hedges.

Energy

We are exposed to risk of fluctuating prices for natural gas and electricity. We, from time to time, in the ordinary course of business, enter into hedging transactions and/or physical delivery commitments with firm prices with third parties to mitigate our risk from fluctuations in natural gas and electricity prices. See Note 7 of Notes to Consolidated Financial Statements included in this Report for information regarding the volume of our derivative and physical delivery commitments with energy companies in place to cover our exposure to fluctuations in natural gas and electricity prices as of December 31, 2018.

We estimate that a $1.00 per mmbtu decrease in natural gas prices as of December 31, 2018 and December 31, 2017 would have resulted in an unrealized mark-to-market loss of $4.0 million and $3.6 million, respectively, with corresponding changes to the net fair value of our natural gas derivative positions. We estimate that a $5.00 per Mwh decrease in electricity prices as of December 31, 2018 and December 31, 2017, would have resulted in an unrealized mark-to-market loss of $1.1 million and $0.7 million, respectively, with corresponding changes to the net fair value of our electricity derivative positions.

Foreign Currency

Our primary foreign exchange exposure is the operating costs of our London, Ontario facility. A 10% change in the Canadian dollar exchange rate is estimated to have an annual operating cost impact of $1.9 million.

KAISER ALUMINUM CORPORATION AND SUBSIDIARY COMPANIES

Item 8. ***Financial Statements and Supplementary Data***

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
Kaiser Aluminum Corporation
Foothill Ranch, California

Opinions on the Consolidated Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Kaiser Aluminum Corporation and Subsidiary Companies (the "Company") as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows, for each of the three years in the period ended December 31, 2018, and the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by COSO.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company has changed its method of accounting for revenue from contracts with customers in 2018 due to adoption of Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers (Topic 606).*

Basis for Opinions

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

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

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ Deloitte & Touche LLP

Costa Mesa, California
February 22, 2019

We have served as the Company's auditor since 2002.

KAISER ALUMINUM CORPORATION AND SUBSIDIARY COMPANIES

CONSOLIDATED BALANCE SHEETS

	December 31, 2018	December 31, 2017
	(In millions of dollars, except share and per share amounts)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 125.6	$ 51.1
Short-term investments	36.7	183.7
Receivables:		
Trade receivables, net	179.8	165.0
Other	25.6	15.5
Contract assets	54.9	—
Inventories	215.1	207.9
Prepaid expenses and other current assets	18.9	33.4
Total current assets	656.6	656.6
Property, plant and equipment, net	611.8	571.4
Deferred tax assets, net	35.9	72.0
Intangible assets, net	32.4	25.0
Goodwill	44.0	18.8
Other assets	38.6	41.4
Total	$ 1,419.3	$ 1,385.2
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 121.4	$ 90.0
Accrued salaries, wages and related expenses	40.1	42.6
Other accrued liabilities	44.0	40.5
Total current liabilities	205.5	173.1
Net liabilities of Salaried VEBA	32.4	31.9
Deferred tax liabilities	4.2	4.3
Long-term liabilities	66.4	60.0
Long-term debt	370.4	369.6
Total liabilities	678.9	638.9
Commitments and contingencies – Note 9		
Stockholders' equity:		
Preferred stock, 5,000,000 shares authorized at both December 31, 2018 and December 31, 2017; no shares were issued and outstanding at December 31, 2018 and December 31, 2017	—	—
Common stock, par value $0.01, 90,000,000 shares authorized at both December 31, 2018 and December 31, 2017; 22,471,705 shares issued and 16,234,603 shares outstanding at December 31, 2018; 22,393,537 shares issued and 16,773,586 shares outstanding at December 31, 2017	0.2	0.2
Additional paid in capital	1,059.3	1,055.9
Retained earnings	150.2	85.5
Treasury stock, at cost, 6,237,102 shares at December 31, 2018 and 5,619,951 shares at December 31, 2017	(420.5)	(358.6)
Accumulated other comprehensive loss	(48.8)	(36.7)
Total stockholders' equity	740.4	746.3
Total	$ 1,419.3	$ 1,385.2

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

KAISER ALUMINUM CORPORATION AND SUBSIDIARY COMPANIES

STATEMENTS OF CONSOLIDATED INCOME

	Year Ended December 31,		
	2018	2017	2016
	(In millions of dollars, except share and per share amounts)		
Net sales	$ 1,585.9	$ 1,397.5	$ 1,330.6
Costs and expenses:			
Cost of products sold:			
Cost of products sold, excluding depreciation and amortization and other items[1]	1,300.7	1,085.9	1,000.8
Lower of cost or market inventory write-down	—	—	4.9
Depreciation and amortization	43.9	39.7	36.0
Selling, general, administrative, research and development[2]	96.3	97.5	105.0
Goodwill impairment	—	18.4	—
Other operating charges, net	1.4	0.8	2.8
Total costs and expenses	1,442.3	1,242.3	1,149.5
Operating income	143.6	155.2	181.1
Other expense:			
Interest expense	(22.7)	(22.2)	(20.3)
Other expense, net – Note 12	(0.9)	—	(13.6)
Income before income taxes	120.0	133.0	147.2
Income tax provision	(28.3)	(87.6)	(55.5)
Net income	$ 91.7	$ 45.4	$ 91.7
Net income per common share:			
Basic	$ 5.53	$ 2.67	$ 5.15
Diluted	$ 5.43	$ 2.63	$ 5.09
Weighted-average number of common shares outstanding (in thousands):			
Basic	16,585	16,996	17,813
Diluted	16,874	17,259	18,033

1. See Note 7 for discussion of our adoption of ASU 2017-12 (as defined in Note 1) and the related reclassification of amounts previously presented in the Statements of Consolidated Income within Unrealized (gain) loss on derivative instruments and now included within Cost of products sold, excluding depreciation and amortization and other items.

2. See Note 1 for discussion of our adoption of ASU 2017-07 (as defined in Note 1) and the related reclassification of amounts previously presented in the Statements of Consolidated Income within Selling, general, administrative, research and development and now included within Other expense, net.

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

KAISER ALUMINUM CORPORATION AND SUBSIDIARY COMPANIES

STATEMENTS OF CONSOLIDATED COMPREHENSIVE INCOME

	Year Ended December 31,		
	2018	2017	2016
	(In millions of dollars)		
Net income	$ 91.7	$ 45.4	$ 91.7
Other comprehensive income (loss), net of tax – Note 10:			
Defined benefit pension plan and Salaried VEBA	2.9	(1.4)	(5.8)
Available for sale securities	(0.6)	0.5	0.9
Cash flow hedges	(13.9)	0.7	—
Foreign currency translation	(0.1)	0.2	(0.1)
Other comprehensive loss, net of tax	(11.7)	—	(5.0)
Comprehensive income	$ 80.0	$ 45.4	$ 86.7

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

KAISER ALUMINUM CORPORATION AND SUBSIDIARY COMPANIES

STATEMENTS OF CONSOLIDATED STOCKHOLDERS' EQUITY

	Common Shares Outstanding	Common Stock	Additional Paid In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
	(In millions of dollars, except share and per share amounts)						
BALANCE, December 31, 2015	18,053,747	$ 0.2	$ 1,036.5	$ 15.9	$ (246.5)	$ (31.7)	$ 774.4
Cumulative-effect adjustment	—	—	0.8	(0.1)	—	—	0.7
BALANCE, January 1, 2016	18,053,747	$ 0.2	$ 1,037.3	$ 15.8	$ (246.5)	$ (31.7)	$ 775.1
Net income	—	$ —	$ —	$ 91.7	$ —	$ —	$ 91.7
Other comprehensive loss, net of tax	—	—	—	—	—	(5.0)	(5.0)
Issuance of non-vested shares to employees and non-employee directors	9,702	—	—	—	—	—	—
Issuance of common shares to non-employee directors	1,474	—	0.1	—	—	—	0.1
Issuance of common shares to employees upon option exercises and vesting of restricted stock units and performance shares	66,810	—	1.2	—	—	—	1.2
Cancellation of employee non-vested shares	(379)	—	—	—	—	—	—
Cancellation of shares to cover employees' tax withholdings upon vesting of non-vested shares	(36,055)	—	(2.9)	—	—	—	(2.9)
Repurchase of common stock	(443,838)	—	—	—	(34.9)	—	(34.9)
Cash dividends on common stock and restricted shares and dividend equivalents on restricted stock units and performance shares[1]	—	—	—	(32.4)	—	—	(32.4)
Amortization of unearned equity compensation	—	—	11.7	—	—	—	11.7
Dividends on unvested equity awards that were canceled	—	—	—	0.1	—	—	0.1
BALANCE, December 31, 2016	17,651,461	$ 0.2	$ 1,047.4	$ 75.2	$ (281.4)	$ (36.7)	$ 804.7
Net income	—	$ —	$ —	$ 45.4	$ —	$ —	$ 45.4
Issuance of non-vested shares to non-employee directors	11,817	—	—	—	—	—	—
Issuance of common shares to non-employee directors	2,282	—	0.2	—	—	—	0.2
Issuance of common shares to employees upon vesting of restricted stock units and performance shares	103,652	—	—	—	—	—	—
Cancellation of employee non-vested shares	(451)	—	—	—	—	—	—
Cancellation of shares to cover employees' tax withholdings upon vesting of non-vested shares	(56,495)	—	(4.5)	—	—	—	(4.5)
Tax effect of cumulative-effect adjustment related to prior year adoption of ASU 2016-09	—	—	—	0.3	—	—	0.3
Repurchase of common stock	(938,680)	—	—	—	(77.8)	—	(77.8)
Cancellation of treasury stock	—	—	(0.2)	(0.4)	0.6	—	—
Cash dividends on common stock and restricted shares and dividend equivalents on restricted stock units[1]	—	—	—	(35.0)	—	—	(35.0)
Amortization of unearned equity compensation	—	—	13.0	—	—	—	13.0
BALANCE, December 31, 2017	16,773,586	$ 0.2	$ 1,055.9	$ 85.5	$ (358.6)	$ (36.7)	$ 746.3
Cumulative-effect adjustment[2]	—	$ —	$ —	$ 10.7	$ —	$ (0.4)	$ 10.3
BALANCE, January 1, 2018	16,773,586	$ 0.2	$ 1,055.9	$ 96.2	$ (358.6)	$ (37.1)	$ 756.6
Net income	—	—	—	91.7	—	—	91.7
Other comprehensive loss, net of tax	—	—	—	—	—	(11.7)	(11.7)
Issuance of non-vested shares to non-employee directors	9,009	—	—	—	—	—	—
Issuance of common shares to non-employee directors	1,954	—	0.2	—	—	—	0.2
Issuance of common shares to employees upon vesting of restricted stock units and performance shares	135,400	—	—	—	—	—	—
Cancellation of shares to cover employees' tax withholdings upon vesting of non-vested shares	(68,195)	—	(6.9)	—	—	—	(6.9)
Repurchase of common stock	(617,151)	—	—	—	(61.9)	—	(61.9)
Cash dividends on common stock and restricted shares and dividend equivalents on restricted stock units and performance shares[1]	—	—	—	(37.7)	—	—	(37.7)
Amortization of unearned equity compensation	—	—	10.1	—	—	—	10.1
BALANCE, December 31, 2018	16,234,603	$ 0.2	$ 1,059.3	$ 150.2	$ (420.5)	$ (48.8)	$ 740.4

1. Dividends declared per common share were $2.20, $2.00 and $1.80 during 2018, 2017 and 2016, respectively.

2. See Note 1 for discussion of our adoption of ASC 606 and ASU 2016-01 (as defined in Note 1).

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

KAISER ALUMINUM CORPORATION AND SUBSIDIARY COMPANIES

STATEMENTS OF CONSOLIDATED CASH FLOWS

	Year Ended December 31,		
	2018	2017	2016
		(In millions of dollars)	
Cash flows from operating activities:			
Net income	$ 91.7	$ 45.4	$ 91.7
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation of property, plant and equipment	42.1	38.3	34.5
Amortization of definite-lived intangible assets	1.8	1.4	1.5
Amortization of debt discount and debt issuance costs	1.0	1.2	1.1
Deferred income taxes	36.7	89.0	57.4
Non-cash equity compensation	10.3	13.3	11.8
Lower of cost or market inventory write-down	—	—	4.9
Non-cash asset impairment charges	1.4	19.2	2.8
Loss on extinguishment of debt	—	—	11.1
(Gain) loss on disposition of property, plant and equipment	(0.2)	(0.5)	0.2
Gain on disposition of available for sale securities	(2.9)	(2.3)	—
Non-cash defined benefit net periodic postretirement benefit cost	6.6	4.8	3.7
Other non-cash changes in assets and liabilities	21.9	(15.5)	(17.5)
Changes in operating assets and liabilities:			
Trade and other receivables	(22.3)	(30.9)	(26.8)
Contract assets	0.7	—	—
Inventories, excluding lower of cost or market write-down	(45.0)	(6.3)	13.1
Prepaid expenses and other current assets	(0.4)	(1.7)	(8.0)
Accounts payable	29.2	13.0	3.4
Accrued liabilities	(2.6)	(4.7)	26.2
Annual variable cash contributions to VEBAs	(15.7)	(20.0)	(19.5)
Long-term assets and liabilities, net	(4.1)	(2.2)	(26.0)
Net cash provided by operating activities[1]	150.2	141.5	165.6
Cash flows from investing activities[2]:			
Capital expenditures	(74.1)	(75.5)	(76.1)
Purchase of available for sale securities	(135.2)	(247.5)	(255.3)
Purchase of equity securities	(0.9)	—	—
Proceeds from disposition of available for sale securities	283.9	296.9	55.0
Cash payment for acquisition of Imperial Machine & Tool Co., net of cash received	(43.2)	—	—
Proceeds from disposal of property, plant and equipment	0.6	0.6	—
Net cash provided by (used in) investing activities	31.1	(25.5)	(276.4)
Cash flows from financing activities[2]:			
Repayment of principal and redemption premium of 8.25% Senior Notes	—	—	(206.0)
Issuance of 5.875% Senior Notes	—	—	375.0
Cash paid for debt issuance costs	—	—	(6.8)
Proceeds from stock option exercises	—	—	1.2
Repayment of capital lease	(0.7)	(0.4)	—
Cancellation of shares to cover employees' tax withholdings upon vesting of non-vested shares	(6.9)	(4.5)	(2.9)
Repurchase of common stock	(60.7)	(79.5)	(33.3)
Cash dividends and dividend equivalents paid	(37.7)	(35.0)	(32.4)
Net cash (used in) provided by financing activities	(106.0)	(119.4)	94.8
Net increase (decrease) in cash, cash equivalents and restricted cash during the period	75.3	(3.4)	(16.0)
Cash, cash equivalents and restricted cash at beginning of period	64.3	67.7	83.7
Cash, cash equivalents and restricted cash at end of period	$ 139.6	$ 64.3	$ 67.7

1. See Note 11 for adjustments made to arrive at our Consolidated Balance Sheet as of January 1, 2018 upon adopting ASC 606 (as defined in Note 1).

2. See Note 15 for supplemental disclosure on non-cash transactions.

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

KAISER ALUMINUM CORPORATION AND SUBSIDIARY COMPANIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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KAISER ALUMINUM CORPORATION AND SUBSIDIARY COMPANIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies

In this Annual Report on Form 10-K (this "Report"), unless the context otherwise requires, references in these notes to consolidated financial statements to "Kaiser Aluminum Corporation," "we," "us," "our," "the Company" and "our Company" refer collectively to Kaiser Aluminum Corporation and its subsidiaries.

Organization and Nature of Operations. Kaiser Aluminum Corporation specializes in the production of semi-fabricated specialty aluminum mill products, such as aluminum plate and sheet and extruded and drawn products, for the following end market applications: aerospace and high strength ("Aero/HS products"), automotive ("Automotive Extrusions"), general engineering ("GE products") and other industrial ("Other products"). Our business is organized into one operating segment. See Note 16 for additional information regarding our business, product and geographical area information and concentration of risk.

Principles of Consolidation and Basis of Presentation. The consolidated financial statements include the accounts of our wholly owned subsidiaries and are prepared in accordance with United States generally accepted accounting principles ("GAAP") and the rules and regulations of the Securities and Exchange Commission ("SEC"). Intercompany balances and transactions are eliminated. We have reclassified certain amounts in prior-period financial statements to conform to the current period's presentation. On the Statements of Consolidated Income, prior period presentation of Unrealized (gain) loss on derivative instruments is now contained within "Cost of products sold, excluding depreciation and amortization and other items." See Note 7 for additional details. See Note 16 for changes relating to the consolidation of the All Other business unit into the Fabricated Products reporting segment.

Use of Estimates in the Preparation of Financial Statements. The preparation of financial statements in accordance with GAAP requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities known to exist as of the date the financial statements are published and the reported amounts of revenues and expenses during the reporting period. Uncertainties with respect to such estimates and assumptions are inherent in the preparation of our consolidated financial statements; accordingly, it is possible that the actual results could differ from these estimates and assumptions, which could have a material effect on the reported amounts of our consolidated financial position and results of operations.

Fair Value Measurements. We apply the fair value hierarchy established by GAAP for the recognition and measurement of certain financial assets and liabilities. An asset or liability's fair value classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement. In determining fair value, we utilize valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible and consider counterparty risk in our assessment of fair value.

We also review the underlying inputs that are significant to the fair value measurement of financial instruments to determine if a transfer among hierarchy levels is appropriate. We historically have not had significant transfers into or out of each hierarchy level.

Financial assets and liabilities that we measure at fair value each period include our derivative instruments, equity investments related to our deferred compensation plan and debt investment securities classified as available for sale securities (see Note 4 and Note 7). Additionally, we measure at fair value once each year at December 31 the plan assets of the Salaried VEBA (defined in Note 4) and our Canadian defined benefit pension plan. We record our remaining financial assets and liabilities at carrying value.

Goodwill is tested for impairment during the fourth quarter on an annual basis, as well as on an interim basis, as warranted, at the time of relevant events and changes in circumstances. Intangible assets with definite lives are initially recognized at fair value and subsequently amortized over the estimated useful lives to reflect the pattern in which the economic benefits of the intangible assets are consumed. In the event the pattern cannot be reliably determined, we use a straight-line amortization method. Whenever events or changes in circumstances indicate that the carrying amount of the intangible assets may not be recoverable, the intangible assets are reviewed for impairment. For a discussion of our business acquisition in 2018, the goodwill impairment charge we recorded during 2017 and the intangible asset non-cash impairment charge we recorded during 2016, see Note 3.

For a majority of our remaining non-financial assets and liabilities, which include contract assets, inventories and property, plant and equipment, we are not required to measure their fair value on a recurring basis. However, if certain triggering events occur, an evaluation of the affected non-financial asset or liability will be required, which could result in a reduction to the carrying amount of such asset or liability. See "*Inventories*" below for a discussion of the lower of cost or market inventory

write-down recorded in 2016 and see "*Property, Plant and Equipment, Net"* below for a discussion of impairment charges on idled assets recorded during 2018, 2017 and 2016.

Cash and Cash Equivalents. We consider only those short-term, highly liquid investments which, when purchased, have maturities of 90 days or less to be cash equivalents. Our cash equivalents consist primarily of funds in commercial paper, money market funds and other highly liquid investments, which are classified within Level 1 of the fair value hierarchy with the exception of commercial paper, which is classified within Level 2 of the fair value hierarchy (see Note 7).

Restricted Cash. We are required to keep on deposit certain amounts that are pledged or held as collateral relating to workers' compensation and other agreements. We account for such deposits as restricted cash (see Note 15). From time to time, such restricted funds could be returned to us or we could be required to pledge additional cash.

Available for Sale Securities. We account for investments in certain marketable debt securities as available for sale securities. Such securities are recorded at fair value (see Note 7), with net unrealized gains and losses, net of income taxes, reflected in Accumulated other comprehensive loss as a component of Stockholders' equity. Realized gains and losses from the sale of marketable debt securities, if any, are determined on a specific identification basis. Debt investment securities with an original maturity of 90 days or less are classified as Cash and cash equivalents (see Note 2). Debt investment securities with an original maturity of greater than 90 days are presented as Short-term investments on the Consolidated Balance Sheets. In addition to debt investment securities, we also hold assets in various investment funds managed by a third-party trust in connection with our deferred compensation program (see Note 4).

Trade Receivables and Allowance for Doubtful Accounts. Trade receivables primarily consist of amounts billed to customers for products sold. Accounts receivable are generally due within 30 to 90 days. For the majority of our receivables, we establish an allowance for doubtful accounts based upon collection experience and other factors. On certain other receivables where we are aware of a specific customer's inability or reluctance to pay, an allowance for doubtful accounts is established against amounts due, to reduce the net receivable balance to the amount we reasonably expect to collect. However, if circumstances change, our estimate of the recoverability of accounts receivable could be different. Circumstances that could affect our estimates include, but are not limited to, customer credit issues and general economic conditions. Accounts are written off once deemed to be uncollectible. Any subsequent cash collections relating to accounts that have been previously written off are typically recorded as a reduction to total bad debt expense in the period of payment. Write-offs for 2018, 2017 and 2016 were immaterial to the consolidated financial statements.

Inventories. Inventories are stated at the lower of cost or market value. On March 31, 2016, we recorded a lower of cost or market inventory write-down of $4.9 million as a result of a decrease in our net realizable value of inventory. The net realizable value reflected commitments as of that date from customers to purchase our inventory at prices that exceeded the Midwest Transaction Price, which reflects the primary aluminum supply/demand dynamics in North America, reduced by an approximate normal profit margin. There were no additional lower of cost or market inventory adjustments since the quarter ended March 31, 2016.

Finished products, work-in-process and raw material inventories are stated on the last-in, first-out ("LIFO") basis. At December 31, 2018 and December 31, 2017, the current cost of our inventory exceeded its stated LIFO value by $31.7 million and $24.3 million, respectively. The stated LIFO value of our inventory represented its net realizable value (less a normal profit margin). Other inventories are stated on the first-in, first-out basis and consist of operating supplies, which are materials and supplies to be consumed during the production process. Inventory costs consist of material, labor and manufacturing overhead, including depreciation. Abnormal costs, such as idle facility expenses, freight, handling costs and spoilage, are accounted for as current period charges (see Note 2 for the components of inventories).

Replacement Parts. Replacement parts consist of preventative maintenance and capital spare parts, which are stated on the first-in, first-out basis. Replacement parts are recorded within Prepaid expenses and other current assets or Other assets depending on whether or not the expected utilization of the replacement parts is to occur within the current operating cycle.

Property, Plant and Equipment, Net. Property, plant and equipment, net, is recorded at cost and includes construction in progress (see Note 2). Interest related to the construction of qualifying assets is capitalized as part of the construction costs. The amount of interest expense capitalized as construction in progress was $1.7 million, $2.2 million and $2.9 million during 2018, 2017 and 2016, respectively.

Depreciation is computed using the straight-line method at rates based on the estimated useful lives of the various classes of assets. Capital lease assets and leasehold improvements are depreciated on a straight-line basis over the shorter of the estimated useful lives of the assets or the lease term. The principal estimated useful lives are as follows:

	Range (in years)
Land improvements	3 - 25
Buildings and leasehold improvements	15 - 45
Machinery and equipment	1 - 24
Capital lease assets	2 - 10

Depreciation expense is not included in Cost of products sold, excluding depreciation and amortization and other items, but is included in Depreciation and amortization.

Property, plant and equipment are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset or group of assets may not be recoverable. We regularly assess whether events and circumstances with the potential to trigger impairment have occurred and rely on a number of factors, including operating results, business plans, economic projections and anticipated future cash flow, to make such assessments. We use an estimate of the future undiscounted cash flows of the related asset or asset group over the estimated remaining life of such asset(s) in measuring whether the asset(s) are recoverable. Measurement of the amount of impairment, if any, is based on the difference between the carrying value of the asset(s) and the estimated fair value of such asset(s). Fair value is determined through a series of standard valuation techniques.

We recorded impairment charges of $1.4 million, $0.8 million and $0.2 million in 2018, 2017 and 2016, respectively, to reflect the scrap value of idled assets we determined not to deploy for future use. Asset impairment charges are included in Other operating charges, net, in the Statements of Consolidated Income.

We classify assets as held for sale only when an asset is being actively marketed and expected to sell within 12 months. Assets held for sale are initially measured at the lesser of the assets' carrying amount and the fair value less costs to sell.

Derivative Financial Instruments. Consistent with guidelines established by management and approved by our Board of Directors, we use derivative financial instruments to mitigate our exposure to changes in the market price of aluminum, alloying metals, energy and, to a lesser extent, foreign currency exchange rates. We do not use derivative financial instruments for trading or other speculative purposes. Hedging transactions are executed centrally on behalf of all of our operations to minimize transaction costs, monitor consolidated net exposures and allow for increased responsiveness to changes in market factors.

We reflect the fair value of all of our derivative instruments on our Consolidated Balance Sheets (see Note 7). The fair value of hedges settling within one year is included in Prepaid expenses and other current assets or Other accrued liabilities. The fair value of hedges settling beyond one year is included in Other assets or Long-term liabilities.

Prior to our adoption of ASU 2017-12 (as defined below under "*Adoption of New Accounting Standards*"), we did not meet the documentation requirements for hedge (deferral) accounting related to our aluminum and energy derivatives. Accordingly, we recorded unrealized gain or loss associated with these hedges in the Statements of Consolidated Income. Subsequent to our adoption of ASU 2017-12 on January 1, 2018, our aluminum and energy derivatives qualified for hedge (deferral) accounting and, as such, we designated such hedges as cash flow hedges. Forward swap contracts for zinc and copper ("Alloying Metals") used in our fabrication operations are also designated as cash flow hedges. Unrealized gains and losses associated with our cash flow hedges are deferred in Other comprehensive loss, net of tax and reclassified to Cost of products sold, excluding depreciation and amortization and other items when such hedges settle (see Note 7).

From time to time, we enter into foreign currency forward contracts to protect the value of anticipated foreign currency expenses associated with cash commitments for equipment purchases. We do not meet the documentation requirements for hedge (deferral) accounting related to foreign currency derivatives and, as such, gains and losses (both unrealized and realized) related to our foreign currency forward contracts are reflected as an increase or reduction in Other income, net.

Self Insurance of Workers' Compensation and Employee Healthcare Liabilities. We self-insure the majority of the costs of workers' compensation benefits and employee healthcare benefits and rely on insurance coverage to protect us from large losses on individual claims. Workers' compensation liabilities are based on a combination of estimates for: (i) incurred-but-not-

reported claims and (ii) the ultimate expense of incurred claims. Such estimates are based on judgment, using our historical claims data and information and analysis provided by actuarial and claims advisors, our insurance carriers and other professionals. Our undiscounted workers' compensation liabilities were estimated at $27.6 million and $24.8 million at December 31, 2018 and December 31, 2017, respectively. However, we account for our workers' compensation accrued liability on a discounted basis (see Note 2), using a discount rate of 3.00% at December 31, 2018 and 2.25% at December 31, 2017. Accrued liabilities for employee healthcare benefits, which are estimates of unpaid incurred medical and prescription drug costs as provided by our healthcare administrators, were $3.6 million and $3.5 million at December 31, 2018 and December 31, 2017, respectively.

Debt Issuance Costs. Costs incurred in connection with debt financing are deferred and amortized over the estimated term of the related borrowing. Such amortization is included in Interest expense and may be capitalized as part of construction in progress (see Note 8).

Conditional Asset Retirement Obligations ("CAROs"). We have CAROs at several of our manufacturing facilities. Our CAROs can be separated into two primary categories: (i) legal obligations related to the removal and disposal of asbestos and (ii) asset retirement obligations related to future lease terminations. The majority of our CAROs relate to the first category and consist of incremental costs that would be associated with the removal and disposal of asbestos (all of which is believed to be fully contained and encapsulated within walls, floors, ceilings or piping) of certain of our older facilities if such facilities were to undergo major renovation or be demolished. We estimate incremental costs for special handling, removal and disposal costs of materials that may or will give rise to CAROs and then discount the expected costs back to the current year using a credit-adjusted, risk-free rate. When it is unclear when or if CAROs will be triggered, we use probability weighting for possible timing scenarios to determine the probability-weighted liability amounts that should be recognized in our consolidated financial statements (see Note 9).

Environmental Contingencies. With respect to environmental loss contingencies, we record a loss contingency whenever a contingency is probable and reasonably estimable (see Note 9). Accruals for estimated losses from environmental remediation obligations are generally recognized no later than the completion of the remedial feasibility study. Such accruals are adjusted as information develops or circumstances change. Costs of future expenditures for environmental remediation obligations are not discounted to their present value. Accruals for expected environmental costs are included in Other accrued liabilities or Long-term liabilities, as appropriate (see Note 2). Environmental expense relating to continuing operations is included in Cost of products sold, excluding depreciation and amortization and other items[1] in the Statements of Consolidated Income. Environmental expense relating to non-operating locations is included in Selling, general, administrative, research and development ("SG&A and R&D") in the Statements of Consolidated Income.

Advertising Costs. Advertising costs, which are included in SG&A and R&D, are expensed as incurred. Advertising costs for 2018, 2017 and 2016 were $0.3 million, $0.7 million and $0.4 million, respectively.

Research and Development Costs. Research and development costs, which are included in SG&A and R&D, are expensed as incurred. Research and development costs for 2018, 2017 and 2016 were $9.8 million, $10.0 million and $10.2 million, respectively.

Major Maintenance Activities. All major maintenance costs are accounted for using the direct expensing method.

Leases. For leases that contain predetermined fixed escalations of the minimum rent, we recognize the related rent expense on a straight-line basis from the date we take possession of the property to the end of the initial lease term. We record any difference between the straight-line rent amounts and the amount payable under the lease as part of deferred rent in Other accrued liabilities or Long-term liabilities, as appropriate. Deferred rent for all periods presented was not material.

Stock-Based Compensation. Stock-based compensation in the form of service-based awards is provided to executive officers, certain employees and non-employee directors and is accounted for at fair value. We measure the cost of services received in exchange for an award of equity instruments based on the grant-date fair value of the award and the number of awards expected to ultimately vest. The grant-date fair value is determined based on the stock price on the date of grant, adjusted for expected dividends or dividend equivalents to be paid during the vesting period.

We also grant performance-based awards to executive officers and other key employees. The methodology used to value these performance-based awards is based on the nature of the performance conditions within those awards. Awards that are subject to performance conditions pertaining to total shareholder return are valued on the date of grant using a Monte Carlo valuation model. The key assumptions in applying this model are an expected volatility and a risk-free interest rate. Awards with performance conditions pertaining to our cost performance and awards with performance conditions pertaining to our

economic value added performance are valued based on our stock price at the date of grant. For more information on our stock-based compensation, see Note 6.

The cost of service-based awards, including time-vested restricted stock and performance shares, is recognized as an expense over the requisite service period of the award on a straight-line basis. Adjustments to expense related to forfeitures are recorded in the period in which they occur. For performance shares with performance conditions pertaining to our cost performance and economic value added performance, the related expense is updated quarterly by adjusting the estimated number of shares expected to vest based on the most probable outcome of the performance condition (see Note 6).

Income Taxes. Deferred income taxes reflect the future tax effect of temporary differences between the carrying amount of assets and liabilities for financial and income tax reporting and are measured by applying statutory tax rates in effect for the year during which the differences are expected to reverse. In accordance with Accounting Standards Codification ("ASC") Topic 740, *Income Taxes* ("ASC 740"), we use a "more likely than not" threshold for recognition of tax attributes that are subject to uncertainties and measure any reserves in respect of such expected benefits based on their probability. Deferred tax assets are reduced by a valuation allowance to the extent it is more likely than not that the deferred tax assets will not be realized (see Note 13).

Adoption of New Accounting Pronouncements

Accounting Standards Update ("ASU") No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* ("ASU 2014-09"), was issued in May 2014 and requires an entity to recognize revenue to depict 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. We adopted ASU 2014-09, including its subsequent amendments as codified under ASC Topic 606 ("ASC 606"), during the quarter ended March 31, 2018. Upon adoption under the modified retrospective method, we elected to apply the guidance only to contracts that were not completed at the date of initial application, which resulted in a cumulative-effect increase of $10.1 million (see Note 11) to our Retained earnings (net of a $3.3 million tax impact) on January 1, 2018. Comparative information in this Report has not been adjusted and continues to be reported under previous revenue recognition guidance within ASC Topic 605 ("ASC 605"). See Statement of Consolidated Stockholders' Equity and Note 11 for details of the significant changes and quantitative impacts of the changes, as well as our policy on revenue recognition.

ASU No. 2016-01, *Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities* ("ASU 2016-01"), was issued in January 2016. The amendments in ASU 2016-01 require equity investments to be measured at fair value with changes in fair value recognized in net income. Equity investments related to our deferred compensation plan that had previously been accounted for as available for sale securities are now accounted for as equity investments with changes in fair value recorded within net income. As such, we recorded a cumulative-effect increase of $0.6 million to our Retained earnings on January 1, 2018 to remove the balance of mark-to-market adjustments recorded within Accumulated other comprehensive income at December 31, 2017. See Note 4 for additional details on our deferred compensation plan, including the fair value of related equity investments.

ASU No. 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* ("ASU 2017-07"), was issued in March 2017. ASU 2017-07 amends the requirements related to the income statement presentation of the components of net periodic postretirement benefit cost for our defined benefit pension and other postretirement plans. Specifically, ASU 2017-07 requires us to: (i) disaggregate the current-service-cost component from the "other components" of net benefit cost and present it with other current compensation costs for related employees in the income statement and (ii) present the other components elsewhere in the income statement and outside of income from operations. As a result of our retrospective adoption of ASU 2017-07, we reclassified amounts that had previously been presented within Selling, general, administrative, research and development to Other expense, net, in the Statements of Consolidated Income. See Note 4 for further discussion of our defined benefit pension and other postretirement plans.

ASU No. 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities* ("ASU 2017-12"), was issued in August 2017. The amendments under ASU 2017-12 refine and expand hedge accounting requirements for both financial (e.g., interest rate) and commodity risks. Its provisions create more transparency around how economic results are presented, both on the face of the financial statements and in the related notes. It also makes certain targeted improvements to simplify the application of hedge accounting guidance. There was no cumulative effect adjustment to record as a result of early adopting ASU 2017-12 in the quarter ended March 31, 2018; however, we designated all of our outstanding commodity hedges as cash flow hedges beginning January 1, 2018. We therefore have significantly reduced the mark-to-market adjustments that have historically been recorded within the Statements of Consolidated Income. These

adjustments have instead been recorded within Other comprehensive loss, net of tax beginning in the quarter ended March 31, 2018. See Note 7 for further discussion of our derivatives and hedging programs.

There were no material impacts on our consolidated financial statements resulting from our early adoption in the first quarter of 2018 of ASU No. 2017-09, *Compensation - Stock Compensation (Topic 718): Scope of Modification Accounting.*

Accounting Pronouncements Issued But Not Yet Adopted

ASU No. 2016-02, *Leases (Topic 842): Amendments to the Financial Accounting Standards Board Accounting Standards Codification* ("ASU 2016-02"), was issued in February 2016. Under ASU 2016-02, lessees will need to recognize a right-of-use asset and a lease liability for virtually all of their leases (other than leases that meet the definition of a short-term lease). For income statement purposes, a dual model was retained, requiring leases to be classified as either operating or finance. Operating leases will result in straight-line expense (similar to current operating leases) while finance leases will result in a front-loaded expense pattern (similar to current capital leases). ASU 2016-02 becomes effective for us in the first quarter of 2019. We plan to adopt this standard using the optional transition method provided for under ASU No. 2018-11, *Leases (Topic 842): Targeted Improvements* ("ASU 2018-11"), which will allow us to apply the standard as of January 1, 2019, rather than as of the earliest period presented. We plan to elect the package of practical expedients within ASC Topic 842, which, among other things, will allow us to carry forward historical lease classification. We also plan to elect the practical expedient that will allow us to exclude leases with a term of twelve months or less from our balance sheet. However, we are not electing to adopt the hindsight practical expedient. We estimate that the adoption of ASU 2016-02 will impact our consolidated balance sheet as of January 1, 2019 through the creation of a right-of-use asset and lease liability for operating leases in the range of $20.0 million to $30.0 million. We are still in process of estimating our incremental borrowing rate as of January 1, 2019, updating our policies and procedures to incorporate updates to lease accounting as well as assessing our control environment for the resulting changes.

ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"), was issued in June 2016. Under ASU 2016-13, existing guidance on reporting credit losses for trade and other receivables and available for sale debt securities will be replaced with a new forward-looking "expected loss" model that generally will result in the earlier recognition of allowances for losses. We are currently in the process of evaluating the impact of adopting ASU 2016-13 in 2020, but do not expect it to have a material impact on our consolidated financial statements.

ASU No. 2018-15, *Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract* ("ASU 2018-15"), was issued in August 2018. Under ASU 2018-15, requirements for capitalizing implementation costs incurred in a hosting arrangement (cloud computing) that is a service contract, are to be aligned with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. We are currently in the process of evaluating the impact of adopting ASU 2018-15 in 2020, but do not expect it to have a material impact on our consolidated financial statements.

We do not anticipate any material impact on our consolidated financial statements upon the adoption of the following accounting pronouncements: (i) ASU No. 2018-07, *Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*; (ii) ASU No. 2018-08, *Not-for-Profit Entities (Topic 958): Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made*; (iii) ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement*; and (iv) ASU 2018-14, *Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715-20): Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans*.

2. Supplemental Balance Sheet Information

	December 31, 2018	December 31, 2017
	(In millions of dollars)	
Cash and Cash Equivalents		
Cash and money market funds	$ 22.9	$ 23.5
Commercial paper	102.7	27.6
Total	$ 125.6	$ 51.1

	December 31, 2018	December 31, 2017
	(In millions of dollars)	
Trade Receivables, net		
Billed trade receivables	$ 179.5	$ 165.9
Unbilled trade receivables	1.1	0.3
Trade receivables, gross	180.6	166.2
Allowance for doubtful receivables	(0.8)	(1.2)
Trade receivables, net	$ 179.8	$ 165.0
Inventories		
Finished products	$ 48.0	$ 63.8
Work-in-process	85.6	78.3
Raw materials	75.0	61.3
Operating supplies	6.5	4.5
Total	$ 215.1	$ 207.9
Property, Plant and Equipment, net		
Land and improvements	$ 21.4	$ 21.1
Buildings and leasehold improvements	97.0	92.1
Machinery and equipment	755.6	689.1
Construction in progress	43.6	35.1
Property, plant and equipment – gross	917.6	837.4
Accumulated depreciation	(307.4)	(267.9)
Assets held for sale	1.6	1.9
Property, plant and equipment, net	$ 611.8	$ 571.4
Other Accrued Liabilities		
Uncleared cash disbursements	$ 4.8	$ 7.3
Accrued income taxes and other taxes payable	6.5	6.8
Accrued annual contribution to VEBAs – Note 4	2.1	15.7
Accrued interest	2.9	2.9
Other – Note 7	27.7	7.8
Total	$ 44.0	$ 40.5
Long-Term Liabilities		
Workers' compensation accruals	$ 24.6	$ 22.6
Long-term environmental accrual – Note 9	14.3	15.8
Other long-term liabilities	27.5	21.6
Total	$ 66.4	$ 60.0

3. Business Combinations, Goodwill and Intangible Assets

Business Combinations. On September 19, 2018, we acquired Imperial Machine and Tool Co. ("IMT"), located in Columbia, New Jersey, for $43.2 million in cash, net of cash received. IMT specializes in multi-material additive manufacturing and machining technologies for demanding aerospace and defense, automotive, high-tech and general industrial applications. The acquisition allows us to gain further insights into the potentially disruptive additive manufacturing technology and enhances our ability to address customer needs by broadening our capability to provide innovative solutions for demanding applications.

The following table summarizes recognized amounts of identifiable assets acquired and liabilities assumed at the acquisition date (in millions of dollars):

Cash	$	0.9
Accounts receivable		2.6
Prepaid expenses and other current assets		0.6
Inventory		2.9
Property, plant and equipment		4.1
Identifiable intangible assets with definite lives		9.2
Goodwill		25.2
Accounts payable and other current liabilities		(1.4)
Total purchase price		44.1
Less: cash acquired		(0.9)
Purchase price, net of cash acquired	$	43.2

Total acquisition-related costs were approximately $0.6 million, all of which were expensed during the year ended December 31, 2018 and were included in Selling, general, administrative, research and development in the Statements of Consolidated Income.

Goodwill. The following table presents the changes to goodwill during the year ended December 31, 2018 (in millions of dollars):

		December 31, 2017		Increase to Goodwill[1]		December 31, 2018
Goodwill	$	37.2	$	25.2	$	62.4
Accumulated impairment loss		(18.4)		—		(18.4)
Carrying value	$	18.8	$	25.2	$	44.0

[1] The goodwill of $25.2 million arising from the acquisition of IMT after allocating the consideration paid, net of cash received, to all other identifiable assets is expected to be deductible for income tax purposes over the next 15 years.

Due to a reduction in our long-term demand assumption for hard alloy extruded shapes, we recorded an impairment charge with respect to our Chandler, Arizona (Extrusion) facility of $18.4 million during the quarter ended June 30, 2017 within Operating income in the Statements of Consolidated Income.

Intangible Assets. Information regarding our intangible assets consisted of the following as of each period presented (in millions of dollars, except amortization periods):

	Weighted-Average Amortization Period (in years)	Gross Amount	Accumulated Amortization	Intangible Assets, Net
December 31, 2018				
Customer relationships	24	$ 36.1	$ (11.1)	$ 25.0
Trade name	10	2.4	(0.1)	2.3
Non-compete agreement	5	5.4	(0.3)	5.1
Total		$ 43.9	$ (11.5)	$ 32.4
December 31, 2017				
Customer relationships	25	$ 34.7	$ (9.7)	$ 25.0
Total		$ 34.7	$ (9.7)	$ 25.0

We recorded a $2.6 million non-cash impairment charge within Other operating charges, net, during the quarter ended September 30, 2016 due to the loss of a customer. We identified no other indicators of impairment associated with the remainder of our intangible assets during the years ended December 31, 2018, December 31, 2017 or December 31, 2016.

Amortization expense relating to definite-lived intangible assets was $1.8 million for 2018, $1.4 million for 2017, and $1.5 million for 2016. The expected amortization of intangible assets for each of the next five calendar years is as follows (in millions of dollars):

2019	$ 2.8
2020	2.8
2021	2.8
2022	2.8
2023	2.6
Thereafter	18.6
Total	$ 32.4

4. Employee Benefits

Employee Plans. Employee benefit plans include:

- A defined contribution 401(k) savings plan for hourly bargaining unit employees at nine of our production facilities based on the specific collective bargaining agreement at each facility. For active bargaining unit employees at three of these production facilities, we are required to make fixed rate contributions. For active bargaining unit employees at one of these production facilities, we are required to match certain employee contributions. For active bargaining unit employees at three of these production facilities, we are required to make both fixed rate contributions and concurrent matches. For active bargaining unit employees at two remaining production facilities, we are not required to make any contributions. Fixed rate contributions either: (i) range from (in whole dollars) $800 to $2,400 per employee per year, depending on the employee's age, or (ii) vary between 2% to 10% of the employees' compensation depending on their age and years of service for employees hired prior to January 1, 2004 or is a fixed 2% annual contribution for employees hired on or after January 1, 2004.
- A defined contribution 401(k) savings plan for salaried and certain hourly employees providing for a concurrent match of up to 4% of certain contributions made by employees plus an annual contribution of between 2% and 10% of their compensation depending on their age and years of service to employees hired prior to January 1, 2004. All new hires on or after January 1, 2004 receive a fixed 2% contribution annually.

- A defined contribution 401(k) savings plan for certain employees providing for an annually funded discretionary Company match determined in January based on the financial results of the previous year. If a Company match is to be made, a total flat dollar amount is determined and then funded to employees' accounts based on their contribution levels.
- A defined benefit pension plan for salaried employees at our London, Ontario facility, with annual contributions based on each salaried employee's age and years of service. At December 31, 2018, approximately 62% of the plan assets were invested in equity securities and 34% of plan assets were invested in fixed income securities. The remaining plan assets were invested in short-term securities. Our investment committee reviews and evaluates the investment portfolio. The asset mix target allocation on the long-term investments is approximately 65% in equity securities, 30% in fixed income securities and 5% in short-term securities. The plan assets of our Canadian pension plan are managed by advisors selected by us, with the investment portfolio subject to periodic review and evaluation by our investment committee. The investment of assets in the Canadian pension plan is based upon the objective of maintaining a diversified portfolio of investments in order to minimize concentration of credit and market risks (such as interest rate, currency, equity price and liquidity risks). The degree of risk and risk tolerance take into account the obligation structure of the plan, the anticipated demand for funds and the maturity profiles required from the investment portfolio in light of these demands.
- A non-qualified, unfunded, unsecured plan of deferred compensation for certain employees who would otherwise suffer a loss of benefits under our defined contribution plan as a result of the limitations imposed by the Internal Revenue Code of 1986 ("Code"). Despite the plan being an unfunded plan, we make an annual contribution to a rabbi trust to fulfill future funding obligations, as contemplated by the terms of the plan. The assets in the trust are held in various investment funds at certain registered investment companies (see "*Fair Value of Plan Assets"* below) and are at all times subject to the claims of our general creditors. No participant has a claim to any assets of the trust; however, participants are eligible to receive distributions from the trust subject to vesting and other eligibility requirements. Offsetting liabilities relating to the deferred compensation plan are included in Long-term liabilities. Upon adoption of ASU 2016-01 on January 1, 2018 (see Note 1), assets in the trust are accounted for as equity investments with changes in fair value recorded within Other expense, net. During the year ended December 31, 2018, we recognized a $1.0 million loss on equity securities still held at the reporting date related to the deferred compensation plan.
- An employment agreement with our chief executive officer extending through July 15, 2020. We also provide certain members of senior management, including each of our named executive officers, with benefits related to terminations of employment in specified circumstances, including in connection with a change in control, by us without cause and by the executive officer with good reason.

Salaried VEBA Postretirement Obligation. Certain retirees who retired prior to 2004 and certain employees who were hired prior to February 2002 and have subsequently retired or will retire with the requisite age and service, along with their surviving spouses and eligible dependents, are eligible to participate in a voluntary employees' beneficiary association ("VEBA") that provides healthcare cost, medical cost and long-term care insurance cost reimbursement benefits ("Salaried VEBA"). We have an ongoing obligation with no express termination date to make variable cash contributions up to a maximum of $2.9 million to the Salaried VEBA. We determined that in the first quarter of 2019, we will pay approximately $2.1 million with respect to 2018. Such amount was recorded within Other accrued liabilities as of December 31, 2018 (see Note 2). We paid the maximum of $2.9 million with respect to 2017 during the first quarter of 2018. We account for the Salaried VEBA as a defined benefit plan in our financial statements.

Union VEBA Postretirement Obligation. Certain other eligible retirees represented by certain unions, along with their surviving spouses and eligible dependents, participate in a separate VEBA ("Union VEBA"). During the first quarter of 2018, we made a $12.8 million cash contribution to the Union VEBA with respect to the nine months ended September 30, 2017. This was our final contribution. We have no ongoing obligation to make further contributions to the Union VEBA.

Key Assumptions. The following data presents the key assumptions used and the amounts reflected in our consolidated financial statements with respect to our Canadian pension plan and the Salaried VEBA. We use a December 31 measurement date for all of the plans.

Assumptions used to determine benefit obligations as of the periods presented were as follows:

	Canadian Pension Plan		Salaried VEBA	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Discount rate	3.90%	3.40%	3.90%	3.20%
Expected long-term return on plan assets	4.45%	4.45%	5.50%	5.50%
Rate of compensation increase	3.00%	3.00%	—	—

Key assumptions made in computing the net obligation of the Salaried VEBA and in total include:

With respect to Salaried VEBA assets:

- Based on the information received from the Salaried VEBA at December 31, 2018 and at December 31, 2017, the Salaried VEBA assets were invested in various managed proprietary funds.
- Our variable payment, if any, is treated as a funding/contribution policy and not counted as a Salaried VEBA asset at December 31 for actuarial purposes.

With respect to Salaried VEBA obligations:

- The accumulated postretirement benefit obligation ("APBO") for the Salaried VEBA was computed based on the level of benefits being provided by it at December 31, 2018 and December 31, 2017.
- Since the Salaried VEBA was paying a fixed annual amount to its participants at both December 31, 2018 and December 31, 2017, no future cost trend rate increase has been assumed in computing the APBO for the Salaried VEBA.

Assumptions used to determine net periodic postretirement benefit cost for the years ended December 31 were:

	Canadian Pension Plan			Salaried VEBA		
	2018	2017	2016	2018	2017	2016
Discount rate	3.40%	3.80%	4.10%	3.20%	3.60%	3.90%
Expected long-term return on plan assets[1]	4.45%	4.45%	4.45%	5.50%	7.75%	7.75%
Rate of compensation increase	3.00%	3.00%	3.00%	—	—	—

1. The expected long-term rate of return assumption for the Salaried VEBA is based on the targeted investment portfolios provided to us by the trustee of the Salaried VEBA.

Benefit Obligations and Funded Status. The following table presents the benefit obligations and funded status of our Canadian pension plan and the Salaried VEBA as of December 31, 2018 and December 31, 2017 and the corresponding amounts that are included in our Consolidated Balance Sheets (in millions of dollars):

	Canadian Pension Plan		Salaried VEBA	
	2018	2017	2018	2017
Change in benefit obligation:				
Obligation at beginning of year	$ 8.5	$ 7.0	$ 90.0	$ 86.8
Foreign currency translation adjustment	(0.7)	0.5	—	—
Service cost	0.3	0.3	—	—
Interest cost	0.3	0.3	2.8	3.0
Prior service cost[1]	—	—	6.9	7.3
Actuarial (gain) loss[2]	(0.6)	0.6	(6.8)	(0.5)
Plan participants contributions	0.1	0.1	—	—
Benefits paid by Company	(0.6)	(0.3)	—	—
Benefits paid by Salaried VEBA	—	—	(7.3)	(6.6)
Obligation at end of year[3]	7.3	8.5	85.6	90.0
Change in plan assets:				
Fair market value of plan assets at beginning of year	7.3	6.1	58.1	58.2
Foreign currency translation adjustment	(0.6)	0.5	—	—
Actual return on assets	(0.2)	0.5	0.3	3.6
Plan participants contributions	0.1	0.1	—	—
Company contributions	0.5	0.4	2.1	2.9
Benefits paid by Company	(0.6)	(0.3)	—	—
Benefits paid by Salaried VEBA	—	—	(7.3)	(6.6)
Fair market value of plan assets at end of year	6.5	7.3	53.2	58.1
Net funded status[4]	$ (0.8)	$ (1.2)	$ (32.4)	$ (31.9)

1. The prior service cost relating to the Salaried VEBA in both 2018 and 2017 resulted from increases in the annual healthcare reimbursement benefit starting in 2018 and 2017, respectively, for plan participants.

2. The actuarial gain relating to the Salaried VEBA in 2018 was comprised of: (i) a $5.1 million gain due to a change in the discount rate; (ii) a $2.2 million gain due to a change in the projected utilization rate; offset by (iii) a $0.5 million loss due to changes in census information.

   The actuarial gain relating to the Salaried VEBA in 2017 was comprised of: (i) a $2.5 million gain due to changes in census information; (ii) a $1.0 million gain due to a change in the projected utilization rate; offset by (iii) a $3.0 million loss due to a change in the discount rate.

3. For the Canadian pension plan, the benefit obligation is the projected benefit obligation. For the Salaried VEBA, the benefit obligation is the APBO.

4. Net funded status of $32.4 million and $31.9 million relating to the Salaried VEBA at December 31, 2018 and December 31, 2017, respectively, was presented as Net liabilities of Salaried VEBA on the Consolidated Balance Sheet.

The accumulated benefit obligation for the Canadian pension plan was $6.4 million and $7.9 million at December 31, 2018 and December 31, 2017, respectively. We expect to contribute $0.6 million to the Canadian pension plan in 2019.

As of December 31, 2018, the net benefits expected to be paid in each of the next five fiscal years and in the aggregate for the five fiscal years thereafter are as follows (in millions of dollars):

	Benefit Payments Due by Period					
	2019	2020	2021	2022	2023	2024-2028
Canadian pension plan benefit payments	$ 0.3	$ 0.3	$ 0.3	$ 0.3	$ 0.3	$ 1.8
Salaried VEBA benefit payments[1]	8.0	7.8	7.5	7.2	6.9	29.9
Total net benefits	$ 8.3	$ 8.1	$ 7.8	$ 7.5	$ 7.2	$ 31.7

1. Such amounts are based on benefit amounts and certain key assumptions obtained from the Salaried VEBA.

The amount of loss included in the Consolidated Balance Sheets (within Accumulated other comprehensive loss) associated with our Canadian pension plan and the Salaried VEBA (before tax) that had not yet been reflected in net periodic postretirement benefit cost was as follows at December 31 (in millions of dollars):

	Canadian Pension Plan		Salaried VEBA	
	2018	2017	2018	2017
Accumulated net actuarial loss	$ (1.5)	$ (1.9)	$ (12.5)	$ (17.5)
Transition assets	—	0.1	—	—
Prior service cost	—	—	(44.2)	(42.7)
Cumulative loss reflected in Accumulated other comprehensive loss	$ (1.5)	$ (1.8)	$ (56.7)	$ (60.2)

The amount in Accumulated other comprehensive loss that has not yet been recognized as a component of net periodic postretirement benefit cost at December 31, 2018 that is expected to be recognized in 2019 for the Canadian pension plan was nominal at December 31, 2018. For the Salaried VEBA, such amounts were $6.1 million at December 31, 2018. Of the $6.1 million relating to the Salaried VEBA, $5.7 million is related to amortization of prior service cost and $0.4 million is related to amortization of net actuarial loss. See Note 10 for reclassification adjustments within other comprehensive (loss) income that were recognized as components of net periodic postretirement benefit cost for 2018, 2017 and 2016.

Fair Value of Plan Assets. The plan assets of our Canadian pension plan and the Salaried VEBA are measured annually on December 31 and reflected in our Consolidated Balance Sheets at fair value. In determining the fair value of the plan assets at an annual period end, we utilize primarily the results of valuations supplied by the investment advisors responsible for managing the assets of each plan, which we independently review for reasonableness. Valuation of certain Canadian pension plan and Salaried VEBA assets are based on the net asset value ("NAV") of shares held by the plans at year-end using the NAV practical expedient.

With respect to the Salaried VEBA, the investment advisors providing the valuations are engaged by the Salaried VEBA trustees. Certain Salaried VEBA plan assets are valued based upon unadjusted quoted market prices in active markets that are accessible at the measurement date for identical, unrestricted assets (e.g., liquid securities listed on an exchange). Such assets are classified within Level 1 of the fair value hierarchy. Valuation of other Salaried VEBA invested plan assets is based on significant observable inputs (e.g., valuations derived from actual market transactions, broker-dealer supplied valuations or correlations between a given U.S. market and a non-U.S. security). Valuation model inputs can generally be verified and valuation techniques do not involve significant judgment. The fair values of such financial instruments are classified within Level 2 of the fair value hierarchy.

In addition to the Canadian pension plan and Salaried VEBA, we also hold assets in various investment funds at certain registered investment companies in connection with our deferred compensation program. Such assets are accounted for as available for sale securities within Level 2 of the fair value hierarchy and are measured and recorded at fair value based on their quoted market prices.

The following table presents the fair value of plan assets, classified under the appropriate level of the fair value hierarchy, as of each period presented (in millions of dollars):

	Level 1	Level 2	Level 3	Total
As of December 31, 2018:				
Plan Assets in the Fair Value Hierarchy:				
Salaried VEBA –				
Cash and money market investments	$ 0.9	$ —	$ —	$ 0.9
Diversified investment funds in registered investment companies[1]	8.7	—	—	8.7
Total Salaried VEBA assets in the fair value hierarchy	9.6	—	—	9.6
Deferred compensation program – Diversified investment funds in registered investment companies[1]	—	10.5	—	10.5
Total plan assets in the fair value hierarchy	$ 9.6	$ 10.5	$ —	$ 20.1
Plan Assets Measured at NAV [2]:				
Salaried VEBA – Fixed income investment funds in registered investment companies[3]				$ 21.2
Salaried VEBA – Equity investment funds in registered investment companies[4]				20.3
Canadian pension plan – Diversified investment funds in registered investment companies[1]				6.5
Total plan assets at fair value				$ 68.1
As of December 31, 2017:				
Plan Assets in the Fair Value Hierarchy:				
Salaried VEBA –				
Cash and money market investments	$ 1.3	$ —	$ —	$ 1.3
Diversified investment funds in registered investment companies[1]	10.2	—	—	10.2
Total Salaried VEBA assets in the fair value hierarchy	11.5	—	—	11.5
Deferred compensation program – Diversified investment funds in registered investment companies[1]	—	9.8	—	9.8
Total plan assets in the fair value hierarchy	$ 11.5	$ 9.8	$ —	$ 21.3
Plan Assets Measured at NAV [2]:				
Salaried VEBA – Fixed income investment funds in registered investment companies[3]				$ 19.4
Salaried VEBA – Equity investment funds in registered investment companies[4]				24.3
Canadian pension plan – Diversified investment funds in registered investment companies[1]				7.3
Total plan assets at fair value				$ 72.3

1. The plan assets are invested in investment funds that hold a diversified portfolio of: (i) U.S. and international debt and equity securities; (ii) fixed income securities such as corporate bonds and government bonds; (iii) mortgage-related securities; and (iv) cash and cash equivalents.

2. The market value of these funds has not been categorized in the fair value hierarchy and is being presented in the table above to permit a reconciliation of the fair value hierarchy to the Consolidated Balance Sheets. Equity investment funds measured at fair value using the NAV practical expedient are managed by an investment adviser registered with the SEC

under the Investment Advisers Act of 1940 and can be redeemed with five business days' notice on the 15th (or last business day prior to the 15th) and on the last business day of each month. A business day is every day that the New York Stock Exchange is open. Diversified investment funds measured at fair value using the NAV practical expedient are unitized mutual funds without externally published net asset values, which can be redeemed daily without restriction.

3. This category represents investments in various fixed income funds with multiple registered investment companies. Such funds invest in diversified portfolios, including: (i) marketable fixed income securities, such as (a) U.S. Treasury and other government and agency securities, (b) municipal bonds, (c) mortgage-backed securities, (d) asset-backed securities, (e) corporate bonds, notes and debentures in various sectors, (f) preferred and common stock, (g) investments in affiliated and other investment companies, (h) short-term investments and other net assets and (i) repurchase agreements and reverse repurchase agreements; (ii) other commingled investments; (iii) investment grade debt; (iv) fixed income instruments which may be represented by options, future contracts or swap agreements; and (v) cash and cash equivalents.

4. This category represents investments in equity funds that invest in portfolios comprised of: (i) equity and equity-related securities of U.S. and non-U.S. issuers across all market capitalizations; (ii) common stock in investment trust funds; and (iii) other short-term investments.

The following tables present the total expense (income) related to all benefit plans for the periods presented (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
Canadian pension plan[1]	$ 0.4	$ 0.3	$ 0.3
Defined contribution plans[1]	8.8	8.9	8.9
Deferred compensation plan[1]	1.0	1.8	0.9
Multiemployer pension plans[2]	4.7	4.6	4.7
Net periodic postretirement benefit cost relating to Salaried VEBA[3]	6.1	4.5	3.4
Gain on removal of Union VEBA net assets[3]	—	—	(0.1)
Total	$ 21.0	$ 20.1	$ 18.1

1. Substantially all of these charges related to employee benefits are in Cost of products sold, excluding depreciation and amortization and other items with the remaining balance in SG&A and R&D.

2. See Note 5 for more information on our multiemployer defined benefit pension plans.

3. On January 1, 2018, we retrospectively adopted ASU 2017-07 (see Note 1). As such, the current service cost component of Net periodic postretirement benefit cost relating to Salaried VEBA is included within the Statements of Consolidated Income in SG&A and R&D for all periods presented. We reclassified all other components of Net periodic postretirement benefit cost relating to Salaried VEBA, as well as Gain on removal of Union VEBA net assets that had previously been presented within SG&A and R&D, to Other expense, net, in the Statements of Consolidated Income.

Components of Net Periodic Postretirement Benefit Cost. Our results of operations included the following impacts associated with the Canadian pension plan and the Salaried VEBA: (a) a charge for service rendered by employees; (b) a charge for accretion of interest; (c) a benefit for the return on plan assets; and (d) amortization of net gains or losses on assets, prior service costs associated with plan amendments and actuarial differences. The following table presents the components of net periodic postretirement benefit cost for the years ended December 31 (in millions of dollars):

	Canadian Pension Plan			Salaried VEBA		
	2018	2017	2016	2018	2017	2016
Service cost	$ 0.3	$ 0.3	$ 0.3	$ 0.1	$ —	$ —
Interest cost	0.3	0.3	0.3	2.7	3.0	2.9
Expected return on plan assets	(0.3)	(0.3)	(0.3)	(2.9)	(4.1)	(4.1)
Amortization of prior service cost[1]	—	—	—	5.4	4.7	4.1
Amortization of net actuarial loss	0.1	—	—	0.8	0.9	0.5
Net periodic postretirement benefit cost	$ 0.4	$ 0.3	$ 0.3	$ 6.1	$ 4.5	$ 3.4

1. We amortize prior service cost on a straight-line basis over the average remaining years of service to full eligibility for benefits of the active plan participants.

5. Multiemployer Pension Plans

Overview. We contribute to multiemployer defined benefit pension plans under the terms of collective bargaining agreements that cover our union-represented employees at certain facilities. At December 31, 2018, approximately 51% of our total employees were union-represented employees at facilities participating in these multiemployer pension plans. We currently estimate that contributions will range from $3.0 million to $5.0 million per year through 2019.

The risks of participating in these multiemployer plans are different from single-employer plans in the following aspects:

- Assets contributed to the multiemployer plan by one employer may be used to provide benefits to employees of other participating employers.
- If a participating employer stops contributing to the plan, the unfunded obligations of the plan may be borne by the remaining participating employers.
- If we choose to stop participating in some of our multiemployer plans, we may be required to pay those plans an amount based on the underfunded status of the plan, referred to as a withdrawal liability.

Our participation in multiemployer pension plans for the year ended December 31, 2018 is outlined in the table below:

Pension Fund	Employer Identification Number	Pension Protection Act Zone Status[1]		FIP/RP Status Pending/Implemented in 2018[2]	Contributions of the Company			Surcharge Imposed in 2018	Expiration Date of Collective-Bargaining Agreements
		2018	2017		2018	2017	2016		
					(in millions of dollars)				
Steelworkers Pension Trust (USW)[3]	236648508	Green	Green	No	$ 3.6	$ 3.5	$ 3.7	No	Mar 2020 - Feb 2021
Other Funds[4]					1.1	1.1	1.0		
					$ 4.7	$ 4.6	$ 4.7		

1. The most recent Pension Protection Act zone status available in 2018 and 2017 for the Steelworkers Pension Trust is for the plan's year-end at December 31, 2017 and December 31, 2016, respectively. The zone status is based on information that we received from the plan and is certified by the plan's actuary. Among other factors, plans in the green zone are at least 80% funded.

2. The "FIP/RP Status Pending/Implemented" column indicates if a Financial Improvement Plan (FIP) or a Rehabilitation Plan (RP) is either pending or has been implemented for the plan under the Pension Protection Act.

3. We are party to three collective bargaining agreements with the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, AFL-CIO, CLC ("USW") that require contributions to the Steelworkers Pension Trust. As of December 31, 2018, USW collective bargaining agreements covering employees at the Newark, Ohio ("Newark") and Spokane, Washington ("Trentwood") facilities covered 86% of our USW-represented employees and expire in September 2020. Our monthly contributions per hour worked by each bargaining unit employee at the Newark and Trentwood facilities are (in whole dollars) $1.50 and will increase to $1.75 in 2019. The union contracts covering employees at the Richmond, Virginia facility and Florence, Alabama facility cover 11% and 3% of our USW-represented employees, respectively, and expire in November 2020 and March 2020, respectively.

4. Other Funds consists of plans that are not individually significant.

We were not listed in any of the plans' Forms 5500 or the Canada-Wide Industrial Pension Plan financial statements as providing more than 5% of the total contributions for any of the plan years disclosed. At December 31, 2018, financial statements and Forms 5500 were not available for the plan years ending in 2018. Further, there were no significant changes to the number of employees covered by our multiemployer plans that would affect the period-to-period comparability of the contributions for the years presented.

6. Employee Incentive Plans

Short-Term Incentive Plans ("STI Plans")

We have annual short-term incentive compensation plans for senior management and certain other employees payable at our election in cash, shares of common stock or a combination of cash and shares of common stock. Amounts earned under STI Plans are based on our adjusted earnings before interest, taxes, depreciation and amortization ("Adjusted EBITDA"), modified for certain safety, quality, delivery, cost and individual performance factors. The Adjusted EBITDA targets are determined based on the return on adjusted net assets. Most of our production facilities have similar programs for both hourly and salaried employees. As of December 31, 2018, we had a liability of $13.1 million recorded within Accrued salaries, wages and related expenses for estimated probable future payments relating to the 12-month performance period of our 2018 STI Plans.

Long-Term Incentive Programs ("LTI Programs")

General. Executive officers and other key employees of the Company, as well as non-employee directors of the Company, are eligible to participate in the Kaiser Aluminum Corporation 2016 Equity and Incentive Compensation Plan ("2016 Plan"). The 2016 Plan was approved by stockholders on May 26, 2016 and replaced and succeeded in its entirety the Kaiser Aluminum Corporation Amended and Restated 2006 Equity and Performance Incentive Plan, except with regard to awards previously granted thereunder that continued to be outstanding. At December 31, 2018, 577,014 shares were available for awards under the 2016 Plan. We issue new shares of our common stock upon vesting under the 2016 Plan.

Non-Vested Common Shares and Restricted Stock Units. We grant non-vested common shares ("RSAs") to our non-employee directors and restricted stock units ("RSUs") to our executive officers and other key employees. The RSUs have rights similar to the rights of RSAs and each RSU that becomes vested entitles the recipient to receive one common share or a cash amount equaling the value of one common share. The service period is generally one year for RSAs granted to non-employee directors and three years for RSUs granted to executive officers and other key employees. Prior to 2016, we granted RSAs to executive officers and other key employees, generally with a three-year service period, but in certain circumstances with a longer service period.

A summary of the activity with respect to RSAs and RSUs for the year ended December 31, 2018 is as follows:

	Shares	Weighted-Average Grant-Date Fair Value per Share
Outstanding at December 31, 2017	216,953	$ 74.04
Granted	74,138	96.40
Vested	(64,061)	73.25
Forfeited	(7,517)	77.17
Outstanding at December 31, 2018	219,513	$ 80.99

Performance Shares. We grant performance shares to executive officers and other key employees that vest upon the achievement of specified market or internal performance goals. Performance goals can include: (i) our achieving a total shareholder return ("TSR") compared to the TSR of a specified group of peer companies over a three-year performance period ("TSR-Based Performance Shares"); (ii) achieving targeted improvements to our total controllable cost performance over a three-year performance period; and/or (iii) achieving targeted improvements to our economic value added performance, determined based on our adjusted pre-tax operating income in excess of a capital charge, over a three-year performance period. Each performance share that becomes vested and earned entitles the recipient to receive one common share or a cash amount equaling the value of one common share. The number of performance shares that may be earned and result in the issuance of cash or common shares ranges between 0% to 200% of the target number of underlying common shares, which is approximately one-half of the maximum payout.

Inputs and assumptions used in the Monte Carlo simulations to calculate the fair value at grant date of our TSR-Based Performance Shares were as follows:

	Year Ended December 31,		
	2018	2017	2016
Grant date fair value	$ 127.41	$ 97.88	$ 93.02
Grant date stock price	$ 101.66	$ 79.69	$ 80.46
Expected volatility of Kaiser Aluminum[1]	24.86%	22.74%	17.81%
Expected volatility of peer companies[1]	44.74%	44.19%	41.22%
Risk-free interest rate	2.37%	1.54%	1.01%
Dividend yield	2.16%	2.50%	2.24%

1. Expected volatility based on 2.8 years of daily closing share prices from the valuation date to the end of the performance period.

A summary of the activity with respect to performance shares for the year ended December 31, 2018 is as follows:

	Shares	Weighted-Average Grant-Date Fair Value per Share
Outstanding at December 31, 2017	459,669	$ 90.12
Granted [1]	124,833	109.38
Vested	(125,674)	95.68
Forfeited [1]	(10,261)	94.85
Canceled [1]	(22,207)	95.68
Outstanding at December 31, 2018	426,360	$ 93.72

1. The number of shares granted and forfeited are presented at their maximum payout; and the number of shares canceled includes the number of shares that did not vest due to performance results falling below those required for maximum payout.

Non-Cash Compensation Expense. Non-cash compensation expense relating to all awards is included in SG&A and R&D. Non-cash compensation expense by type of award under LTI Programs was as follows for each period presented (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
RSAs and RSUs	$ 5.8	$ 5.4	$ 4.7
Performance shares	4.3	7.7	7.0
Total non-cash compensation expense	$ 10.1	$ 13.1	$ 11.7

Recognized tax benefits relating to non-cash compensation expense were $2.5 million, $4.9 million and $4.4 million for 2018, 2017 and 2016, respectively.

Unrecognized Gross Compensation Cost Data. The following table presents unrecognized gross compensation cost data by type of award as of December 31, 2018:

	Unrecognized Gross Compensation Costs (in millions of dollars)	Expected Period (in years) Over Which the Remaining Gross Compensation Costs Will Be Recognized
RSAs and RSUs	$ 8.7	2.5
Performance shares	$ 6.0	1.6

The weighted-average grant-date fair value per share for shares granted by type of award was as follows for each period presented:

	Year Ended December 31,		
	2018	2017	2016
RSAs and RSUs	$ 96.40	$ 77.35	$ 76.82
Performance shares	$ 109.38	$ 86.97	$ 88.00

Stock Options. As of December 31, 2016, we had 1,543 fully-vested outstanding stock options exercisable to purchase common shares at $80.01 per share, all of which subsequently expired on April 2, 2017. No options were granted during the years ended December 31, 2018 and December 31, 2017, and no options were outstanding as of December 31, 2018 and December 31, 2017.

Participants may elect to have us withhold common shares to satisfy minimum statutory tax withholding obligations arising in connection with the exercise of stock options and vesting of RSAs, RSUs and performance shares. We cancel any such

shares withheld on the applicable vesting dates or earlier dates when service requirements are satisfied, which correspond to the times at which income to the employee is recognized. When we withhold these common shares, we are required to remit to the appropriate taxing authorities the fair value of the shares withheld as of the vesting date. During 2018, 2017 and 2016, 68,195, 56,495 and 36,055 common shares, respectively, were withheld and canceled for this purpose. The withholding of common shares by us could be deemed a purchase of the common shares.

7. Derivatives, Hedging Programs and Other Financial Instruments

Overview. In conducting our business, we enter into derivative transactions, including forward contracts and options, to limit our exposure to: (i) metal price risk related to our sale of fabricated aluminum products and the purchase of metal used as raw material for our fabrication operations; (ii) energy price risk relating to fluctuating prices of natural gas and electricity used in our production processes; and (iii) foreign currency requirements with respect to our foreign subsidiaries and cash commitments for equipment purchases denominated in foreign currency.

Our derivative activities are overseen by a committee ("Hedging Committee"), which is composed of our chief executive officer, chief operating officer, chief financial officer, chief accounting officer, vice president of metal management, treasurer and other officers and employees selected by the chief executive officer. The Hedging Committee meets regularly to review commodity price exposure, derivative positions and strategy. Management reviews the scope of the Hedging Committee's activities with our Board of Directors.

We are exposed to counterparty credit risk on all of our derivative instruments, which we manage by monitoring the credit quality of our counterparties and allocating our hedging positions among multiple counterparties to limit exposure to any single entity. Our counterparties are major investment grade financial institutions or trading companies. Hedging transactions are governed by negotiated reciprocal credit lines, which generally require collateral to be posted above specified credit thresholds. We believe the risk of loss is remote and contained due to counterparty credit quality, our diversification practice and collateral requirements.

In a majority of our hedging counterparty agreements, our counterparty offers us a credit line that adjusts up or down, depending on our liquidity. Below specified liquidity thresholds, we may have to post collateral if the fair value of our net liability with such counterparty exceeds our reduced credit line. We manage this risk by allocating hedging transactions among multiple counterparties, using options as part of our hedging activities or both. The aggregate fair value of our derivative instruments that were in a net liability position was $12.6 million and $0.1 million at December 31, 2018 and December 31, 2017, respectively, and we had no collateral posted as of those dates.

Additionally, our firm-price customer sales commitments create incremental customer credit risk related to metal price movements. Under certain circumstances, we mitigate this risk by periodically requiring cash collateral from them, which we classify as deferred revenue and include as a component of Other accrued liabilities. At December 31, 2018, we had $0.2 million cash collateral posted from our customers. For more information about concentration risks concerning customers and suppliers, see Note 16.

Aluminum Hedges. Our pricing of fabricated aluminum products is generally intended to lock in a conversion margin (representing the value added from the fabrication process(es)) and to pass through metal price fluctuations to our customers. For some of our higher value added products sold on a spot basis, the pass through of metal price movements can sometimes lag by as much as several months, with a favorable impact to us when metal prices decline and an adverse impact to us when metal prices increase. Additionally, in certain instances, we enter into firm-price arrangements with our customers for stipulated volumes to be delivered in the future. Because we generally purchase primary and secondary aluminum on a floating price basis, the lag in passing through metal price movements to customers on some of our higher value added products sold on a spot basis and the volume that we have committed to sell to our customers under a firm-price arrangement create metal price risk for us. We use third-party hedging instruments to limit exposure to metal price risk related to the metal pass through lag on some of our products and firm-price customer sales contracts.

Alloying Metals Hedges. We are exposed to risk of fluctuating prices for Alloying Metals used as raw materials in our fabrication operations. We, from time to time, in the ordinary course of business, use third-party hedging instruments to mitigate our risk from price fluctuations in Alloying Metals.

Energy Hedges. We are exposed to risk of fluctuating prices for natural gas and electricity. We, from time to time, in the ordinary course of business, enter into hedging transactions and/or physical delivery commitments with third parties to mitigate our risk from fluctuations in natural gas and electricity prices.

Notional Amount of Derivative Contracts

The following table summarizes our derivative positions at December 31, 2018:

Aluminum	Maturity Period (month/year)	Notional Amount of contracts (mmlbs)
Fixed price purchase contracts	1/19 through 12/21	139.1
Fixed price sales contracts	1/19 through 11/19	0.9
Midwest premium swap contracts[1]	1/19 through 12/21	100.1

Alloying Metals	Maturity Period (month/year)	Notional Amount of contracts (mmlbs)
Fixed price purchase contracts	1/19 through 12/19	9.0

Natural Gas[2]	Maturity Period (month/year)	Notional Amount of contracts (mmbtu)
Fixed price purchase contracts	1/19 through 12/21	4,040,000

Electricity[3]	Maturity Period (month/year)	Notional Amount of contracts (Mwh)
Fixed price purchase contracts	1/20 through 12/21	219,600

1. Regional premiums represent the premium over the London Metal Exchange price for primary aluminum which is incurred on our purchases of primary aluminum.

2. As of December 31, 2018, we had derivative and/or physical delivery commitments with energy companies in place to cover exposure to fluctuations in prices for approximately 66% of the expected natural gas purchases for each of the years 2019, 2020 and 2021.

3. As of December 31, 2018, we had derivative and/or physical delivery commitments with energy companies in place to cover exposure to fluctuations in prices for approximately 54% of the expected electricity purchases for 2019, 55% of the expected electricity purchases for 2020 and 9% of the expected electricity purchases for 2021.

Adoption of ASU 2017-12

Prior to our adoption of ASU 2017-12 on January 1, 2018, changes in the fair value of non-designated hedges (aluminum and energy) were recorded within Unrealized (gain) loss on derivative instruments in the Statements of Consolidated Income. Upon settlement, realized gain or loss was recorded within Cost of products sold, excluding depreciation and amortization and other items, with an offsetting reversal of previously recognized unrealized amounts recorded within Unrealized (gain) loss on derivative instruments.

Beginning with our adoption of ASU 2017-12 (see Note 1), aluminum and energy hedges that were non-designated prior to 2018 are now designated as cash flow hedges. As these previously non-designated hedges are settled, unrealized gains and losses recognized subsequent to December 31, 2017 are reclassified from Accumulated other comprehensive loss to Cost of products sold, excluding depreciation and amortization.

Loss (Gain)

See Note 10 for the total amount of gain or loss on derivative instruments designated and qualifying as cash flow hedging instruments that was reported in Accumulated other comprehensive (loss) ("AOCI"), as well as the related reclassifications into earnings and tax effects. Cumulative gains and losses related to cash flow hedges are reclassified out of AOCI when the associated hedged commodity purchases impact earnings.

The location and amount of loss (gain) included on the Statements of Consolidated Income associated with all derivative contracts consisted of the following for each period presented (in millions of dollars):

	Year Ended December 31,					
	2018	2017		2016		
	Cost of products sold, excluding depreciation and amortization and other items[1]	Cost of products sold, excluding depreciation and amortization and other items[1]	Unrealized (gain) loss on derivative instruments	Cost of products sold, excluding depreciation and amortization and other items[1]	Unrealized gain on derivative instruments
Total amounts of income and expense line items presented in the statements of consolidated income in which the effects of hedges are recorded	$ 1,300.7	$ 1,105.3	$ (19.4)	$ 1,019.5	$ (18.7)
Loss (gain) recognized in income related to cash flow hedges:					
Aluminum	$ 2.1	$ —	$ —	$ —	$ —
Alloying Metals	1.0	(0.9)	—	—	—
Natural gas	(0.3)	—	—	—	—
Total loss (gain) recognized in income	$ 2.8	$ (0.9)	$ —	$ —	$ —
(Gain) loss recognized in income related to non-designated hedges:					
Aluminum	$ —	$ (20.4)	$ (20.9)	$ 2.0	$ (10.8)
Natural gas	—	0.7	1.4	5.0	(7.9)
Foreign exchange	—	(0.1)	—	0.1	—
Electricity	$ —	—	0.1	—	—
Total (gain) loss recognized in income	$ —	$ (19.8)	$ (19.4)	$ 7.1	$ (18.7)

[1] Beginning with our adoption of ASU 2017-12 effective January 1, 2018, we no longer have Unrealized (gain) loss on derivative instruments on the Statements of Consolidated Income as all of our commodity hedges are designated as cash flow hedges. As such, all Unrealized (gain) loss on derivative instruments is reported in AOCI. For the years ended December 31, 2017 and December 31, 2016, Unrealized (gain) loss on derivative instruments was reclassified to Cost of products sold, excluding depreciation and amortization and other items in the Statements of Consolidated Income to conform to the current period's presentation, for a combined total of $1,085.9 million and $1,000.8 million, respectively. The amounts comprising both line items are presented separately here for comparative purposes.

Fair Values of Derivative Contracts

The fair values of our derivative contracts are based upon trades in liquid markets. Valuation model inputs can be verified, and valuation techniques do not involve significant judgment. The fair values of such financial instruments are classified within Level 2 of the fair value hierarchy.

All of our derivative contracts with counterparties are subject to enforceable master netting arrangements. We reflect the fair value of our derivative contracts on a gross basis on the Consolidated Balance Sheets. The following table presents the fair value of our derivative financial instruments as of the periods presented (in millions of dollars):

	December 31, 2018			December 31, 2017		
	Derivative Assets	Derivative Liabilities	Net Amount	Derivative Assets	Derivative Liabilities	Net Amount
Cash Flow Hedges:						
Aluminum –						
Fixed price purchase contracts	$ 0.1	$ (13.2)	$ (13.1)	$ —	$ —	$ —
Fixed price sales contracts	0.1	—	0.1	—	—	—
Midwest premium swap contracts	3.2	(0.5)	2.7	—	—	—
Alloying Metals – Fixed price purchase contracts	—	(1.7)	(1.7)	0.9	—	0.9
Natural gas – Fixed price purchase contracts	0.2	(0.5)	(0.3)	—	—	—
Electricity – Fixed price purchase contracts	0.7	—	0.7	—	—	—
Non-Designated Hedges:						
Aluminum –						
Fixed price purchase contracts	—	—	—	22.5	—	22.5
Fixed price sales contracts	—	—	—	—	(0.1)	(0.1)
Midwest premium swap contracts	—	—	—	1.7	(0.1)	1.6
Natural gas – Fixed price purchase contracts	—	—	—	0.2	(0.5)	(0.3)
Electricity – Fixed price purchase contracts	—	—	—	—	(0.1)	(0.1)
Total	$ 4.3	$ (15.9)	$ (11.6)	$ 25.3	$ (0.8)	$ 24.5

The following table presents the balance sheet location of derivative assets and liabilities as of the periods presented (in millions of dollars):

	December 31, 2018	December 31, 2017
Assets:		
Prepaid expenses and other current assets	$ 3.4	$ 18.9
Other assets	0.9	6.4
Total assets	$ 4.3	$ 25.3
Liabilities:		
Other accrued liabilities	$ (13.2)	$ (0.3)
Long-term liabilities	(2.7)	(0.5)
Total Liabilities	$ (15.9)	$ (0.8)

Fair Value of Other Financial Instruments

Cash and Cash Equivalents. See Note 2 for components of cash and cash equivalents.

Available for Sale Securities. We hold debt investment securities that are accounted for as available for sale securities and are presented as cash equivalents and short-term investments on our Consolidated Balance Sheets. The fair value of the debt investment securities, which consist of commercial paper, is determined based on valuation models that use observable market data. At December 31, 2018, all of our short-term investments had maturity dates within 12 months. We review our debt investment portfolio for other-than-temporary impairment at least quarterly or when there are changes in credit risk or other potential valuation concerns. At December 31, 2018 and December 31, 2017, the total unrealized loss, net of tax, included in

AOCI was immaterial and was not other-than-temporarily impaired. We believe that it is probable that the principal and interest will be collected in accordance with the contractual terms, and that the unrealized loss on these securities was due to normal market fluctuations, and not due to increased credit risk or other valuation concerns. The fair value input of our available for sale securities, which are classified within Level 2 of the fair value hierarchy, is calculated based on broker quotes. The amortized cost for available for sale securities approximates their fair value.

The following table presents our other financial assets, classified under the appropriate level of the fair value hierarchy, as of December 31, 2018 (in millions of dollars):

	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	$ 22.9	$ 102.7	$ —	$ 125.6
Short-term investments	—	36.7	—	36.7
Total	$ 22.9	$ 139.4	$ —	$ 162.3

The following table presents our other financial assets, classified under the appropriate level of the fair value hierarchy, as of December 31, 2017 (in millions of dollars):

	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	$ 23.5	$ 27.6	$ —	$ 51.1
Short-term investments	—	183.7	—	183.7
Total	$ 23.5	$ 211.3	$ —	$ 234.8

All Other Financial Assets and Liabilities. We believe that the fair values of our accounts receivable, contract assets, accounts payable and accrued liabilities approximate their respective carrying values due to their short maturities and nominal credit risk.

8. Debt and Credit Facility

Senior Notes

5.875% Senior Notes. In May 2016, we issued $375.0 million principal amount of 5.875% unsecured senior notes due May 15, 2024 ("5.875% Senior Notes") at 100% of the principal amount. The unamortized amount of debt issuance costs as of December 31, 2018 and December 31, 2017 was $4.6 million and $5.4 million, respectively. Interest expense, including amortization of debt issuance costs, relating to the 5.875% Senior Notes was $22.9 million for each of the years ended December 31, 2018 and December 31, 2017, and $14.5 million for the year ended December 31, 2016. A portion of the interest relating to the 5.875% Senior Notes was capitalized as construction in progress. The effective interest rate of the 5.875% Senior Notes is approximately 6.1% per annum, taking into account the amortization of debt issuance costs.

All outstanding 5.875% Senior Notes are freely transferable. The fair value of the outstanding 5.875% Senior Notes, which are Level 1 liabilities, was approximately $369.9 million and $399.9 million at December 31, 2018 and December 31, 2017, respectively.

The 5.875% Senior Notes are unsecured obligations and are guaranteed by certain of our domestic subsidiaries that own virtually all of our operating assets and through which we conduct the vast majority of our business. See Note 17 for condensed guarantor and non-guarantor financial information.

The indenture governing the 5.875% Senior Notes places limitations on our ability to, among other things: (i) incur liens; (ii) consolidate, merge or sell all or substantially all of our and certain of our subsidiaries' assets; (iii) incur or guarantee additional indebtedness; (iv) enter into transactions with affiliates; and (v) make "restricted payments" (as defined in the indenture to include certain loans, investments, dividend payments, share repurchases and prepayments, redemptions and repurchases of certain indebtedness). Many of these limitations also apply to certain of our subsidiaries. Additionally, the indenture limits the ability of certain of our subsidiaries to be subject to consensual restrictions on paying dividends to us, making loans to us, repaying indebtedness owed to us, or transferring assets to us. Certain types and amounts of restricted payments are allowed by various provisions of the indenture. In particular, the indenture provisions permit us to make restricted payments in any amount if, after giving effect to such restricted payments, our "consolidated net indebtedness" as a ratio of "EBITDA" (each term as defined in the indenture) is less than 2.75:1.00.

We may redeem the 5.875% Senior Notes at our option in whole or part at any time on or after May 15, 2019 at a redemption price of 104.406% of the principal amount, declining to 102.938%, 101.469% and 100% of the principal amount on or after May 15, 2020, May 15, 2021 and May 15, 2022, respectively, in each case plus any accrued and unpaid interest. At any time prior to May 15, 2019, we may also redeem some or all of the 5.875% Senior Notes at a redemption price equal to 100% of the principal amount, together with any accrued and unpaid interest, plus a "make-whole premium."

Holders of the 5.875% Senior Notes have the right to require us to repurchase the 5.875% Senior Notes at a price equal to 101% of the principal amount plus any accrued and unpaid interest following the occurrence of both: (i) a change of control and (ii) a ratings decline by one or both of the two major rating agencies within 60 days after the earlier of a change of control or the public notice of an upcoming change of control. A change of control includes: (i) certain ownership changes; (ii) certain recapitalizations, mergers and dispositions; (iii) certain changes in the composition of our Board of Directors; and (iv) stockholder approval of any plan or proposal for the liquidation or dissolution of us. We may also be required to offer to repurchase the 5.875% Senior Notes at 100% of the principal amount, plus any accrued and unpaid interest, with the proceeds of certain asset sales.

8.25% Senior Notes. In May 2012, we issued $225.0 million principal amount of 8.25% unsecured senior notes due June 1, 2020 ("8.25% Senior Notes"), of which $197.8 million principal amount remained outstanding at December 31, 2015. On June 1, 2016, we redeemed in full all remaining 8.25% Senior Notes at a redemption price of 104.125% of the principal amount. Interest expense, including amortization of debt issuance costs, relating to the 8.25% Senior Notes was $7.1 million for 2016. A portion of the interest relating to the 8.25% Senior Notes was capitalized as construction in progress.

Revolving Credit Facility

Our credit agreement with JPMorgan Chase Bank, N.A., as administrative agent, and the other financial institutions party thereto ("Revolving Credit Facility") provides us with a $300.0 million funding commitment through December 1, 2020. Joining the Company as borrowers ("Co-Borrowers") are three of our wholly-owned domestic operating subsidiaries: Kaiser Aluminum Investments Company, Kaiser Aluminum Fabricated Products, LLC and Kaiser Aluminum Washington, LLC.

The Revolving Credit Facility is secured by a first priority lien on substantially all of the accounts receivable, inventory and certain other related assets and proceeds of the Co-Borrowers, as well as certain machinery and equipment. Under the Revolving Credit Facility, we are able to borrow from time to time an aggregate commitment amount equal to the lesser of $300.0 million and a borrowing base comprised of: (i) 85% of eligible accounts receivable; (ii) the lesser of (a) 75% of eligible inventory and (b) 85% of the net orderly liquidation value of eligible inventory as determined in the most recent inventory appraisal ordered by the administrative agent; and (iii) certain eligible machinery and equipment supporting up to $60.0 million of borrowing availability, reduced by certain reserves, all as specified in the Revolving Credit Facility. Up to a maximum of $20.0 million of availability under the Revolving Credit Facility may be utilized for letters of credit.

Borrowings under the Revolving Credit Facility bear interest at a rate equal to either a base prime rate or LIBOR, at our option, plus, in each case, a specified variable percentage determined by reference to the then-remaining borrowing availability under the Revolving Credit Facility. The funding commitment of the Revolving Credit Facility may be increased up to $400.0 million, subject to certain conditions and the agreement of lenders thereunder.

We had $300.0 million of total borrowing availability under the Revolving Credit Facility at December 31, 2018, based on the borrowing base determination then in effect. At December 31, 2018, there were no borrowings under the Revolving Credit Facility and $8.0 million was used to support outstanding letters of credit, leaving $292.0 million of net borrowing availability. The interest rate applicable to any overnight borrowings under the Revolving Credit Facility would have been 5.75% at December 31, 2018.

Amounts owed under the Revolving Credit Facility may be accelerated upon the occurrence of various events of default including, without limitation, the failure to make principal or interest payments when due and breaches of covenants, representations and warranties set forth therein. The Revolving Credit Facility places limitations on our ability and certain of our subsidiaries to, among other things, grant liens, engage in mergers, sell assets, incur debt, enter into sale and leaseback transactions, make investments, undertake transactions with affiliates, prepay certain debt, pay dividends and repurchase shares. We are allowed to prepay debt, pay dividends and repurchase shares in any amount if, after giving effect to such payment, $52.5 million or more would be available for us to borrow under the Revolving Credit Facility, or if after giving effect to such payment, $45.0 million or more would be available to us to borrow under the Revolving Credit Facility and we maintain a fixed charge coverage ratio at or above 1.15:1.0. In addition, we are required to maintain a fixed charge coverage ratio on a consolidated basis at or above 1.0:1.0 if borrowing availability under the Revolving Credit Facility is less than $30.0 million.

9. Commitments and Contingencies

Commitments. We have a variety of financial commitments, including purchase agreements, forward foreign exchange and forward sales contracts, indebtedness and letters of credit (see Note 7 and Note 8).

Rental expenses were $8.2 million, $7.9 million and $8.5 million for 2018, 2017 and 2016, respectively. There are renewal options in various leases subject to certain terms and conditions. Minimum rental commitments at December 31, 2018 were as follows (in millions of dollars):

Year Ended December 31,	Capital Leases	Operating Leases
2019	$ 1.7	$ 6.1
2020	1.4	3.7
2021	1.2	2.8
2022	1.1	2.4
2023	1.0	2.2
2024 and thereafter	1.8	20.8
Total minimum lease payments	$ 8.2	$ 38.0
Less: interest	(1.2)	
Present value[1]	$ 7.0	

1. Of the $7.0 million in capital lease obligations as of December 31, 2018, $1.4 million was included in Other accrued liabilities and $5.6 million was included in Long-term liabilities. Assets recorded under capital leases and the accumulated amortization thereon were $8.3 million and $1.3 million, respectively, as of December 31, 2018, and $2.2 million and $0.9 million, respectively, as of December 31, 2017.

CAROs. The inputs in estimating the fair value of CAROs include: (i) the timing of when any such CARO cash flows may be incurred; (ii) incremental costs associated with special handling or treatment of CARO materials; and (iii) the credit-adjusted risk-free rate applicable at the time additional CARO cash flows are estimated; all of these are considered Level 3 inputs as they involve significant judgment from us.

The following table summarizes the activity relating to our CARO liabilities (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
Beginning balance	$ 5.9	$ 5.5	$ 4.9
Liabilities settled during the period	—	—	(0.1)
Accretion expense	0.4	0.4	0.5
Adjustment to accretion expense due to revisions to estimated cash flow and timing of expenditure[1]	—	—	0.2
Ending balance	$ 6.3	$ 5.9	$ 5.5

1. The adjustments in 2016 had a de minimis impact on the basic and diluted net income per share for 2016.

The estimated fair value of CARO liabilities were based upon the application of a weighted-average credit-adjusted risk-free rate of 8.7% at both December 31, 2018 and December 31, 2017. CAROs are included in Other accrued liabilities or Long-term liabilities, as appropriate.

Environmental Contingencies. We are subject to a number of environmental laws and regulations, to potential fines or penalties assessed for alleged breaches of such laws and regulations and to potential claims based upon such laws and regulations. We are also subject to legacy environmental contingencies related to activities that occurred at operating facilities

prior to July 6, 2006, which represent the majority of our environmental accruals. The status of these environmental contingencies are discussed below. We have established procedures for regularly evaluating environmental loss contingencies. Our environmental accruals represent our undiscounted estimate of costs reasonably expected to be incurred based on presently enacted laws and regulations, existing requirements, currently available facts, existing technology and our assessment of the likely remediation actions to be taken.

We continue to pursue remediation activities, primarily to address the historical use of oils containing polychlorinated biphenyls ("PCBs") at our Trentwood facility. Our remediation efforts are in collaboration with the Washington State Department of Ecology ("Washington State Ecology"), to which we submitted a feasibility study in 2012 of remediation alternatives and from which we received permission to begin certain remediation activities pursuant to a signed work order. As we have finished a number of sections of the work plan, we have received approval from Washington State Ecology on satisfactory completion of those sections. Additionally, in cooperation with Washington State Ecology, to determine the treatability and evaluate the feasibility of removing PCBs from ground water under the Trentwood facility, we constructed an experimental treatment facility and began treatment operations in 2016. As the long-term success of the new methodology cannot be reasonably determined at this time, it is possible we may need to make upward adjustments to our related accruals and cost estimates as the long-term results become available.

During 2013, at the request of the Ohio Environmental Protection Agency ("OEPA"), we initiated an investigational study of the Newark facility related to historical on-site waste disposal. In the fourth quarter of 2018, we submitted our remedial investigation study to the OEPA which is subject to their review and approval. Following OEPA approval of the remedial investigational study, we will then prepare the final feasibility study and update estimates for probable and estimable remediation, if any. The actual and final cost for remediation will not be fully determinable until a final feasibility study is submitted and accepted by the OEPA and work plans are prepared, which is expected to occur in the next 12 months.

The following table presents the changes in our environmental accrual, which was primarily included in Long-term liabilities (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
Beginning balance	$ 16.6	$ 17.2	$ 18.6
Additional accruals	1.7	0.3	0.1
Less: expenditures	(1.4)	(0.9)	(1.5)
Ending balance	$ 16.9	$ 16.6	$ 17.2

At December 31, 2018, our environmental accrual of $16.9 million represented our estimate of the incremental remediation cost based on: (i) proposed alternatives in the final feasibility study related to the Trentwood facility; (ii) currently available facts with respect to our Newark facility; and (iii) facts related to certain other locations owned or formerly owned by us. In accordance with approved and proposed remediation action plans, we expect that the implementation and ongoing monitoring could occur over a period of 30 or more years.

As additional facts are developed, feasibility studies are completed, remediation plans are modified, necessary regulatory approvals for the implementation of remediation are obtained, alternative technologies are developed and/or other factors change, there may be revisions to management's estimates and actual costs may exceed the current environmental accruals. We believe at this time that it is reasonably possible that undiscounted costs associated with these environmental matters may exceed current accruals by amounts that could be, in the aggregate, up to an estimated $11.6 million over the remediation period. It is reasonably possible that our recorded estimate will change in the next 12 months.

Other Contingencies. We are party to various lawsuits, claims, investigations and administrative proceedings that arise in connection with past and current operations. We evaluate such matters on a case-by-case basis and our policy is to vigorously contest any such claims we believe are without merit. We accrue for a legal liability when it is both probable that a liability has been incurred and the amount of the loss is reasonably estimable. Quarterly, in addition to when changes in facts and circumstances require it, we review and adjust these accruals to reflect the impacts of negotiations, settlements, rulings, advice of legal counsel and other information and events pertaining to a particular case. While uncertainties are inherent in the final outcome of such matters and it is presently impossible to determine the actual cost that may ultimately be incurred, we believe that we have sufficiently accrued for such matters and that the ultimate resolution of pending matters will not have a material impact on our consolidated financial position, operating results or liquidity.

In July and September 2018, we filed a total of three requests for exclusion from certain import duties, as instituted in the Presidential Proclamation 9704 of March 8, 2018 (also known as “Section 232 Tariff”), with the Bureau of Industry and Security ("BIS"), an agency within the Department of Commerce. If such exclusions are approved by the BIS, we believe we will be able to apply for and recover approximately $2.4 million, which represents Section 232 Tariff related duties paid from the dates of filing the exclusion requests through December 31, 2018. However, the ultimate outcome of the exclusion requests, and subsequently the request for refund, cannot be determined. Therefore, no amount has been recognized in the 2018 financial results for the possible collection of a refund.

10. Accumulated Other Comprehensive (Loss) Income

The following table presents the changes in the accumulated balances for each component of Accumulated other comprehensive (loss) income ("AOCI") for each period presented (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
Defined benefit pension plan and VEBAs:			
Beginning balance	$ (38.5)	$ (37.1)	$ (31.3)
Actuarial gain (loss) arising during the period	4.4	(0.3)	(5.7)
Less: income tax (expense) benefit	(1.1)	0.1	2.1
Net actuarial gain (loss) arising during the period	3.3	(0.2)	(3.6)
Prior service cost arising during the period	(6.9)	(7.3)	(8.3)
Less: income tax benefit	1.7	2.7	3.1
Net prior service cost arising during the period	(5.2)	(4.6)	(5.2)
Amortization of net actuarial loss[1]	0.9	0.9	0.5
Amortization of prior service cost[1]	5.4	4.7	4.1
Less: income tax expense[2]	(1.5)	(2.1)	(1.7)
Net amortization and reclassification from AOCI to Net income	4.8	3.5	2.9
Translation impact on Canadian pension plan AOCI balance	—	(0.1)	0.1
Other comprehensive income (loss), net of tax	2.9	(1.4)	(5.8)
Ending balance	$ (35.6)	$ (38.5)	$ (37.1)
Available for sale securities:			
Beginning balance[3]	$ 0.9	$ 0.8	$ (0.1)
Unrealized gain on available for sale securities	4.7	4.0	1.9
Less: income tax expense	(1.1)	(1.5)	(0.7)
Net gain on available for sale securities	3.6	2.5	1.2
Gain reclassified from AOCI to Net income[4]	(5.4)	(3.2)	(0.5)
Less: income tax benefit[2]	1.2	1.2	0.2
Net gain reclassified from AOCI to Net income	(4.2)	(2.0)	(0.3)
Other comprehensive (loss) income, net of tax	(0.6)	0.5	0.9
Ending balance	$ 0.3	$ 1.3	$ 0.8
Cash Flow Hedges:			
Beginning balance	$ 0.5	$ (0.2)	$ (0.2)
Unrealized (loss) gain on cash flow hedges	(21.2)	1.8	(0.1)
Less: income tax benefit (expense)	5.3	(0.7)	—
Net unrealized (loss) gain on cash flow hedges	(15.9)	1.1	(0.1)
Reclassification of unrealized loss (gain) upon settlement of cash flow hedges[5]	2.7	(0.6)	0.1
Less: income tax (expense) benefit[2]	(0.7)	0.2	—
Net loss (gain) reclassified from AOCI to Net income	2.0	(0.4)	0.1
Other comprehensive (loss) income, net of tax	(13.9)	0.7	—
Ending balance	$ (13.4)	$ 0.5	$ (0.2)

	Year Ended December 31,		
	2018	2017	2016
Foreign Currency Translation:			
Beginning balance	$ —	$ (0.2)	$ (0.1)
Other comprehensive (loss) income, net of tax	(0.1)	0.2	(0.1)
Ending balance	$ (0.1)	$ —	$ (0.2)
Total AOCI ending balance	$ (48.8)	$ (36.7)	$ (36.7)

1. Amounts amortized out of AOCI relating to Salaried VEBA adjustments were included within Other expense, net, as a component of Net periodic postretirement benefit cost relating to Salaried VEBA.

2. Income tax amounts reclassified out of AOCI were included as a component of Income tax provision.

3. The beginning unrealized gain within Available for sale securities as of January 1, 2018 includes a $0.4 million cumulative-effect adjustment from our adoption of ASU 2016-01, which required us to remove cumulative gains on equity investments related to our deferred compensation plan as they are no longer accounted for as available for sale securities (see Note 1 and Note 4 for additional details).

4. Amounts reclassified out of AOCI relating to sales of available for sale securities were included as a component of Other expense, net. We use the specific identification method to determine the amount reclassified out of AOCI.

5. Amounts reclassified out of AOCI relating to cash flow hedges were included as a component of Cost of products sold, excluding depreciation and amortization and other items. As of December 31, 2018, we estimate a net mark-to-market loss before tax of $15.6 million in AOCI will be reclassified into Net income within the next 12 months.

11. Revenue Recognition

Prior to the Adoption of ASC 606. Prior to our adoption of ASC 606 on January 1, 2018, we recognized revenue on a gross basis when all of the following criteria were met: (i) persuasive evidence of an arrangement existed; (ii) title, ownership and risk of loss had passed to the customer; (iii) the price to the customer was fixed or determinable; and (iv) collection of the resulting receivable was reasonably assured. Provisions for estimated sales returns from and allowances to customers were made in the same period as the related revenues were recognized, based on historical experience or the specific identification of an event necessitating a reserve.

Subsequent to the Adoption of ASC 606. Subsequent to our adoption of ASC 606 on January 1, 2018 (see "*New Accounting Pronouncements"* in Note 1), we recognize revenue as we fulfill our performance obligations and transfer control of products to our customers. For products that have an alternative use and/or for which we do not have an enforceable right to payment (including a reasonable profit) during the production process, we recognize revenue at a point in time. For products that have no alternative use and for which we have an enforceable right to payment (including a reasonable profit) throughout the production process, we recognize revenue over time. In general, a majority of our Aero/HS products and our Automotive Extrusions are recognized over time, with the remainder of our products recognized at a point in time.

For the majority of our business, contracts with customers begin when we acknowledge a purchase order for a specific customer order of product to be delivered in the near term. These purchase orders are short term in nature, although they may reference a longer term "blanket purchase order" or a "terms and conditions" agreement, both of which may span multiple years. For revenue recognized at a point in time, transfer of control usually occurs upon shipment or upon customer receipt of the product, depending on shipping terms. For contracts recognized over time, control transfer occurs incrementally during our production process as progress is made on fulfilling the performance obligation. We use the input method of determining our progress, capturing direct costs beginning at the point that billet or cast ingot is introduced into production at either the extrusion phase or the rolling phase, respectively. We believe the input method more accurately reflects the transfer of control as it represents the best information available of work completed to date for which we have an enforceable right to payment. For products in production, we recognize revenue using estimates of the cost incurred to date plus a reasonable margin. As the duration of our contracts for accounting purposes is typically less than one year, we do not present quantitative information about the aggregate transaction price allocated to unsatisfied performance obligations at the end of the reporting period.

We adjust the amount of revenue recognized on all products, regardless of timing of revenue recognition, for variable price consideration, which could include metal market price adjustments, volume rebates and sales discounts. We estimate rebate and discount values based on forecasted order data and historical payment trends for specific customers, adjusted as necessary at each reporting period. Accounts receivable is recorded when our right to consideration becomes unconditional. Payment terms for a majority of our domestic customers are 30 days after invoice date. To accommodate shipping time to overseas locations, payment terms for foreign customers are typically several weeks longer than domestic terms. As such, we do not adjust the promised amount of consideration for the effects of a significant financing component as we do not expect the period between the transfer of control of products to our customers and receipt of payment will be greater than one year.

Contract assets primarily relate to our enforceable right to consideration for work completed but not billed at the reporting date on contracts for products recognized over time. Contract assets also include amounts related to our contractual right to consideration for finished goods recognized over time that were in transit as of period end.

Incremental Costs of Obtaining a Contract. We expense the costs of obtaining a contract as incurred as the amortization period of the asset that we otherwise would have recognized is one year or less.

Shipping and Handling Activities. We account for shipping and handling activities that occur after the customer has obtained control of a product as fulfillment activities (i.e., an expense) rather than as a promised service (i.e., a revenue element).

The following table presents the impact on our opening Consolidated Balance Sheet as of January 1, 2018 of adopting ASC 606 (in millions of dollars):

	December 31, 2017 As Reported	Cumulative-effect Adjustments[1]	January 1, 2018 As Adjusted
Contract assets	$ —	$ 55.6	$ 55.6
Inventories	207.9	(40.7)	167.2
Total current assets	656.6	14.9	671.5
Deferred tax assets, net	72.0	(3.3)	68.7
Total assets	$ 1,385.2	$ 11.6	$ 1,396.8
Other accrued liabilities	40.5	1.5	42.0
Total current liabilities	173.1	1.5	174.6
Total liabilities	$ 638.9	$ 1.5	$ 640.4
Retained earnings	85.5	10.1	95.6
Total stockholders' equity	746.3	10.1	756.4
Total liabilities and stockholders' equity	$ 1,385.2	$ 11.6	$ 1,396.8

[1] Included in the cumulative-effect adjustment was a charge of $5.0 million as a result of decrementing higher cost prior LIFO layers.

The following table presents the impact of adopting ASC 606 on our Consolidated Balance Sheet as of the period presented (in millions of dollars):

	December 31, 2018 As Reported	Adjustments	December 31, 2018 without Adoption of ASC 606
Contract assets	$ 54.9	$ (54.9)	$ —
Inventories	215.1	32.4	247.5
Total current assets	656.6	(22.5)	634.1
Deferred tax assets, net	35.9	3.3	39.2
Total assets	$ 1,419.3	$ (19.2)	$ 1,400.1
Other accrued liabilities	44.0	(3.7)	40.3
Total current liabilities	205.5	(3.7)	201.8
Total liabilities	$ 678.9	$ (3.7)	$ 675.2
Retained earnings	150.2	(15.5)	134.7
Total stockholders' equity	740.4	(15.5)	724.9
Total liabilities and stockholders' equity	$ 1,419.3	$ (19.2)	$ 1,400.1

The following table presents the impact of adopting ASC 606 on our Statements of Consolidated Income for each period presented (in millions of dollars, except per share amounts):

	Year Ended December 31, 2018		
	As Reported	Adjustments	Without Adoption of ASC 606
Net sales	$ 1,585.9	$ 1.2	$ 1,587.1
Cost of products sold, excluding depreciation and amortization and other items[1]	1,300.7	8.3	1,309.0
Operating income	143.6	(7.1)	136.5
Income before income taxes	120.0	(7.1)	112.9
Income tax provision	(28.3)	1.7	(26.6)
Net income	$ 91.7	$ (5.4)	$ 86.3
Net income per common share:			
Basic	$ 5.53	$ (0.33)	$ 5.20
Diluted	$ 5.43	$ (0.32)	$ 5.11

[1] Included in the "as reported" amounts was the benefit of having decremented higher cost prior LIFO layers as part of the cumulative-effect adjustment of adopting ASC 606, as discussed in the opening balance sheet table above.

The following table presents the impact of adopting ASC 606 on our Statements of Consolidated Comprehensive Income for each period presented (in millions of dollars):

	Year Ended December 31, 2018		
	As Reported	Adjustments	Without Adoption of ASC 606
Net income	$ 91.7	$ (5.4)	$ 86.3
Comprehensive income	$ 80.0	$ (5.4)	$ 74.6

The following table presents the impact of adopting ASC 606 on our Statements of Consolidated Cash Flows for the period presented (in millions of dollars):

	Year Ended December 31, 2018 As Reported	Adjustments	Year Ended December 31, 2018 without Adoption of ASC 606
Net income	$ 91.7	$ (5.4)	$ 86.3
Changes in operating assets and liabilities:			
Contract assets	0.7	(0.7)	—
Inventories	(45.0)	8.3	(36.7)
Accrued liabilities	(2.6)	(2.2)	(4.8)
Net cash provided by operating activities	$ 150.2	$ —	$ 150.2

12. Other Expense, Net

Other expense, net, consisted of the following for each period presented (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
Interest income	$ 0.3	$ 0.2	$ 0.1
Net periodic postretirement benefit cost relating to Salaried VEBA	(6.1)	(4.5)	(3.4)
Gain on removal of Union VEBA net assets	—	—	0.1
Realized gain on investments	6.1	3.4	0.8
Loss on extinguishment of debt[1]	—	—	(11.1)
All other, net	(1.2)	0.9	(0.1)
Other expense, net	$ (0.9)	$ —	$ (13.6)

1. Represents the loss on extinguishment of our 8.25% Senior Notes during the year ended December 31, 2016 which includes an $8.2 million premium paid to redeem the notes and a $2.9 million write-off of unamortized debt issuance costs associated with the notes.

13. Income Tax Matters

Tax Provision. Income before income taxes by geographic area was as follows (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
Domestic	$ 114.6	$ 127.9	$ 143.6
Foreign	5.4	5.1	3.6
Income before income taxes	$ 120.0	$ 133.0	$ 147.2

Income taxes are classified as either domestic or foreign based on whether payment is made or due to the United States or a foreign country. Certain income classified as foreign is also subject to domestic income taxes.

Income tax provision consisted of (in millions of dollars):

	Federal	Foreign	State	Total
2018				
Current	$ 11.9	$ (1.9)	$ (1.5)	$ 8.5
Deferred	(34.7)	0.1	(1.4)	(36.0)
Expense applied to increase Retained earnings/ Other comprehensive loss	(0.7)	—	(0.1)	(0.8)
Income tax provision	$ (23.5)	$ (1.8)	$ (3.0)	$ (28.3)
2017				
Current	$ 3.1	$ (0.8)	$ (1.0)	$ 1.3
Deferred	(82.0)	(1.0)	(5.7)	(88.7)
Expense applied to increase Retained earnings/ Other comprehensive loss	(0.1)	(0.1)	—	(0.2)
Income tax provision	$ (79.0)	$ (1.9)	$ (6.7)	$ (87.6)
2016				
Current	$ 2.7	$ 0.6	$ (1.5)	$ 1.8
Deferred	(47.8)	(1.2)	(4.7)	(53.7)
Expense applied to increase Additional paid in capital/Other comprehensive loss	(3.2)	(0.1)	(0.3)	(3.6)
Income tax provision	$ (48.3)	$ (0.7)	$ (6.5)	$ (55.5)

A reconciliation between the provision for income taxes and the amount computed by applying the federal statutory income tax rate to Income before income taxes is as follows (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
Amount of federal income tax provision based on the statutory rate	$ (25.2)	$ (46.5)	$ (51.5)
Decrease (increase) in federal valuation allowances	1.7	0.5	(0.3)
Non-deductible compensation (expense) benefit	(0.6)	(2.3)	0.3
Non-deductible expense	(1.5)	—	(0.3)
State income tax provision, net of federal benefit [1]	(2.5)	(4.3)	(4.2)
Foreign income tax (expense) benefit	(0.5)	(0.1)	0.5
Foreign undistributed earnings	0.4	(5.9)	—
Tax rate change	(0.1)	(29.0)	—
Income tax provision	$ (28.3)	$ (87.6)	$ (55.5)

1. State income taxes were $4.5 million in 2018, increased by a $0.9 million due to higher tax rate true-ups in various states, offset by a $2.9 million decrease in the valuation allowance relating to certain state net operating losses. The state income taxes were $4.0 million in 2017, increased by a $2.5 million change in tax rates, offset by a $2.2 million decrease in the valuation allowance relating to certain state net operating losses. The state income taxes were $4.1 million in 2016, offset by a $0.2 million decrease due to lower tax rates in various states and a $0.3 million increase in the valuation allowance relating to certain state net operating losses.

Deferred Income Taxes. Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and amounts used for income tax purposes. The components of our net deferred income tax assets were as follows (in millions of dollars):

	Year Ended December 31,	
	2018	2017
Deferred income tax assets:		
Loss and credit carryforwards	$ 48.7	$ 98.7
Salaried VEBA (see Note 4)	8.0	11.6
Other assets	27.2	21.0
Inventories	20.0	9.3
Valuation allowances	(8.4)	(13.0)
Total deferred income tax assets	95.5	127.6
Deferred income tax liabilities:		
Property, plant and equipment	(62.0)	(57.7)
Undistributed foreign earnings	(1.8)	(2.2)
Total deferred income tax liabilities	(63.8)	(59.9)
Net deferred income tax assets [1]	$ 31.7	$ 67.7

1. Of the total net deferred income tax assets of $31.7 million, $35.9 million was presented as Deferred tax assets, net, and $4.2 million was presented as Deferred tax liabilities on the Consolidated Balance Sheet as of December 31, 2018. Of the total net deferred income tax assets of $67.7 million, $72.0 million was presented as Deferred tax assets, net, and $4.3 million was presented as Deferred tax liabilities on the Consolidated Balance Sheet as of December 31, 2017.

Tax Attributes. At December 31, 2018, we had $117.7 million of net operating loss ("NOL") carryforwards available to reduce future cash payments for federal income taxes in the United States. H.R.1, commonly referred to as the Tax Cut and Jobs Act ("Tax Act"), allows net operating losses generated prior to December 31, 2017 (including our NOL carryforwards) to be fully deducted against 100% of taxable income until fully utilized or expired (see "*Tax Cuts and Jobs Act*" below for further discussion of the Tax Act). Our NOL carryforwards expire periodically through 2030.

We also had $11.4 million of alternative minimum tax ("AMT") credit carryforwards available to offset regular federal income tax requirements. Since the corporate AMT has been repealed in the Tax Act for tax years beginning after December 31, 2017, our AMT credit carryforwards that have not yet been used are refundable in future years. We will use AMT credits to offset any regular income tax liability in years 2018 through 2020, with 50% of remaining AMT credits refunded in each of the 2018, 2019 and 2020 tax years and all remaining credits refunded in tax year 2021 (see "*Tax Cuts and Jobs Act*" below for further discussion of the Tax Act).

In assessing the realizability of deferred tax assets, management considers whether it is "more likely than not" that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers taxable income in carryback years, the scheduled reversal of deferred tax liabilities, tax planning strategies and projected future taxable income in making this assessment. Due to uncertainties surrounding the realization of some of our deferred tax assets, primarily including state NOL carryforwards sustained during the prior years and expiring tax benefits, we have a valuation allowance against our deferred tax assets. When recognized, the tax benefits relating to any reversal of this valuation allowance will be recorded as a reduction of income tax expense. The decrease in the valuation allowance was $4.6 million, $2.7 million and $5.5 million in 2018, 2017 and 2016, respectively.

The decrease in the valuation allowance for 2018 was primarily due to the expiration of state NOL carryforwards and the related reversal of their valuation allowances and the expiration of a capital loss carryforward. The decrease in the valuation allowance for 2017 was primarily due to the expiration of state NOL carryforwards and the related reversal of their valuation allowances and the utilization of capital losses. The decrease in the valuation allowance for 2016 was primarily due to the expiration of state NOL carryforwards and the related reversal of their valuation allowances.

Other. We and our subsidiaries file income tax returns in the U.S. federal jurisdiction and various states and foreign jurisdictions.

Our tax returns for certain past years are still subject to examination by taxing authorities and the use of NOL carryforwards in future periods could trigger a review of attributes and other tax matters in years that are not otherwise subject to examination.

We have gross unrecognized benefits relating to uncertain tax positions. A reconciliation of changes in the gross unrecognized tax benefits is as follows (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
Gross unrecognized tax benefits at beginning of period	$ 1.5	$ 1.8	$ 1.7
Gross increases for tax positions of prior years	—	—	0.1
Gross decreases for tax positions of prior years		(0.3)	—
Gross unrecognized tax benefits at end of period	$ 1.5	$ 1.5	$ 1.8

If and when the $1.5 million of gross unrecognized tax benefits at December 31, 2018 are recognized, $0.4 million will be reflected in our income tax provision and thus affect the effective tax rate in future periods.

In addition, we recognize interest and penalties related to unrecognized tax benefits in the income tax provision. We had $0.2 million and $0.1 million accrued for interest and penalties at December 31, 2018 and December 31, 2017, respectively. Of these amounts, none were considered current and, as such, were included in Long-term liabilities on the Consolidated Balance Sheets at December 31, 2018 and December 31, 2017. We recognized an increase in interest and penalty of $0.1 million in our tax provision in 2018. We recognized a decrease in interest and penalty of $0.1 million in our tax provision in 2017. There was no change to interest and penalty in 2016.

We do not expect our gross unrecognized tax benefits to significantly change within the next 12 months.

Tax Cuts and Jobs Act. On December 22, 2017, the U.S. government enacted the Tax Act, which makes broad and complex changes to the Code, including, but not limited to: (i) reducing the U.S. federal corporate tax rate from 35% to 21%; (ii) requiring companies to pay a one-time transition tax on certain unrepatriated earnings of foreign subsidiaries; (iii) generally eliminating U.S. federal income taxes on dividends from foreign subsidiaries; (iv) requiring a current inclusion in U.S. federal taxable income of certain earnings of controlled foreign corporations; (v) eliminating the corporate AMT and changing how existing AMT credits can be realized; (vi) creating a new limitation on deductible interest expense; and (vii) changing rules related to uses and limitations of NOL carryforwards created in tax years beginning after December 31, 2017.

The SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118"), which provided guidance on accounting for the tax effects of the Tax Act. SAB 118 provided a measurement period that should not extend beyond one year from the Tax Act enactment date for companies to complete the accounting under ASC No. 740, *Income Taxes* ("ASC 740"). In accordance with SAB 118, a company must reflect the income tax effects of those aspects of the Tax Act for which the accounting under ASC 740 was complete. To the extent that a company's accounting for certain income tax effects of the Tax Act was incomplete, but it was able to determine a reasonable estimate, it recorded a provisional estimate in the financial statements at December 31, 2017. The completion of the accounting for the Tax Act in accordance with SAB 118 at December 31, 2018 did not result in a significant change to the provisional amounts booked at December 31, 2017.

Reduction of US Federal Corporate Tax Rate. The Tax Act reduced the corporate tax rate to 21%, effective January 1, 2018. For certain of our deferred tax assets, we recorded a decrease of $29.0 million, with a corresponding net increase to deferred income tax expense for the year ended December 31, 2017.

Deemed Repatriation Transition Tax. The Deemed Repatriation Transition Tax ("Transition Tax") is a tax on previously untaxed accumulated and current earnings and profits ("E&P") of certain of our foreign subsidiaries. To determine the amount of the Transition Tax, we determined, in addition to other factors, the amount of post-1986 E&P of the relevant subsidiaries, as well as the amount of non-U.S. income taxes paid on such earnings. We recorded a Transition Tax obligation of $3.5 million. In addition, we have accrued $1.6 million for withholding tax since our earnings in Canada are no longer permanently reinvested.

Internal Revenue Code Section 162(m). The Tax Act modified Section 162(m) of the Code ("Section 162(m)") by: (i) expanding the scope of covered employees to include the chief financial officer; (ii) providing that any individual that becomes

a covered employee for a taxable year beginning after December 31, 2016 would remain a covered employee for all future years; and (iii) eliminating the exceptions for commissions and performance-based compensation from the $1.0 million deduction limit. These changes did not apply to compensation stemming from contracts entered into on or before November 2, 2017, unless such contracts were materially modified on or after that date. Compensation agreements entered into and share-based payment awards granted after this date were subject to the revised terms of Section 162(m). We recorded a Section 162(m) obligation of $2.3 million.

14. Net Income Per Share and Stockholders' Equity

Net Income Per Share. Basic net income per share is computed by dividing distributed and undistributed net income allocable to common shares by the weighted-average number of common shares outstanding during the applicable period. The basic weighted-average number of common shares outstanding during the period excludes non-vested share-based payment awards. Diluted net income per share was calculated under the treasury stock method for 2018, 2017 and 2016, which in all years was more dilutive than the two-class method.

The following table sets forth the computation of basic and diluted net income per share for the periods presented (in millions of dollars, except share and per share amounts):

	Year Ended December 31,		
	2018	2017	2016
Numerator:			
Net income	$ 91.7	$ 45.4	$ 91.7
Denominator – Weighted-average common shares outstanding (in thousands):			
Basic	16,585	16,996	17,813
Add: dilutive effect of non-vested common shares, restricted stock units and performance shares[1]	289	263	220
Diluted	16,874	17,259	18,033
Net income per common share, Basic:	$ 5.53	$ 2.67	$ 5.15
Net income per common share, Diluted:	$ 5.43	$ 2.63	$ 5.09

1. A total of 52,000 and 50,000 non-vested RSAs, RSUs and performance shares for the years ended December 31, 2017 and December 31, 2016, respectively, were excluded from the weighted-average diluted shares computation as their inclusion would have been anti-dilutive. None were excluded for the year ended December 31, 2018.

Dividends. During 2018, 2017 and 2016, we paid a total of approximately $37.7 million ($2.20 per common share), $35.0 million ($2.00 per common share) and $32.4 million ($1.80 per common share), respectively, in cash dividends to stockholders, including the holders of RSAs, and dividend equivalents to the holders of certain RSUs and performance shares.

Treasury Stock. From time to time, we repurchase shares pursuant to a stock repurchase program authorized by our Board of Directors. Repurchase transactions will occur at such times and prices as management deems appropriate and will be funded with our excess liquidity after giving consideration to, among other things, internal and external growth opportunities and future cash flows. Repurchases may be in open-market transactions or in privately negotiated transactions and the program may be modified or terminated by our Board of Directors at any time.

Repurchases of our common stock pursuant to the stock repurchase program is recorded as Treasury stock and consisted of the following for each period presented:

	Year Ended December 31,		
	2018	2017	2016
Number of common shares repurchased	617,151	938,680	443,838
Weighted-average repurchase price (dollars per share)	$ 100.28	$ 82.97	$ 78.59
Total cost of repurchased common shares (in millions of dollars)	$ 61.9	$ 77.8	$ 34.9

At December 31, 2018 and December 31, 2017, $148.7 million and $110.5 million, respectively, were available to repurchase our common shares pursuant to the stock repurchase program.

Preferred Stock. In connection with a tax asset protection rights plan, our Board of Directors declared a dividend, payable April 22, 2016, of one right for each outstanding share of our common stock. In general, if the rights become exercisable, each right would allow its holder to purchase one one-hundredth of a share of our Series A Preferred Stock. The authorized number of shares of Series A Preferred Stock is 900,000.

15. Supplemental Cash Flow Information

	Year Ended December 31,		
	2018	2017	2016
	(in millions of dollars)		
Interest paid	$ 21.6	$ 21.1	$ 17.7
Non-cash investing and financing activities (included in Accounts payable):			
Unpaid purchases of property and equipment	$ 7.0	$ 7.4	$ 4.6
Stock repurchases not yet settled	$ 1.3	$ 0.1	$ 1.8
Acquisition of property and equipment through capital leasing arrangements	$ 6.5	$ 1.2	$ 0.2

	December 31,		
	2018	2017	2016
Components of cash, cash equivalents and restricted cash:			
Cash and cash equivalents	$ 125.6	$ 51.1	$ 55.2
Restricted cash included in Prepaid expenses and other current assets	0.3	0.3	0.3
Restricted cash included in Other assets	13.7	12.9	12.2
Total cash, cash equivalents and restricted cash shown in the Statements of Consolidated Cash Flows	$ 139.6	$ 64.3	$ 67.7

16. Business, Product and Geographical Area Information and Concentration of Risk

Our primary line of business is the production of semi-fabricated specialty aluminum mill products, such as aluminum plate and sheet and extruded and drawn products, primarily used in Aero/HS products, Automotive Extrusions, GE products and Other products. We operate 12 focused production facilities in the United States and one in Canada. Our chief operating decision maker reviews and evaluates our business as a single operating segment. Prior to 2018, we reported our consolidated financial statements based on one reportable segment, Fabricated Products (comprised primarily of our manufacturing operations), and presented the business unit All Other (comprised primarily of corporate general and administrative expenses) as a reconciling item between Fabricated Products and our consolidated financial statements. During 2018, we determined that the All Other business unit had decreased in materiality and relevance and was therefore immaterial to our consolidated financial statements. Therefore, we no longer separate All Other from Fabricated Products for all periods presented in this Report and on a prospective basis.

At December 31, 2018, approximately 62% of our employees were covered by collective bargaining agreements and none of our employees were covered by collective bargaining agreements with expiration dates occurring within one year from December 31, 2018.

Net sales by end market applications and by timing of control transfer for each period presented were as follows (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
Net sales:			
Aero/HS products	$ 739.4	$ 653.7	$ 675.4
Automotive Extrusions	239.3	217.3	188.8
GE products	546.0	476.2	420.1
Other products	61.2	50.3	46.3
Total net sales	$ 1,585.9	$ 1,397.5	$ 1,330.6
Timing of revenue recognition – Note 11:			
Products transferred at a point in time	$ 543.0	n/a	n/a
Products transferred over time	1,042.9	n/a	n/a
Total net sales	$ 1,585.9		

Geographic information for net sales based on country of origin, income taxes paid and long-lived assets were as follows (in millions of dollars):

	Year Ended December 31,		
	2018	2017	2016
Net sales to unaffiliated customers:			
Domestic	$ 1,509.6	$ 1,337.3	$ 1,278.6
Foreign[1]	76.3	60.2	52.0
Total net sales	$ 1,585.9	$ 1,397.5	$ 1,330.6
Income taxes paid:			
Domestic	$ 1.6	$ 1.2	$ 0.7
Foreign	2.0	0.1	0.5
Total income taxes paid	$ 3.6	$ 1.3	$ 1.2

	December 31,		
	2018	2017	2016
Long-lived assets:[2]			
Domestic	$ 581.7	$ 541.2	$ 499.5
Foreign[1]	30.1	30.2	31.4
Total long-lived assets	$ 611.8	$ 571.4	$ 530.9

1. Foreign reflects our London, Ontario production facility.

2. Long-lived assets represent Property, plant and equipment, net.

The aggregate foreign currency transaction gain (loss) included in determining net income were immaterial for 2018, 2017 and 2016.

For the years ended December 31, 2018, December 31, 2017 and December 31, 2016, one customer represented 25%, 27% and 26%, respectively, of Net sales and a second customer represented 15%, 12% and 10%, respectively, of Net sales.

One individual customer accounted for 31% and another individual customer accounted for 11% of the accounts receivable balance at December 31, 2018. One individual customer accounted for 22% and another individual customer accounted for 14% of the accounts receivable balance at December 31, 2017.

Information about export sales and primary aluminum supply from our major suppliers were as follows for the periods presented:

	Year Ended December 31,		
	2018	2017	2016
Percentage of Net sales:			
Export sales	15%	18%	19%
Percentage of total annual primary aluminum supply (lbs):			
Supply from our top five major suppliers	81%	85%	84%
Supply from our largest supplier	22%	36%	32%
Supply from our second and third largest suppliers combined	38%	33%	32%

17. Condensed Guarantor and Non-Guarantor Financial Information

During the quarter ended June 30, 2016, we issued $375.0 million aggregate principal amount of our 5.875% Senior Notes and redeemed in full the remaining principal balance of our 8.25% Senior Notes. The 5.875% Senior Notes were issued by Kaiser Aluminum Corporation ("Parent") pursuant to an indenture dated May 12, 2016 ("Indenture") with Wells Fargo Bank, National Association, as trustee ("Trustee"). The obligations of the Parent under the Indenture are guaranteed by Kaiser Aluminum Investments Company, Kaiser Aluminum Fabricated Products, LLC and Kaiser Aluminum Washington, LLC, ("Guarantor Subsidiaries"). All Guarantor Subsidiaries are 100% owned by Parent. The guarantees are full and unconditional and joint and several but have customary releases in the following situations: (i) the sale of the Guarantor Subsidiary or all of its assets; (ii) the declaration of a Guarantor Subsidiary as an unrestricted subsidiary under the Indenture; (iii) the termination or release of the Guarantor Subsidiary's guarantee of certain other indebtedness; or (iv) our exercise of legal defeasance or covenant defeasance or the discharge of our obligations under the Indenture.

The following condensed consolidating financial information as of December 31, 2018 and December 31, 2017, and for the years ended December 31, 2018, December 31, 2017 and December 31, 2016 present: (i) the financial position, results of operation and cash flows for each of (a) Parent, (b) the Guarantor Subsidiaries on a combined basis and (c) the Non-Guarantor subsidiaries of Parent other than the Guarantor Subsidiaries ("Non-Guarantor Subsidiaries") on a combined basis; (ii) the "Consolidating Adjustments," which represent the adjustments necessary to eliminate the investments in our subsidiaries, other intercompany balances and other intercompany sales and cost of sales among Parent, the Guarantor Subsidiaries and the Non-Guarantor Subsidiaries; and (iii) the resulting totals, reflecting information for us on a consolidated basis, as reported. The condensed consolidating financial information should be read in conjunction with the consolidated financial statements herein.

The Non-Guarantor Subsidiaries include Kaiser Aluminum Mill Products, Inc., Kaiser Aluminum Canada Limited, Trochus Insurance Company, Kaiser Aluminum France, S.A.S., Kaiser Aluminum Beijing Trading Company, Imperial Machine & Tool, Co. and Solid Innovations, LLC. Kaiser Aluminum Mill Products, Inc. was included in the "Guarantor Subsidiaries" under the indenture covering the 8.25% Senior Notes but is not a Guarantor Subsidiary under the Indenture.

KAISER ALUMINUM CORPORATION AND SUBSIDIARY COMPANIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

CONDENSED CONSOLIDATING BALANCE SHEET
(In millions of dollars)

December 31, 2018

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
ASSETS					
Current assets:					
Cash and cash equivalents	$ —	$ 122.6	$ 3.0	$ —	$ 125.6
Short-term investments	—	36.7	—	—	36.7
Receivables:					
Trade receivables, net	—	174.0	5.8	—	179.8
Intercompany receivables	143.7	0.1	4.3	(148.1)	—
Other	—	23.3	2.3	—	25.6
Contract assets	—	52.0	2.9	—	54.9
Inventories	—	203.0	12.1	—	215.1
Prepaid expenses and other current assets	0.1	18.4	0.4	—	18.9
Total current assets	143.8	630.1	30.8	(148.1)	656.6
Investments in and advances to subsidiaries	974.7	94.9	0.2	(1,069.8)	—
Property, plant and equipment, net	—	577.4	34.4	—	611.8
Long-term intercompany receivables	—	—	9.8	(9.8)	—
Deferred tax assets, net	—	32.9	—	3.0	35.9
Intangible assets, net	—	23.6	8.8	—	32.4
Goodwill	—	18.8	25.2	—	44.0
Other assets	—	38.6	—	—	38.6
Total	$ 1,118.5	$ 1,416.3	$ 109.2	$ (1,224.7)	$ 1,419.3
LIABILITIES AND STOCKHOLDERS' EQUITY					
Current liabilities:					
Accounts payable	$ 4.9	$ 109.6	$ 6.9	$ —	$ 121.4
Intercompany payable	—	148.0	0.1	(148.1)	—
Accrued salaries, wages and related expenses	—	38.3	1.8	—	40.1
Other accrued liabilities	2.8	46.7	0.8	(6.3)	44.0
Total current liabilities	7.7	342.6	9.6	(154.4)	205.5
Net liabilities of Salaried VEBA	—	32.4	—	—	32.4
Deferred tax liabilities	—	—	4.2	—	4.2
Long-term intercompany payable	—	9.8	—	(9.8)	—
Long-term liabilities	—	63.3	3.1	—	66.4
Long-term debt	370.4	—	—	—	370.4
Total liabilities	378.1	448.1	16.9	(164.2)	678.9
Total stockholders' equity	740.4	968.2	92.3	(1,060.5)	740.4
Total	$ 1,118.5	$ 1,416.3	$ 109.2	$ (1,224.7)	$ 1,419.3

KAISER ALUMINUM CORPORATION AND SUBSIDIARY COMPANIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

CONDENSED CONSOLIDATING BALANCE SHEET
(In millions of dollars)

December 31, 2017

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
ASSETS					
Current assets:					
Cash and cash equivalents	$ —	$ 48.4	$ 2.7	$ —	$ 51.1
Short-term investments	—	183.7	—	—	183.7
Receivables:					
Trade receivables, net	—	160.1	4.9	—	165.0
Intercompany receivables	22.8	0.1	0.7	(23.6)	—
Other	—	14.7	0.8	—	15.5
Inventories	—	198.7	9.2	—	207.9
Prepaid expenses and other current assets	0.1	32.9	0.4	—	33.4
Total current assets	22.9	638.6	18.7	(23.6)	656.6
Investments in and advances to subsidiaries	1,097.7	48.2	—	(1,145.9)	—
Property, plant and equipment, net	—	541.2	30.2	—	571.4
Long-term intercompany receivables	—	—	12.4	(12.4)	—
Deferred tax assets, net	—	67.3	—	4.7	72.0
Intangible assets, net	—	25.0	—	—	25.0
Goodwill	—	18.8	—	—	18.8
Other assets	—	41.4	—	—	41.4
Total	$ 1,120.6	$ 1,380.5	$ 61.3	$ (1,177.2)	$ 1,385.2
LIABILITIES AND STOCKHOLDERS' EQUITY					
Current liabilities:					
Accounts payable	$ 1.9	$ 81.4	$ 6.7	$ —	$ 90.0
Intercompany payable	—	23.5	0.1	(23.6)	—
Accrued salaries, wages and related expenses	—	41.0	1.6	—	42.6
Other accrued liabilities	2.8	46.2	1.0	(9.5)	40.5
Total current liabilities	4.7	192.1	9.4	(33.1)	173.1
Net liabilities of Salaried VEBA	—	31.9	—	—	31.9
Deferred tax liabilities	—	—	4.3	—	4.3
Long-term intercompany payable	—	12.4	—	(12.4)	—
Long-term liabilities	—	58.0	2.0	—	60.0
Long-term debt	369.6	—	—	—	369.6
Total liabilities	374.3	294.4	15.7	(45.5)	638.9
Total stockholders' equity	746.3	1,086.1	45.6	(1,131.7)	746.3
Total	$ 1,120.6	$ 1,380.5	$ 61.3	$ (1,177.2)	$ 1,385.2

CONDENSED CONSOLIDATING STATEMENT OF COMPREHENSIVE INCOME
(In millions of dollars)

Year Ended December 31, 2018

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
Net sales	$ —	$ 1,547.0	$ 138.1	$ (99.2)	$ 1,585.9
Costs and expenses:					
Cost of products sold, excluding depreciation and amortization and other items	—	1,271.2	126.0	(96.5)	1,300.7
Depreciation and amortization	—	41.3	2.6	—	43.9
Selling, general, administrative, research and development	4.8	88.5	5.7	(2.7)	96.3
Other operating charges, net	—	1.3	0.1	—	1.4
Total costs and expenses	4.8	1,402.3	134.4	(99.2)	1,442.3
Operating (loss) income	(4.8)	144.7	3.7	—	143.6
Other (expense) income:					
Interest expense	(21.1)	(2.2)	—	0.6	(22.7)
Other (expense) income, net	—	(0.4)	0.1	(0.6)	(0.9)
(Loss) income before income taxes	(25.9)	142.1	3.8	—	120.0
Income tax provision	—	(32.9)	(1.7)	6.3	(28.3)
Earnings in equity of subsidiaries	117.6	2.1	—	(119.7)	—
Net income	$ 91.7	$ 111.3	$ 2.1	$ (113.4)	$ 91.7
Comprehensive income	$ 80.0	$ 99.6	$ 2.1	$ (101.7)	$ 80.0

CONDENSED CONSOLIDATING STATEMENT OF COMPREHENSIVE INCOME
(In millions of dollars)

Year Ended December 31, 2017

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
Net sales	$ —	$ 1,365.3	$ 115.7	$ (83.5)	$ 1,397.5
Costs and expenses:					
Cost of products sold, excluding depreciation and amortization and other items[1]	—	1,066.1	101.1	(81.3)	1,085.9
Depreciation and amortization	—	37.5	2.2	—	39.7
Selling, general, administrative, research and development[2]	4.5	88.3	6.9	(2.2)	97.5
Goodwill impairment	—	18.4	—	—	18.4
Other operating charges, net	—	0.8	—	—	0.8
Total costs and expenses	4.5	1,211.1	110.2	(83.5)	1,242.3
Operating (loss) income	(4.5)	154.2	5.5	—	155.2
Other (expense) income:					
Interest expense	(20.7)	(1.7)	—	0.2	(22.2)
Other (expense) income, net	—	(0.5)	0.7	(0.2)	—
(Loss) income before income taxes	(25.2)	152.0	6.2	—	133.0
Income tax provision	—	(95.2)	(1.9)	9.5	(87.6)
Earnings in equity of subsidiaries	70.6	4.3	—	(74.9)	—
Net income	$ 45.4	$ 61.1	$ 4.3	$ (65.4)	$ 45.4
Comprehensive income	$ 45.4	$ 61.1	$ 4.3	$ (65.4)	$ 45.4

1. See Note 7 for discussion of our adoption of ASU 2017-12 and the related reclassification of amounts previously presented in the Statements of Consolidated Income within Unrealized (gain) loss on derivative instruments and now included within Cost of products sold, excluding depreciation and amortization and other items.

2. See Note 1 for discussion of our adoption of ASU 2017-07 and the related reclassification of amounts previously presented in the Statements of Consolidated Income within Selling, general, administrative, research and development and now included within Other expense.

CONDENSED CONSOLIDATING STATEMENT OF COMPREHENSIVE (LOSS) INCOME
(In millions of dollars)

Year Ended December 31, 2016

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
Net sales	$ —	$ 1,301.6	$ 103.4	$ (74.4)	$ 1,330.6
Costs and expenses:					
Cost of products sold:					
Cost of products sold, excluding depreciation and amortization and other items[1]	—	981.9	90.0	(71.1)	1,000.8
Lower of cost or market inventory write-down	—	4.9	—	—	4.9
Depreciation and amortization	—	34.0	2.0	—	36.0
Selling, general, administrative, research and development[2]	4.2	95.0	8.4	(2.6)	105.0
Other operating charges, net	—	2.8	—	—	2.8
Total costs and expenses	4.2	1,118.6	100.4	(73.7)	1,149.5
Operating (loss) income	(4.2)	183.0	3.0	(0.7)	181.1
Other (expense) income:					
Interest (expense) income	(21.6)	1.2	—	0.1	(20.3)
Other expense, net	(11.1)	(2.4)	—	(0.1)	(13.6)
(Loss) income before income taxes	(36.9)	181.8	3.0	(0.7)	147.2
Income tax provision	—	(69.0)	(0.6)	14.1	(55.5)
Earnings in equity of subsidiaries	128.6	1.7	—	(130.3)	—
Net income	$ 91.7	$ 114.5	$ 2.4	$ (116.9)	$ 91.7
Comprehensive income	$ 86.7	$ 109.8	$ 2.1	$ (111.9)	$ 86.7

1. See Note 7 for discussion of our adoption of ASU 2017-12 and the related reclassification of amounts previously presented in the Statements of Consolidated Income within Unrealized (gain) loss on derivative instruments and now included within Cost of products sold, excluding depreciation and amortization and other items.

2. See Note 1 for discussion of our adoption of ASU 2017-07 and the related reclassification of amounts previously presented in the Statements of Consolidated Income within Selling, general, administrative, research and development and now included within Other expense.

CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
(In millions of dollars)

Year Ended December 31, 2018

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
Cash flows from operating activities:					
Net cash provided by operating activities	$ 226.2	$ 166.6	$ 7.4	$ (250.0)	$ 150.2
Cash flows from investing activities:					
Capital expenditures	—	(68.0)	(6.1)	—	(74.1)
Purchase of available for sale securities	—	(135.2)	—	—	(135.2)
Purchase of equity securities	—	(0.9)	—	—	(0.9)
Proceeds from disposition of available for sale securities	—	283.9	—	—	283.9
Cash payment for acquisition of Imperial Machine & Tool Co., net of cash received	—	(43.2)	—	—	(43.2)
Proceeds from disposal of property, plant and equipment	—	0.6	—	—	0.6
Intercompany loans receivable	(120.9)	—	(1.0)	121.9	—
Net cash (used in) provided by investing activities	(120.9)	37.2	(7.1)	121.9	31.1
Cash flows from financing activities:					
Repayment of capital lease	—	(0.7)	—	—	(0.7)
Cancellation of shares to cover employees' tax withholdings upon vesting of non-vested shares	(6.9)	—	—	—	(6.9)
Repurchase of common stock	(60.7)	—	—	—	(60.7)
Cash dividends and dividend equivalents paid	(37.7)	—	—	—	(37.7)
Cash dividends paid to Parent	—	(250.0)	—	250.0	—
Intercompany loans payable	—	121.9	—	(121.9)	—
Net cash used in financing activities	(105.3)	(128.8)	—	128.1	(106.0)
Net increase in cash and cash equivalents during the period	—	75.0	0.3	—	75.3
Cash, cash equivalents and restricted cash at beginning of period	—	61.3	3.0	—	64.3
Cash, cash equivalents and restricted cash at end of period	$ —	$ 136.3	$ 3.3	$ —	$ 139.6

CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
(In millions of dollars)

Year Ended December 31, 2017

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
Cash flows from operating activities:					
Net cash (used in) provided by operating activities	$ (24.2)	$ 156.9	$ 8.8	$ —	$ 141.5
Cash flows from investing activities:					
Capital expenditures	—	(74.7)	(0.8)	—	(75.5)
Purchase of available for sale securities	—	(247.5)	—	—	(247.5)
Proceeds from disposition of available for sale securities	—	296.9	—	—	296.9
Proceeds from disposal of property, plant and equipment	—	0.6	—	—	0.6
Intercompany loans receivable	143.2	—	(7.6)	(135.6)	—
Net cash provided by (used in) investing activities	143.2	(24.7)	(8.4)	(135.6)	(25.5)
Cash flows from financing activities:					
Repayment of capital lease	—	(0.4)	—	—	(0.4)
Cancellation of shares to cover employees' tax withholdings upon vesting of non-vested shares	(4.5)	—	—	—	(4.5)
Repurchase of common stock	(79.5)	—	—	—	(79.5)
Cash dividends and dividend equivalents paid	(35.0)	—	—	—	(35.0)
Intercompany loans payable	—	(135.6)	—	135.6	—
Net cash used in financing activities	(119.0)	(136.0)	—	135.6	(119.4)
Net (decrease) increase in cash and cash equivalents during the period	—	(3.8)	0.4	—	(3.4)
Cash, cash equivalents and restricted cash at beginning of period	—	65.1	2.6	—	67.7
Cash, cash equivalents and restricted cash at end of period	$ —	$ 61.3	$ 3.0	$ —	$ 64.3

CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
(In millions of dollars)

Year Ended December 31, 2016

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Consolidating Adjustments	Consolidated
Cash flows from operating activities:					
Net cash provided by operating activities	$ 177.7	$ 178.7	$ 9.2	$ (200.0)	$ 165.6
Cash flows from investing activities:					
Capital expenditures	—	(74.0)	(2.1)	—	(76.1)
Purchase of available for sale securities	—	(255.3)	—	—	(255.3)
Proceeds from disposition of available for sale securities	—	55.0	—	—	55.0
Intercompany loans receivable[1]	(166.0)	110.4	(1.3)	56.9	—
Net cash used in investing activities	(166.0)	(163.9)	(3.4)	56.9	(276.4)
Cash flows from financing activities:					
Repayment of principal and redemption premium of 8.25% Senior Notes	(206.0)	—	—	—	(206.0)
Issuance of 5.875% Senior Notes	375.0	—	—	—	375.0
Cash paid for debt issuance costs	(6.8)	—	—	—	(6.8)
Proceeds from stock option exercises	1.2	—	—	—	1.2
Cancellation of shares to cover employees' tax withholdings upon vesting of non-vested shares	(2.9)	—	—	—	(2.9)
Repurchase of common stock	(33.3)	—	—	—	(33.3)
Cash dividends and dividend equivalents paid	(32.4)	—	—	—	(32.4)
Cash dividends paid to Parent	—	(200.0)	—	200.0	—
Intercompany loans payable[1]	(106.5)	167.3	(3.9)	(56.9)	—
Net cash (used in) provided by financing activities	(11.7)	(32.7)	(3.9)	143.1	94.8
Net (decrease) increase in cash and cash equivalents during the period	—	(17.9)	1.9	—	(16.0)
Cash, cash equivalents and restricted cash at beginning of period	—	83.0	0.7	—	83.7
Cash, cash equivalents and restricted cash at end of period	$ —	$ 65.1	$ 2.6	$ —	$ 67.7

[1] As a result of Parent's additional liquidity associated with the 5.875% Senior Notes (see Note 8), we classify all intercompany receivables and payables as Intercompany loans receivable and Intercompany loans payable, respectively, and therefore categorize changes in these balances within the investing and financing sections, respectively, of the Condensed Consolidating Statement of Cash Flows.

18. Quarterly Financial Data (Unaudited)

The following tables present the unaudited financial data for each of the interim periods in 2018 and 2017 (in millions of dollars, except per share amounts):

	Quarter Ended 31-Mar	Quarter Ended 30-Jun	Quarter Ended 30-Sep	Quarter Ended 31-Dec
2018				
Net sales	$ 388.0	$ 415.4	$ 393.1	$ 389.4
Cost of products sold, excluding depreciation, amortization and other items	$ 316.7	$ 343.4	$ 323.3	$ 317.3
Gross profit	$ 71.3	$ 72.0	$ 69.8	$ 72.1
Operating income	$ 37.1	$ 34.7	$ 34.9	$ 36.9
Net income	$ 25.7	$ 20.7	$ 21.7	$ 23.6
Net income per common share, Basic	$ 1.54	$ 1.24	$ 1.31	$ 1.44
Net income per common share, Diluted	$ 1.51	$ 1.22	$ 1.29	$ 1.41
Dividends declared per common share	$ 0.55	$ 0.55	$ 0.55	$ 0.55

	Quarter Ended 31-Mar	Quarter Ended 30-Jun	Quarter Ended 30-Sep	Quarter Ended 31-Dec
2017				
Net sales	$ 355.3	$ 356.3	$ 332.8	$ 353.1
Cost of products sold, excluding depreciation, amortization and other items	$ 262.7	$ 289.6	$ 256.4	$ 277.2
Gross profit	$ 92.6	$ 66.7	$ 76.4	$ 75.9
Operating income	$ 59.3	$ 12.5	$ 41.5	$ 41.9
Net income (loss)[1]	$ 36.0	$ 4.7	$ 19.9	$ (15.2)
Net income (loss) per common share, Basic	$ 2.07	$ 0.28	$ 1.18	$ (0.90)
Net income (loss) per common share, Diluted	$ 2.04	$ 0.27	$ 1.16	$ (0.90)
Dividends declared per common share	$ 0.50	$ 0.50	$ 0.50	$ 0.50

[1] The quarter ended June 30, 2017 reflected an $18.4 million goodwill impairment charge (see Note 3). The quarter ended December 31, 2017 included the tax provision effect of $37.2 million due to the Tax Act (see Note 13).

19. Subsequent Events

Dividend Declaration. On January 15, 2019, we announced that our Board of Directors declared a quarterly cash dividend of $0.60 per common share, or approximately $9.8 million (including dividend equivalents), which was paid on February 15, 2019 to stockholders of record at the close of business on January 25, 2019.

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

None.

Item 9A. ***Controls and Procedures***

Evaluation of Disclosure Controls and Procedures. We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports under the Securities Exchange Act of 1934 is processed, recorded, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and that such information is accumulated and communicated to management, including the principal executive officer and principal financial officer, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives and management is required to apply our judgment in evaluating the cost-benefit relationship of possible controls and procedures. An evaluation of the effectiveness of the design and operation of our disclosure controls and procedures was performed as of the end of the period covered by this Report under the supervision of and with the participation of our management, including the principal executive officer and principal financial officer. Based on that evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2018 at the reasonable assurance level.

Management's Annual Report on Internal Control Over Financial Reporting. Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934. Our internal control over financial reporting is designed under the supervision of our principal executive officer and principal financial officer and effected by our Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States and include those policies and procedures that:

(1) Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect our transactions and the dispositions of our assets;

(2) Provide reasonable assurance that our transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States and that our receipts and expenditures are being made only in accordance with authorizations of our management and Board of Directors; and

(3) Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Because of inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we assessed the effectiveness of our internal control over financial reporting as of December 31, 2018, using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control - Integrated Framework as established in 2013. Based on that evaluation, our principal executive officer and principal financial officer concluded that our internal control over financial reporting was effective as of December 31, 2018.

Deloitte & Touche LLP, the independent registered public accounting firm that audited our consolidated financial statements for the year ended December 31, 2018 included in Item 8. "Financial Statements and Supplementary Data" of this Report, has issued an attestation report on the effectiveness of our internal control over financial reporting.

Changes in Internal Controls Over Financial Reporting. We had no changes in our internal control over financial reporting during our most recently completed fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. ***Other Information***

None.

Part III

Item 10. ***Directors, Executive Officers and Corporate Governance***

The information required by this item is incorporated by reference to the information included under the captions "Executive Officers," "Proposals Requiring Your Vote – Proposal 1 – Election of Directors," "Section 16(a) Beneficial Ownership Reporting Compliance" and "Corporate Governance" in our proxy statement for the 2019 annual meeting of stockholders.

Item 11. ***Executive Compensation***

The information required by this item is incorporated by reference to the information included under the captions "Executive Compensation," "Director Compensation" and "Corporate Governance – Board Committees – Compensation Committee – Compensation Committee Interlocks and Insider Participation" in our proxy statement for the 2019 annual meeting of stockholders.

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

The information required by this item is incorporated by reference to the information included under the captions "Equity Compensation Plan Information" and "Principal Stockholders and Management Ownership" in our proxy statement for the 2019 annual meeting of stockholders.

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

The information required by this item is incorporated by reference to the information included under the captions "Certain Relationships and Related Transactions" and "Corporate Governance – Director Independence" in our proxy statement for the 2019 annual meeting of stockholders.

Item 14. ***Principal Accountant Fees and Services***

The information required by this item is incorporated by reference to the information included under the caption "Independent Public Accountants" in our proxy statement for the 2019 annual meeting of stockholders.

PART IV

Item 15. ***Exhibits and Financial Statement Schedules***

1. Financial Statements

The following are contained in this 2018 Form 10-K Report:

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets

Statements of Consolidated Income

Statements of Consolidated Comprehensive Income

Statements of Consolidated Stockholders' Equity

Statements of Consolidated Cash Flows

Notes to Consolidated Financial Statements

2. Financial Statement Schedules

All schedules are omitted because they are either inapplicable or the required information is included in the Consolidated Financial Statements or the notes thereto included in Item 8. "Financial Statements and Supplementary Data" and incorporated herein by reference.

3. Exhibits

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of the Company (incorporated by reference to Exhibit 3.1 to the Registration Statement on Form 8-A, filed by the Company on July 6, 2006, File No. 000-52105).
3.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Company dated July 2, 2008 (incorporated by reference to Exhibit 3.2 to the Quarterly Report on Form 10-Q, filed by the Company on August 7, 2008, File No. 000-52105).
3.3	Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Company dated June 2, 2015 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K, filed by the Company on June 8, 2015, File No. 000-52105).
3.4	Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Company dated May 26, 2016 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K, filed by the Company on May 26, 2016, File No. 001-09447).
3.5	Certificate of Designation of Series A Junior Participating Preferred Stock of Kaiser Aluminum Corporation, as filed with the Secretary of State of the State of Delaware on April 7, 2016 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K, filed by the Company on April 8, 2016, File No. 001-9447).
3.6	Amended and Restated Bylaws of the Company (incorporated by reference to Exhibit 3.2 to the Registration Statement on Form 8-A, filed by the Company on July 6, 2006, File No. 000-52105).
3.7	Amendment to Amended and Restated Bylaws of the Company (incorporated by reference to Exhibit 3.2 to the Current Report on Form 8-K, filed by the Company on June 8, 2015, File No. 000-52105).

Exhibit Number	Description
4.1	Indenture, dated May 12, 2016, by and among Kaiser Aluminum Corporation, each of the guarantors named therein and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K, filed by the Company on May 12, 2016, File No. 001-09447).
4.2	Form of 5.875% Senior Note due 2024 (included in Exhibit 4.1).
4.3	Tax Asset Protection Rights Agreement, dated as of April 7, 2016, between Kaiser Aluminum Corporation and Computershare Inc., as Rights Agent (including the form of Certificate of Designation of Series A Junior Participating Preferred Stock attached as Exhibit A thereto, the form of Rights Certificate attached as Exhibit B thereto and the Summary of Rights to Purchase Preferred Stock attached as Exhibit C thereto) (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K, filed by the Company on April 8, 2016, File No. 001-9447).
10.1	Credit Agreement, dated as of December 1, 2015, among the Company, Kaiser Aluminum Investments Company, Kaiser Aluminum Fabricated Products, LLC, Kaiser Aluminum Washington, LLC and Kaiser Aluminum Alexco, LLC, certain financial institutions from time to time party thereto, as lenders, JPMorgan Chase Bank, N.A., as administrative agent, J.P. Morgan Securities LLC and Wells Fargo Capital Finance, LLC, as joint bookrunners and joint lead arrangers, Wells Fargo Capital Finance, LLC, as documentation agent, and Bank of America, N.A., as syndication agent (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K, filed by the Company on December 1, 2015, File No. 000-52105).
10.2	Description of Compensation of Directors (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q, filed by the Company on July 28, 2017 File No. 001-09447)
**10.3	Employment Agreement, dated as of July 15, 2017, between the Company and Jack A. Hockema (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K, filed by the Company on July 17, 2017, File No. 001-09447).
**10.4	Form of Director Indemnification Agreement (incorporated by reference to Exhibit 10.8 to the Current Report on Form 8-K, filed by the Company on July 6, 2006, File No. 000-52105).
**10.5	Form of Officer Indemnification Agreement (incorporated by reference to Exhibit 10.9 to the Current Report on Form 8-K, filed by the Company on July 6, 2006, File No. 000-52105).
**10.6	Form of Director and Officer Indemnification Agreement (incorporated by reference to Exhibit 10.10 to the Current Report on Form 8-K, filed by the Company on July 6, 2006, File No. 000-52105).
**10.7	Kaiser Aluminum Fabricated Products Restoration Plan (incorporated by reference to Exhibit 10.14 to the Current Report on Form 8-K, filed by the Company on July 6, 2006, File No. 000-52105).
**10.8	Amendment to the Kaiser Aluminum Fabricated Products Restoration Plan (incorporated by reference to Exhibit 10.4 to the Current Report on Form 8-K, filed by the Company on December 31, 2008, File No. 000-52105).
10.9	Amended and Restated Director Designation Agreement dated February 13, 2015 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K, filed by the Company on February 13, 2015, File No. 000-52105).
**10.10	Form of Change in Control Severance Agreement for John M. Donnan, Keith A. Harvey, and Daniel J. Rinkenberger (incorporated by reference to Exhibit 10.33 to the Annual Report on Form 10-K for the period ended December 31, 2002, filed by the Company on March 31, 2003, File No. 001-9447).
**10.11	Form of Change in Control Severance Agreement for John Barneson (incorporated by reference to Exhibit 10.32 to the Annual Report on Form 10-K for the period ended December 31, 2002, filed by the Company on March 31, 2003, File No. 001-9447).
**10.12	Form of Amendment to the Change in Control Severance Agreement with John Barneson, John M. Donnan, Keith A. Harvey and Daniel J. Rinkenberger (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K, filed by the Company on December 31, 2008, File No. 000-52105).

Exhibit Number	Description
**10.13	Kaiser Aluminum Corporation Amended and Restated 2006 Equity and Performance Incentive Plan (incorporated by reference to Exhibit 10.7 to the Quarterly Report on Form 10-Q, filed by the Company on April 24, 2013, File No. 000-52105).
**10.14	Kaiser Aluminum Corporation 2016 Equity and Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K, filed by the Company on May 26, 2016, File No. 001-09447).
10.15	Form of Non-Employee Director Restricted Stock Award Agreement (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q, filed by the Company on July 27, 2016, File No. 001-09447).
**10.16	Executive Officer Restricted Stock Award Agreement (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K, filed by the Company on March 9, 2015, File No. 000-52105).
**10.17	2016 Form of Executive Officer Performance Shares Award Agreement (incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K, filed by the Company on March 9, 2015, File No. 000-52105).
**10.18	2016 Form of Executive Officer Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K, filed by the Company on March 10, 2016, File No. 000-52105).
**10.19	Form of Amendment to 2016 Restricted Stock Unit Award Agreement with Jack Hockema and John Barneson (incorporated by reference to Exhibit 10.5 to the Current Report on Form 8-K, filed by the Company on March 9, 2017, File No. 001-09447).
**10.20	2016-2018 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K, filed by the Company on March 10, 2016, File No. 000-52105).
**10.21	Description of 2016 Long-Term Incentive Umbrella Plan under the Kaiser Aluminum Corporation Amended and Restated 2006 Equity and Performance Incentive Plan (incorporated by reference to Exhibit 10.5 to the Quarterly Report on Form 10-Q, filed by the Company on April 22, 2016, File No. 001-09447).
**10.22	2017 and 2018 Form of Executive Officer Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K, filed by the Company on March 9, 2017, File No. 001-09447).
**10.23	2017 and 2018 Form of Executive Officer Performance Shares Award Agreement (incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K, filed by the Company on March 9, 2017, File No. 001-09447).
**10.24	Amended and Restated 2017-2019 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q, filed by the Company on July 28, 2017, File No. 001-09447).
**10.25	Description of 2017 Long-Term Incentive Umbrella Plan under the Kaiser Aluminum Corporation 2016 Equity and Incentive Compensation Plan (incorporated by reference to Exhibit 10.7 to the Quarterly Report on Form 10-Q, filed by the Company on April 21, 2017, File No. 001-09447).
**10.26	2018 Short-Term Incentive Plan (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K, filed by the Company on March 7, 2018, File No. 001-09447).
**10.27	2018-2020 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K, filed by the Company on March 7, 2018, File No. 001-09447).
21.1	Significant Subsidiaries of Kaiser Aluminum Corporation (incorporated by reference to Exhibit 21.1 to the Annual Report on Form 10-K, filed by the Company on February 18, 2014, File No. 000-52105).
*23.1	Consent of Independent Registered Public Accounting Firm.

Exhibit Number	Description
*31.1	Certification of Jack A. Hockema pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
*31.2	Certification of Daniel J. Rinkenberger pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
*32.1	Certification of Jack A. Hockema pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
*32.2	Certification of Daniel J. Rinkenberger pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
*101.SCH	XBRL Taxonomy Extension Schema
*101.CAL	XBRL Taxonomy Extension Calculation
*101.DEF	XBRL Taxonomy Extension Definition
*101.LAB	XBRL Taxonomy Extension Label
*101.PRE	XBRL Taxonomy Extension Presentation

* Filed herewith.

** Management contract or compensatory plan or arrangement required to be filed as an exhibit to this Annual Report on Form 10-K.

Item 16. ***Form 10-K Summary***

None.

SIGNATURES

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

KAISER ALUMINUM CORPORATION

/s/ Jack A. Hockema

Jack A. Hockema

Chief Executive Officer and Chairman

Date: February 22, 2019

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

/s/ Jack A. Hockema Jack A. Hockema	Chief Executive Officer, Chairman of the Board and Director (Principal Executive Officer)	Date: February 22, 2019
/s/ Daniel J. Rinkenberger Daniel J. Rinkenberger	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	Date: February 22, 2019
/s/ Neal West Neal West	Vice President and Chief Accounting Officer (Principal Accounting Officer)	Date: February 22, 2019
/s/ Carolyn Bartholomew Carolyn Bartholomew	Director	Date: February 22, 2019
 David Foster	Director	
 L. Patrick Hassey	Director	
/s/ Emily Liggett Emily Liggett	Director	Date: February 22, 2019
/s/ Lauralee Martin Lauralee Martin	Director	Date: February 22, 2019
/s/ Alfred E. Osborne, Jr., Ph.D. Alfred E. Osborne, Jr., Ph.D.	Director	Date: February 22, 2019
 Jack Quinn	Director	
/s/ Thomas M. Van Leeuwen Thomas M. Van Leeuwen	Director	Date: February 22, 2019
/s/ Brett E. Wilcox Brett E. Wilcox	Director	Date: February 22, 2019

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-211641, 333-170513 and 333-135613 on Form S-8 of our report dated February 22, 2019, relating to the consolidated financial statements of Kaiser Aluminum Corporation and Subsidiary Companies, and the effectiveness of Kaiser Aluminum Corporation and Subsidiary Companies' internal control over financial reporting (which report expresses an unqualified opinion and includes an explanatory paragraph relating to changes in the method of accounting for revenue from contracts with customers in 2018 due to adoption of Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*), appearing in this Annual Report on Form 10-K of Kaiser Aluminum Corporation for the year ended December 31, 2018.

/s/ Deloitte & Touche LLP

Costa Mesa, California
February 22, 2019

Exhibit 31.1

CERTIFICATION PURSUANT TO SECTION 302

OF THE SARBANES-OXLEY ACT OF 2002

I, Jack A. Hockema, certify that:

1. I have reviewed this report on Form 10-K of Kaiser Aluminum Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Jack A. Hockema

Jack A. Hockema

Chief Executive Officer and Chairman

(Principal Executive Officer)

Date: February 22, 2019

A signed original of this written statement required by Section 302 has been provided to Kaiser Aluminum Corporation and will be retained by Kaiser Aluminum Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 31.2

CERTIFICATION PURSUANT TO SECTION 302

OF THE SARBANES-OXLEY ACT OF 2002

I, Daniel J. Rinkenberger, certify that:

1. I have reviewed this report on Form 10-K of Kaiser Aluminum Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Daniel J. Rinkenberger

Daniel J. Rinkenberger

Executive Vice President and Chief Financial Officer

(Principal Financial Officer)

Date: February 22, 2019

A signed original of this written statement required by Section 302 has been provided to Kaiser Aluminum Corporation and will be retained by Kaiser Aluminum Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

February 22, 2019

In connection with the Annual Report on Form 10-K by Kaiser Aluminum Corporation, a Delaware corporation (the "Company"), for the year ended December 31, 2018 (the "Report"), as filed on the date hereof with the Securities and Exchange Commission, the undersigned, Jack A. Hockema, Chief Executive Officer and Chairman of the Company, does hereby certify, pursuant to 18 U.S.C. 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to such officer's knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

IN WITNESS WHEREOF, the undersigned has executed this certification as of the date first above written.

/s/ Jack A. Hockema

Jack A. Hockema
Chief Executive Officer and Chairman
(Principal Executive Officer)

A signed original of this written statement required by Section 906 has been provided to Kaiser Aluminum Corporation and will be retained by Kaiser Aluminum Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

February 22, 2019

In connection with the Annual Report on Form 10-K by Kaiser Aluminum Corporation, a Delaware corporation (the "Company"), for the year ended December 31, 2018 (the "Report"), as filed on the date hereof with the Securities and Exchange Commission, the undersigned, Daniel J. Rinkenberger, Executive Vice President and Chief Financial Officer of the Company, does hereby certify, pursuant to 18 U.S.C. 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to such officer's knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

IN WITNESS WHEREOF, the undersigned has executed this certification as of the date first above written.

/s/ Daniel J. Rinkenberger

Daniel J. Rinkenberger
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

A signed original of this written statement required by Section 906 has been provided to Kaiser Aluminum Corporation and will be retained by Kaiser Aluminum Corporation and furnished to the Securities and Exchange Commission or its staff upon request.