AMPCO PITTSBURGH CORP
Form 10-K
March 18, 2019

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2018

Commission File Number 1-898

AMPCO-PITTSBURGH CORPORATION

Pennsylvania (State of Incorporation)	25-1117717 (I.R.S. Employer ID No.)
726 Bell Avenue, Suite 301 Carnegie, PA 15106 (Address of principal executive offices)	(412) 456-4400 (Registrant's telephone number)

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

Title of each class	Name of each exchange on which registered
Common stock, $1 par value	New York Stock Exchange

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

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

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K 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 to this Form 10-K. [ ]

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

Large accelerated filer	____	Accelerated filer	____
Non-accelerated filer	____	Smaller reporting company	
Emerging growth company	____		

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

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

The aggregate market value of the voting stock of Ampco-Pittsburgh Corporation held by non-affiliates on June 29, 2018 (based upon the closing price of the Registrant's Common Stock on the New York Stock Exchange on that date) was approximately $69 million.

As of March 11, 2019, 12,494,846 common shares were outstanding.

Documents Incorporated by Reference: Part III of this report incorporates by reference certain information from the Proxy Statement for the 2019 Annual Meeting of Shareholders.

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FORWARD-LOOKING STATEMENTS

The Private Securities Litigation Reform Act of 1995 (the “Act”) provides a safe harbor for forward-looking statements made by us or on our behalf. Management’s Discussion and Analysis of Financial Condition and Results of Operation and other sections of the Annual Report on Form 10-K as well as the consolidated financial statements and notes thereto may contain forward-looking statements that reflect our current views with respect to future events and financial performance.

All statements in this document other than statements of historical fact are statements that are, or could be, deemed “forward-looking statements” within the meaning of the Act. In this document, statements regarding future financial position, sales, costs, earnings, cash flows, other measures of results of operations, capital expenditures, debt levels, plans, objectives, outlook, targets, guidance or goals are forward-looking statements. Words such as “may,” “intend,” “believe,” “expect,” “anticipate,” “estimate,” “project,” “forecast” and other terms of similar meaning that indicate future events and trends are also generally intended to identify forward-looking statements. Forward-looking statements speak only as of the date on which such statements are made, are not guarantees of future performance or expectations, and involve risks and uncertainties. For us, these risks and uncertainties include, but are not limited to, those described under Item 1A. Risk Factors of this Annual Report on Form 10-K. In addition, there may be events in the future that we are not able to predict accurately or control which may cause actual results to differ materially from expectations expressed or implied by forward-looking statements. Except as required by applicable law, we assume no obligation, and disclaim any obligation, to update forward-looking statements whether as a result of new information, events or otherwise.

– PART I –

ITEM 1. BUSINESS

GENERAL DEVELOPMENT OF BUSINESS

Ampco-Pittsburgh Corporation (the “Corporation”) was incorporated in Pennsylvania in 1929. The Corporation, individually or together with its consolidated subsidiaries, is also referred to herein as the “Registrant.” The Corporation classifies its businesses in two segments: Forged and Cast Engineered Products and Air and Liquid Processing.

NARRATIVE DESCRIPTION OF BUSINESS

Forged and Cast Engineered Products Segment

Union Electric Steel Corporation produces ingot and forged products that service a wide variety of industries globally. It specializes in the production of forged hardened steel rolls used in rolling mills by producers of steel, aluminum and other metals throughout the world. In addition, it produces ingot and open-die forged products which are used in the oil and gas industry and the aluminum and plastic extrusion industries. Union Electric Steel Corporation is headquartered in Carnegie, Pennsylvania, with three manufacturing facilities in Pennsylvania and one in Indiana. It is one of the largest producers of forged hardened steel rolls in the world. In addition to a few domestic competitors, several major European, South American and Asian manufacturers also compete in both the domestic and foreign markets.

The following entities are direct or indirect operating subsidiaries of Union Electric Steel Corporation:

Union Electric Steel UK Limited produces cast rolls in a variety of iron and steel qualities for hot and cold strip mills, medium/heavy section mills and plate mills. It is located in Gateshead, England, and is a major supplier of cast rolls to

the metalworking industry worldwide. It primarily competes with European, Asian and North and South American companies in both domestic and foreign markets.

Åkers Sweden AB produces cast rolls in a variety of iron and steel qualities for hot strip finishing, roughing mills, plate mills and medium/heavy section mills. It is located in Åkers Styckebruk, Sweden.

Åkers Valji Ravne d.o.o. produces forged rolls for cluster mills and Z-Hi mills, work rolls for narrow and wide strip and aluminum mills, back-up rolls for narrow strip mills, and leveling rolls and shafts. It is located in Ravne, Slovenia.

Akers National Roll Company produces cast rolls for hot and cold strip mills, and plate mills. It is located in Avonmore, Pennsylvania. Certain operations were temporarily idled in mid-2017.

ASW Steel Inc. is a premier specialty steel producer located in Welland, Ontario, Canada.

Alloys Unlimited Processing, LLC is a distributor of tool steels, alloys and carbon round bar, located in Austintown, Ohio.

The segment also has an equity interest in three joint venture companies in China:

Shanxi Åkers TISCO Roll Co. Ltd., is a joint venture between Taiyuan Iron and Steel Co Ltd. and Åkers AB, a subsidiary of Union Electric Steel Corporation, that produces cast rolls for hot strip mills, steckel mills and medium plate mills. It is located in Taiyuan, Shanxi Province, China. Åkers AB holds a 59.88% interest in the joint venture.

Masteel Gongchang Roll Co., Ltd. is a joint venture among Union Electric Steel Corporation, Magang (Group) Holding Co., Ltd. and Jiangsu Gongchang Roll Co., Ltd. that produces large forged backup rolls for hot and cold strip mills. It is located in Maanshan, Anhui Province, China. Union Electric Steel (Hong Kong) Limited, a subsidiary of Union Electric Steel Corporation, holds a 33% interest in the joint venture.

Jiangsu Gongchang Roll Co., Ltd. is a joint venture that produces cast rolls for hot and cold strip mills, medium/heavy section mills and plate mills. It is located in Xinjian Town Yixing City, Jiangsu Province, China. Union Electric Steel UK Limited, a subsidiary of Union Electric Steel Corporation, holds a 24% interest in the joint venture.

In October 2018, the Board of Directors of the Corporation approved a plan to sell ASW Steel Inc. (“ASW”). The sale of ASW represents a strategic shift that will have a major impact on our results of operations and has been accounted for as a discontinued operation. See Note 2 (Discontinued Operations and Disposition) of this Annual Report on Form 10-K.

Air and Liquid Processing Segment

Aerofin Division of Air & Liquid Systems Corporation produces custom-engineered finned tube heat exchange coils and related heat transfer products for a variety of industries including nuclear power generation, industrial process and HVAC, and is located in Lynchburg, Virginia.

Buffalo Air Handling Division of Air & Liquid Systems Corporation produces large custom air handling systems used in commercial, institutional and industrial buildings and is located in Amherst, Virginia.

Buffalo Pumps Division of Air & Liquid Systems Corporation manufactures a line of centrifugal pumps for the refrigeration, power generation and marine defense industries and is located in North Tonawanda, New York.

All three of the divisions in this segment are principally represented by a common independent sales organization and have several major competitors.

Products

In both segments, the products are dependent on engineering, principally custom designed, and are sold to sophisticated commercial and industrial users located throughout the world. For additional information on the products produced and financial information about each segment, see Note 14 (Revenue) and Note 22 (Business Segments) of this Annual Report on Form 10-K.

Raw Materials

Raw materials used in both segments are generally available from many sources and neither segment is dependent upon any single supplier for any raw material. Substantial volumes of raw materials used by each segment are subject to significant variations in price. The Corporation’s subsidiaries generally do not purchase or commit for the purchase of a major portion of raw materials significantly in advance of the time they require such materials but do make forward commitments for certain commodities (copper and aluminum). See Note 12 (Derivative Instruments) of this

Annual Report on Form 10-K.

Patents and Trademarks

While the Corporation and its subsidiaries hold some patents, trademarks and licenses, in the opinion of management, they are not material to either segment.

Backlog

The backlog of orders at December 31, 2018, was approximately $343 million, compared to a backlog of $325 million at year-end 2017. Approximately 37% of the backlog is expected to be released after 2019.

Competition

The Corporation faces considerable competition from a large number of companies in both segments. The Corporation believes, however, that its subsidiaries are significant participants in each of the niche markets which they serve. Competition in both segments is based on quality, service, price and delivery.

Environmental Protection Compliance Costs

Expenditures for environmental control matters were not material to either segment in 2018 and are not expected to be material in 2019.

Employees

On December 31, 2018, the Corporation and its subsidiaries had 1,922 active employees, of which approximately 120 are employees of ASW.

AVAILABLE INFORMATION

The Corporation files annual, quarterly and current reports, amendments to those reports, proxy statements and other information with the Securities and Exchange Commission (“SEC”). You may access and read the Corporation’s filings without charge through the SEC’s website at www.sec.gov.

The Corporation’s internet address is www.ampcopittsburgh.com. The Corporation makes available, free of charge on its internet website, access to these reports as soon as reasonably practicable after such material is filed with, or furnished to, the SEC. The information on the Corporation’s website is not part of this Annual Report on Form 10-K.

EXECUTIVE OFFICERS

The name, age, position with the Corporation(1) and business experience for the past five years of the Executive Officers of the Corporation are as follows:

J. Brett McBrayer (age 53). Mr. McBrayer has served as the Corporation’s Chief Executive Officer since July 2018. He previously served as President and Chief Executive Officer at Airtex Products and ASC Industries, a global manufacturer and distributor of automotive aftermarket and OEM fuel and water pumps, from 2012 to 2017. Mr. McBrayer also served as Vice President and General Manager of the Alcan Cable business at Rio Tinto Alcan, as Vice President and General Manager of the Specialty Metals Division at Precision Cast Parts Corporation, and held positions of various responsibility and leadership during his 20 years with Alcoa, Inc.

Rose Hoover (age 63). Ms. Hoover has been employed by the Corporation for more than thirty-five years. She has served as President and Chief Administrative Officer of the Corporation since August 2015 and Executive Vice President from 2011 to August 2015.

Michael G. McAuley (age 55). Mr. McAuley has served as Senior Vice President, Chief Financial Officer and Treasurer of the Corporation since March 2018 and as Vice President, Chief Financial Officer and Treasurer since April 2016. Previously, he served as Senior Vice President and Chief Financial Officer of RTI International Metals, Inc., a producer of titanium mill products and fabricated metal components, from July 2014 to October 2015, and has held several senior financial capacities over the preceding 25 years including at Goodrich Corporation and Air Products & Chemicals, Inc.

Maria Trainor (age 44). Ms. Trainor has served as Vice President, General Counsel and Secretary of the Corporation since June 2015. Prior to joining the Corporation, Ms. Trainor was a partner at K&L Gates, LLP, an international law firm, where she had practiced for nearly fourteen years.

Samuel C. Lyon (age 50). Mr. Lyon has served as President of Union Electric Steel Corporation since February 2019. He previously served as Vice President and Group President of Performance Engineered Products at Carpenter Technology Corporation, a developer, manufacturer and distributor of stainless steels and corrosion-resistant alloys, from July 2017 to January 2019. Prior to that, he served as Vice President and General Manager of Dynamet Incorporated, the titanium business unit of Carpenter Technology, from October 2016 to June 2017, and as Chief Operating Officer of UCI-Pumps business of UCI-Fram, an OEM and after-market automotive parts supplier, from March 2013 to September 2016.

Terrence W. Kenny (age 59). Mr. Kenny has been employed by the Corporation for more than thirty years. He has served as President of the Air & Liquid Systems Corporation for more than five years.

Timothy R. Clutterbuck (age 60). Mr. Clutterbuck has served as President of ASW Steel Inc. since November 2011.

(1) Officers serve at the discretion of the Board of Directors and none of the listed individuals serves as a director of a public company.

ITEM 1A. RISK FACTORS

From time to time, important factors may cause actual results to differ materially from future expected results based on performance expressed or implied by any forward-looking statements made by us, including known and unknown risks, uncertainties and other factors, many of which are not possible to predict or control. Several of these factors are described from time to time in our filings with the SEC, but the factors described in filings are not the only risks that the Corporation faces.

Cyclical demand for products and economic downturns may reduce the demand for, and sales of, our products, which could adversely affect our margins and profitability.

A significant portion of the Forged and Cast Engineered Products segment's sales consists of mill rolls to customers in the global steel and aluminum industry which can be periodically impacted by economic or cyclical downturns. Such downturns, the timing and length of which are difficult to predict, may reduce the demand for, and sales of, our forged and cast rolls both in the United States and the rest of the world. Lower demand for rolls may also adversely impact profitability as other competing roll producers lower selling prices in the marketplace in order to fill their manufacturing capacity. Cancellation of orders or deferral of delivery of rolls may occur and produce an adverse impact on financial results. In addition, sales of non-roll product, consisting of open-die forged product primarily for the oil and gas industry, are impacted by fluctuations in global energy prices.

Excess global capacity in steel industry could lower prices for our products, which would adversely affect our sales, margins and profitability, as well as collectability of receivables and salability of in-process inventory.

The global steel manufacturing capacity continues to exceed global consumption of steel products. Such excess capacity often results in manufacturers in certain countries exporting steel at prices significantly below their home market prices (often due to local government assistance or subsidies), which leads to global market destabilization and reduced sales and profitability of some of our and our subsidiaries' customers, which, in turn, affects our sales and profit margins, as well as collectability of receivables and salability of in-process inventory.

A reduction in the level of export sales, as well as other economic factors in foreign countries, may have an adverse impact on our financial results.

Exports are a significant proportion of our subsidiaries' sales. Historically, changes in foreign exchange rates, particularly in respect of the U.S. dollar, British pound, Swedish krona and the euro, have impacted the export of our products and may do so again in the future. Other factors that may adversely impact export sales and operating results include political and economic instability, export controls, changes in tax laws and tariffs and new indigenous producers in overseas markets. A reduction in the level of export sales may have an adverse impact on our financial results. In addition, exchange rate changes may allow foreign roll suppliers to compete in our home markets.

Fluctuation of the value of the U.S. dollar relative to other currencies may adversely affect our business, results of operations and financial condition.

Certain of our subsidiaries operate in foreign jurisdictions and, accordingly, earn revenues, pay expenses, own assets and incur liabilities in countries using currencies other than the U.S. dollar. Since our consolidated financial statements are presented in U.S. dollars, we must translate revenues and expenses into U.S. dollars at the average

exchange rate during each reporting period, and assets and liabilities into U.S. dollars at the exchange rate in effect at the end of each reporting period. Therefore, increases or decreases in the value of the U.S. dollar against other major currencies will affect the translated value for revenue, expenses and balance sheet items denominated in foreign currencies and could materially affect our financial results expressed in U.S. dollars.

Commodity price increases, as well as any reductions in electricity, gas supply or shortage of key production materials, could adversely impact our production, which would result in lower profitability.

Our subsidiaries use certain commodities in the manufacture of their products. These include steel scrap, ferroalloys, energy and graphite electrodes. Any sudden price increase may cause a reduction in profit margins or losses where fixed-priced contracts have been accepted or increases cannot be obtained in future selling prices. In addition, there may be curtailment in electricity or gas supply which would adversely impact production. Shortage of critical materials, while driving up costs, may be of such severity as to disrupt production, all of which may impact sales and profitability. The global supply shortage of graphite electrodes used for electric arc

furnace melting of our steels could materially impact results of operations should we be unable to secure sufficient supply for our production requirements.

We may not be able to realize the expected benefits from the acquisitions that we make, and we may experience difficulties in integrating the acquired businesses.

We have made in the past, and may continue to make, certain acquisitions and enter into joint ventures which are intended to complement or expand our businesses. These acquisitions involve a variety of challenges and risks. We may encounter difficulties integrating acquired businesses with our operations or applying our internal control processes to these acquisitions. Other risks associated with acquisitions are the diversion of management's attention from other business concerns, the potential loss of key employees and customers of the acquired companies, the possible assumption of unknown liabilities, and potential disputes with the sellers. We may not be able to complete certain acquisitions due to antitrust laws and regulations in various jurisdictions. Additionally, we may not realize the degree or timing of benefits we anticipate when we first enter into a transaction. Any of the foregoing could adversely affect our business and results of operations.

A work stoppage or another industrial action on the part of any of our unions may be disruptive to our operations.

Our subsidiaries have several key operations which are subject to multi-year collective bargaining agreements with their hourly work forces. While we believe we have good relations with our unions, there is the risk of industrial action or work stoppage at the expiration of an agreement if contract negotiations break down, which may disrupt manufacturing and impact results of operations.

Dependence on certain equipment may cause an interruption in our production if such equipment is out of operation for an extended period of time, which would result in lower sales and profitability.

Our subsidiaries' principal business relies on certain unique equipment such as an electric arc furnace and a spin cast work roll machine. Although a comprehensive critical spare inventory of key components for this equipment is maintained, if any such unique equipment is out of operation for an extended period, it may result in a significant reduction in our sales and earnings.

The ultimate liability of our subsidiaries for claims alleging personal injury from exposure to asbestos-containing components historically used in certain products of our subsidiaries could have a material adverse effect on our financial condition or liquidity in the future.

Our subsidiaries, and in some cases, we, are defendants in numerous claims alleging personal injury from exposure to asbestos-containing components historically used in certain products of our subsidiaries. Through year-end 2018, our insurance has covered a substantial majority of our settlement and defense costs. We believe that the estimated costs net of anticipated insurance recoveries of our pending and future asbestos legal proceedings should not have a material adverse effect on our financial condition or liquidity. However, there can be no assurance that our subsidiaries or we will not be subject to significant additional claims in the future or that our subsidiaries' ultimate liability with respect to asbestos claims will not present significantly greater and longer lasting financial exposure than provided in our financial statements. The ultimate net liability with respect to such pending and any unasserted claims is subject to various uncertainties, including the following:

- the number of claims that are brought in the future;
- the costs of defending and settling these claims;
- insolvencies among our insurance carriers and the risk of future insolvencies;

- the possibility that adverse jury verdicts could require damage payments in amounts greater than the amounts for which we have historically settled claims;
- possible changes in the litigation environment or federal and state law governing the compensation of asbestos claimants; and
- the risk that the bankruptcies of other asbestos defendants may increase our costs.

Because of the uncertainties related to such claims, it is possible that the ultimate liability could have a material adverse effect on our financial condition or liquidity in the future.

The loss of any of our key management or our inability to attract or retain qualified personnel may prevent us from our implementing our business strategy.

Our success is dependent on the management, experience and leadership skills of our senior management team and key employees. The loss of any of these individuals or an inability to attract, retain and maintain additional personnel with similar industry experience could prevent us from implementing our business strategy. We cannot assure you that we will be able to retain our existing senior management and key personnel or to attract additional qualified personnel when needed.

Potential attacks on information technology infrastructure and other cyber-based business disruptions could have a material adverse effect on our financial condition and results of operations.

We depend on integrated information technology ("IT") systems to conduct our business. IT systems failures, including risks associated with upgrading our systems or in successfully integrating IT and other systems in connection with the integration of businesses we acquire, network disruptions and breaches of data security could disrupt our operations by impeding our processing of transactions, our ability to protect customer or company information and our financial reporting. Our computer systems, including our back-up systems, could be damaged or interrupted by power outages, computer and telecommunications failures, computer viruses, internal or external security breaches, events such as fires, earthquakes, floods, tornadoes and hurricanes, and/or errors by our employees. Cyber-based risks, in particular, are evolving and include potential attacks to our IT infrastructure and to the IT infrastructure of third parties in attempts to gain unauthorized access to our confidential or other proprietary information, or information relating to our employees, customers and other third parties. Although we have taken steps to address these concerns, there can be no assurance that a system failure or data security breach will not have a material adverse effect on our financial condition or results of operations.

A change in the existing regulatory environment could negatively affect our operations and financial performance.

In 2018, the United States imposed tariffs of 25% on primary steel imports and 10% on primary aluminum imports into the U.S. As consumers of steel and aluminum in some of our products, our cost base is exposed to the impact of this action, or similar actions, on our margins, and we could potentially lose market share to foreign competitors not subject to similar tariffs increases. Our financial condition, results of operations and cash flows may continue to be affected by these tariffs, or similar actions. Additionally, should a new trade agreement not occur which mitigates or neutralizes the impact of the tariffs, or similar actions, our financial condition, results of operations and cash flows may continue to be negatively impacted.

New trade restrictions and regulatory burdens associated with "Brexit" could adversely impact our operations and financial performance.

On June 23, 2016, voters in the United Kingdom ("U.K.") approved a referendum to exit from the European Union ("E.U."), commonly known as "Brexit." The U.K. is scheduled to leave the EU on March 29, 2019, unless the U.K. decides to halt the process and stay in the EU prior to that deadline. In November 2018, the EU and the U.K. agreed upon the terms of an agreement which sets out the terms of the U.K.'s withdrawal from the EU and includes a transitional period until December 31, 2020. If the agreement is not ratified by the EU and U.K. before the end of March 2019, then, absent the U.K. withdrawing its notice under Article 50 or members of the EU agreeing to extend the two-year notice period, the U.K. will leave the EU with no agreements in place beyond those temporary arrangements which have been or may be put in place. Given the lack of comparable precedent, it is unclear what financial, trade and legal implications of the U.K. leaving the EU with no agreements in place would have and how such withdrawal would affect our financial condition, results of operations and cash flows.

We may not be able successfully to consummate proposed divestitures or restructure operations.

We may, from time to time, divest businesses that become less of a strategic fit within our core portfolio or restructure operations to improve operating results. Our profitability may be impacted by gains or losses on the sale or restructuring of such businesses and our liquidity may be affected by the length of time we retain these businesses. Additionally, we may be required to record asset impairment or restructuring charges related to these businesses which may adversely impact our financial position, liquidity and results of operations.

We face limitations in availability of capital to fund our strategic plans.

We are parties to a Revolving Credit and Security Agreement (the “Credit Agreement”), a senior secured asset-based revolving credit facility collateralized by a first priority perfected security interest in substantially all of our assets. The Credit Agreement provides for initial borrowings not to exceed $100 million, with an option to increase the credit facility by an additional $50 million at our request and with the approval of the banks, but restricts us from incurring additional indebtedness outside of the Credit Agreement, unless otherwise approved by the banks. The Credit Agreement is subject to various affirmative and negative covenants and contains various

sub-limits, including those based on type of collateral and borrowings by geographic region. If the financial covenants become difficult to meet or if our borrowing needs increase beyond the prescribed limits, our results of operations and liquidity may be materially adversely affected. In addition, our access to public debt markets is limited based on our size, credit profile and not being a well-known seasoned issuer.

A substantial majority of our authorized shares of common stock under our articles of incorporation are either outstanding or reserved for issuance.

Our restated articles of incorporation currently authorize the issuance of 20,000,000 shares of common stock and 3,000,000 shares of preferred stock, of which 150,000 are designated as Series A Preferred Stock. As of the date of this filing, 12,494,846 shares of common stock and zero shares of Series A Preferred Stock are outstanding, a total of 797,354 shares of common stock are reserved for issuance upon the exercise of outstanding stock options and upon vesting of restricted stock units, and a total of 760,375 shares of common stock are reserved for issuance in connection with future issuances of shares under our 2016 Omnibus Incentive Plan. After taking into account the total number of shares of common stock issued and outstanding, in addition to the aggregate number of shares of common stock reserved for future issuance, less than 6,000,000 authorized shares of common stock remain available to be issued.

We currently intend to solicit the approval of our shareholders at our upcoming 2019 annual meeting of shareholders to increase the number of authorized shares to 40,000,000. Absent the approval, our ability to use our shares to raise additional capital in the future will be limited and, as result, may impair our financial flexibility, including our liquidity needs and our ability to repay our debt obligations, execute our business plan, make future acquisitions, and fund operations, any of which could have a material adverse effect on our business, results of operations, financial condition or prospects.

ITEM 1B. UNRESOLVED STAFF COMMENTS

The Corporation has no unresolved staff comments.

ITEM 2. PROPERTIES

The location and general character of the principal locations in each segment, all of which are owned unless otherwise noted, are listed below. In addition, we have sales offices in the following countries: Brazil, China, Egypt, France, Germany, Luxembourg, Slovenia, Sweden and Turkey. See Note 4 (Property, Plant and Equipment) and Note 8 (Borrowing Arrangements) of this Annual Report on Form 10-K for disclosure of properties held as collateral.

Company and Location	Principal Use	Approximate Square Footage	Type of Construction
FORGED AND CAST ENGINEERED PRODUCTS SEGMENT			
Union Electric Steel Corporation Route 18 Burgettstown, PA 15021*	Manufacturing facilities	296,800 on 55 acres	Metal and steel

726 Bell Avenue Carnegie, PA 15106*	Manufacturing facilities and offices	165,900 on 8.7 acres	Metal and steel
U.S. Highway 30 Valparaiso, IN 46383*	Manufacturing facilities	88,000 on 20 acres	Metal and steel
1712 Greengarden Road Erie, PA 16501*	Manufacturing facilities	40,000 on 1 acre	Metal and steel
Union Electric Steel UK Limited Coulthards Lane Gateshead, England	Manufacturing facilities and offices	274,000 on 10 acres	Steel framed, metal and brick
Åkers Sweden AB			

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Company and Location	Principal Use	Approximate Square Footage	Type of Construction
Bruksallén 12SE-647 51 Åkers Styckebruk, Sweden	Manufacturing facilities and offices	394,000 on 162 acres	Steel framed, metal and brick
Åkers Valji Ravne d.o.o. Koroška c. 14 SI-2390 Ravne na Koroškem, Slovenia	Manufacturing facilities and offices	106,000 on 2.1 acres	Brick
Akers National Roll Company 400 Railroad Avenue Avonmore, PA 15618	Manufacturing facilities and offices	140,000 on 29.5 acres	Metal and steel
Shanxi Åkers TISCO Roll Co. Ltd. No. 2 Jian Cao Ping Taiyuan, Shanxi, China	Manufacturing facilities and offices	338,000 on 14.6 acres	Metal, steel and brick
Alloys Unlimited and Processing, LLC 3760 Oakwood Avenue Austintown, Ohio 44515*	Manufacturing facilities and offices	69,800 on 1.5 acres	Steel framed and cement block
ASW Steel Inc. 42 Centre Street Welland, ON, Canada L3B 5N9**	Manufacturing facilities and offices	813,500 on 76 acres	Metal and steel

AIR AND LIQUID PROCESSING SEGMENT

Air & Liquid Systems Corporation			
Aerofin Division 4621 Murray Place Lynchburg, VA 24506	Manufacturing facilities and offices	146,000 on 15.3 acres	Brick, concrete and steel
Buffalo Air Handling Division			
Zane Snead Drive Amherst, VA 24531	Manufacturing facilities and offices	89,000 on 19.5 acres	Metal and steel
Buffalo Pumps Division			
874 Oliver Street N. Tonawanda, NY 14120	Manufacturing facilities and offices	94,000 on 9 acres	Metal, brick and cement block

*Facility is leased.

**Discontinued operation as of December 31, 2018. See Note 2 (Discontinued Operations and Disposition) of this Annual Report on Form 10-K.

In 2018, Union Electric Steel Corporation completed a sale and leaseback financing transaction covering certain of its real estate assets, including its manufacturing facilities in Valparaiso, Indiana and Burgettstown, Pennsylvania, and its manufacturing facility and corporate headquarters located in Carnegie, Pennsylvania. Simultaneously with the sale, Union Electric Steel Corporation entered into a lease agreement pursuant to which Union Electric Steel Corporation would lease the properties from Store Capital Acquisitions, LLC, the purchaser of the properties.

Union Electric Steel Corporation subleases office space to the Corporation. The Corporation then further subleases a portion of its office space to Air & Liquid Systems Corporation for use as its headquarters.

All of the owned facilities are adequate and suitable for their respective purposes.

The Forged and Cast Engineered Products segment's facilities operated within 75% to 80% of their normal capacity during 2018. The facilities of the Air and Liquid Processing segment operated within 60% to 70% of their normal capacity. Normal capacity is defined

as capacity under approximately normal conditions with allowances made for unavoidable interruptions, such as lost time for repairs, maintenance, breakdowns, set-up, failure, supply delays, labor shortages and absences, Sundays, holidays, vacation and inventory taking. The number of work shifts is also taken into consideration.

ITEM 3. LEGAL PROCEEDINGS

LITIGATION

See Note 18 (Litigation) of this Annual Report on Form 10-K.

ENVIRONMENTAL

See Note 20 (Environmental Matters) of this Annual Report on Form 10-K.

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

Not applicable.

ITEM 6. SELECTED FINANCIAL DATA

Not applicable.

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATION

(in thousands, except per share amounts)

EXECUTIVE OVERVIEW

Ampco-Pittsburgh Corporation and its subsidiaries (the “Corporation”) manufacture and sell highly engineered, high-performance specialty metal products and customized equipment utilized by industry throughout the world. We operate in two business segments – the Forged and Cast Engineered Products segment and the Air and Liquid Processing segment.

Forged and Cast Engineered Products

The Forged and Cast Engineered Products segment produces forged hardened steel rolls, cast rolls, open-die forged products, and specialty steel ingot and cast billet products. Forged hardened steel rolls are used mainly for rolling mills by producers of steel, aluminum and other metals. Cast rolls, which are produced in a variety of iron and steel qualities, are used mainly in hot and cold strip mills, medium/heavy section mills and plate mills. Ingot and forged engineered products are used in the oil and gas industry and the aluminum and plastic extrusion industries. Specialty steel ingot and cast billet products are used primarily by the open-die industry and downstream rolled-steel producers. The segment has operations in the United States, England, Sweden, Slovenia, Canada and an equity interest in three joint venture companies in China. Collectively, the segment primarily competes with European, Asian and North and South American companies in both domestic and foreign markets and distributes a significant portion of its products through sales offices located throughout the world.

Roll market conditions in the United States and Europe have improved as protectionist acts have financially strengthened our customer base. Backlog for mill rolls has increased roughly 12% from year end 2017 to year end 2018. However, tariffs imposed in 2018 on U.S. imports of primary steel products from Canada have adversely impacted our Canadian operations and the cost structure of our forged engineered products. In response, we are continuing to seek relief through available government channels. With respect to the oil and gas market, an inventory adjustment in the supply chain has continued to suppress order intake.

In October 2018, the Board of Directors of the Corporation approved a plan to sell ASW Steel Inc. (“ASW”). ASW is our specialty steel producer based in Canada which we acquired in November 2016. Loss of significant U.S. business due to a combination of tariffs imposed by the United States on imports of steel products and the loss of a key customer due to a plant closure have resulted in significant losses for the Canadian operation in 2018. While the

Corporation will continue to service the open-die forged products market, it will not have a dedicated supply of required specialty steel through a back-end integration of ASW. The Corporation, however, expects to enter into a longer-term supply agreement post-sale for the supply of steel ingots. Also, the Corporation will no longer manufacture and supply primary specialty steels to customers in the non-roll opened and closed die forgings and rebar markets and will exit the Canadian market. Collectively, the sale of ASW represents a strategic shift that will have a major impact on our results of operations and has been accounted for as a discontinued operation. See Note 2 to the Consolidated Financial Statements.

Air and Liquid Processing

The Air and Liquid Processing segment includes Aerofin, Buffalo Air Handling and Buffalo Pumps, all divisions of Air & Liquid Systems Corporation ("Air & Liquid"), a wholly owned subsidiary of the Corporation. Aerofin produces custom-engineered finned tube heat exchange coils and related heat transfer products for a variety of industries including OEM/commercial, nuclear power generation and industrial manufacturing. Buffalo Air Handling produces large custom-designed air handling systems for institutional (e.g., hospital, university), pharmaceutical and general industrial building markets. Buffalo Pumps manufactures centrifugal pumps for the fossil-fueled power generation, marine defense and industrial refrigeration industries. The segment has operations in Virginia and

New York with headquarters in Carnegie, Pennsylvania. The segment distributes a significant portion of its products through a common independent group of sales offices located throughout the United States and Canada.

For the Air and Liquid Processing segment, business activity in the specialty centrifugal pump industry has been negatively impacted by a decline in activity in the fossil-fueled power generation market, partially offset by increased activity in the marine defense market. For the heat exchanger business, there are early signs of growth in the industrial market. Additionally, demand for custom air handling systems remains steady although competitive pricing pressures continue. The focus for this segment is to grow revenues, increase margins, strengthen engineering and manufacturing capabilities, and continue to improve the sales distribution network.

CONSOLIDATED RESULTS OF OPERATIONS OVERVIEW

ASW has been accounted for as a discontinued operation. Accordingly, the operating results of ASW have been excluded from continuing operations for 2018 and 2017. Prior year amounts, percentages and backlog have been recast to exclude ASW.

The Corporation

	2018		2017	
Net Sales:				
Forged and Cast Engineered Products	$329,530	79 %	$297,283	77 %
Air and Liquid Processing	89,902	21 %	87,872	23 %
Consolidated	$419,432	100%	$385,155	100%
(Loss) Income from Continuing Operations:				
Forged and Cast Engineered Products	$(6,605)		$(6,887)	
Air and Liquid Processing[(1)]	(22,129)		10,682	
Corporate costs	(16,158)		(17,564)	
Consolidated	$(44,892)		$(13,769)	
Backlog:				
Forged and Cast Engineered Products	$298,723	87 %	$284,163	88 %
Air and Liquid Processing	44,356	13 %	40,438	12 %
Consolidated	$343,079	100%	$324,601	100%

(1) (Loss) income from continuing operations for the Air and Liquid Processing segment for 2018 includes a net pre-tax charge of $32,910 for estimated costs of asbestos-related litigation through 2052, the estimated final date by which we expect to have settled all asbestos-related claims, net of estimated insurance recoveries (see Note 18 to the Consolidated Financial Statements).

Consolidated net sales for 2018 increased from 2017 principally due to higher sales for the Forged and Cast Engineered Products segment. Specifically, sales of forged engineered products improved approximately $17,000 and mill rolls by approximately $16,000 when compared to the prior year. For the Air and Liquid Processing segment, sales of air handling units increased approximately $4,000 from the prior year while sales of heat exchange coils decreased by approximately $2,000. Sales of centrifugal pumps were comparable in 2018 and 2017.

Consolidated loss from continuing operations for 2018 includes a charge of $32,910 for the estimated costs of asbestos-related litigation through 2052, the estimated final date by which we expect to have settled all asbestos-related claims, net of estimated insurance recoveries (see Note 18 to the Consolidated Financial Statements). Corporate expenses decreased in the current year principally due to lower professional fees.

A discussion of sales, (loss) income from continuing operations and backlog for our two segments is included below.

Gross margin, excluding depreciation and amortization, as a percentage of net sales, was 16.1% and 17.7% for 2018 and 2017, respectively. The deterioration is principally attributable to the Forged and Cast Engineered Products segment which experienced lower production levels but benefited from a higher volume of shipments and improved pricing.

Selling and administrative expenses totaled $58,068 (13.8% of net sales) and $60,164 (15.6% of net sales) for 2018 and 2017, respectively. The decrease is primarily due to lower professional fees for Corporate.

The charge for asbestos litigation in 2018 represents an extension of the estimated costs of pending and future asbestos claims, net of additional insurance recoveries, from 2026 through 2052, the estimated final date by which we expect to have settled all asbestos-related claims. See Note 18 to the Consolidated Financial Statements.

Investment-related income for the current year includes a dividend of $377 from the Corporation's U.K./Chinese cast roll joint venture company. No dividends were received in 2017.

Interest expense for the current year increased when compared to the prior year due to increased borrowings under our revolving credit facility, coupled with an increase in our average borrowing rate, and interest on a sale and leaseback financing transaction consummated in the third quarter of 2018.

Other income (expense) improved in 2018 from 2017 primarily due to a contract settlement with a third party of approximately $2,425 and higher pension and other postretirement benefit income of approximately $3,309. The balance of the change between the periods is attributable to fluctuations in foreign exchange gains and losses.

Our income tax provision for 2018 includes a one-time transition tax imposed on the deemed repatriated earnings of foreign subsidiaries. Originally, in 2017, as the result of the enactment of the Tax Cuts and Jobs Act (the "Tax Reform"), the deemed repatriated earnings of our foreign subsidiaries were included in the computation of our net operating losses generated in 2017. However, in 2018, the Internal Revenue Service issued additional guidance with respect to certain provisions of the Tax Reform. Specifically, the additional guidance allowed a taxpayer to exclude the deemed repatriated earnings from the computation of net operating losses generated in tax year 2017. We availed ourselves of the election which enabled us to carry back additional net operating losses resulting in a release of a previously established valuation allowance of $1,419 and a higher refund of federal income taxes previously paid. However, as a result, we recognized the one-time tax of $2,369 on the deemed repatriation of previously untaxed foreign earnings in our income tax provision in 2018. For 2018 and 2017, our income tax provision includes income tax expense (benefit) associated with our profitable operations. An income tax benefit is not able to be recognized on losses for certain of our remaining entities since they remain in a three-year cumulative loss position.

Gain on sale of joint venture represents principally proceeds received from the 2016 sale of a portion of our equity interest in a forged roll Chinese joint venture. Proceeds are being recognized when received since, at the time of the sale, collectability was not assured. The final installment of $400 is due in 2019.

For 2018, we incurred a net loss from continuing operations of $43,575, or $3.50 per common share, which includes an after-tax charge of $31,881, or $2.56 per common share, for estimated costs of asbestos-related litigation through 2052, the estimated final date by which we expect to have settled all asbestos-related claims, net of estimated insurance recoveries. For 2017, we incurred a net loss of $15,051, or $1.22 per common share.

For 2018, net loss from discontinued operations approximated $23,901, or $1.92 per common share, and includes an after-tax charge of $15,000, or $1.21 per common share, for the write down of the assets of ASW to their estimated fair value less costs to sell. See Note 2 to the Consolidated Financial Statements. For 2017, net income from discontinued operations approximated $3,749, or $0.30 per common share.

Forged and Cast Engineered Products

	2018	2017
Net sales	$329,530	$297,283
Operating loss	$(6,605)	$(6,887)
Backlog	$298,723	$284,163

Net sales for 2018 increased 10.8% compared to 2017. The current year benefited from higher sales of mill rolls and, during the first half of the year, from forged engineered products. During the second half of the year, sales of forged engineered products, particularly frac blocs, declined primarily due to excess inventory in the supply chain.

Operating results for 2018 and 2017 were comparable. Operating results for 2018 benefited from higher volumes of shipments and improved pricing, which contributed approximately $14,000; however, operating results were negatively impacted by unabsorbed costs from lower production levels, higher operating costs and equipment maintenance issues, which approximated the same amount.

Backlog at December 31, 2018, increased from the prior year due to improved demand for mill rolls, both forged and cast; however, backlog decreased approximately 50% for forged engineered products principally due to a retraction in the frac bloc market. As of December 31, 2018, approximately $126,008 of the backlog is expected to be released after 2019.

Air and Liquid Processing

	2018	2017
Net sales	$89,902	$87,872
Operating (loss) income	$(22,129)	$10,682
Backlog	$44,356	$40,438

Net sales for 2018 improved when compared to 2017. Specifically, sales of air handling units increased over the prior year due to expanded marketing efforts resulting in improved order intake. Sales of centrifugal pumps approximated sales for 2017; while benefitting from a higher volume of shipments to U.S. Navy shipbuilders, sales of commercial pumps declined from a year ago. Sales of heat exchange coils declined from the prior year and continued to be adversely impacted by a lower volume of shipments to the nuclear and fossil-fueled power generation market. Operating results for 2018 include a charge of $32,910 for the estimated costs of asbestos-related litigation through 2052, the estimated final date by which we expect to have settled all asbestos-related claims, net of estimated insurance recoveries (see Note 18 to the Consolidated Financial Statements). Otherwise, operating results improved based on a higher volume of shipments, product mix and cost containment efforts. Backlog at December 31, 2018, increased from December 31, 2017, with each of the product lines benefiting from higher order intake. The current backlog is expected to ship in 2019.

LIQUIDITY AND CAPITAL RESOURCES

Net cash flows provided by (used in) operating activities for continuing operations equaled $6,710 and $(19,047) for 2018 and 2017, respectively. The improvement is primarily attributable to a lower investment in trade working capital for the Forged and Cast Engineered Products segment of approximately $13,300 and U.S. federal income tax refunds of approximately $3,500 as a result of the carry back of additional net operating losses to earlier years. While we recognized a non-cash charge for the revaluation of our estimated costs of pending and future asbestos claims, net of additional insurance recoveries, this non-cash charge did not affect cash flows by the same amount. Instead, net asbestos-related payments equaled $6,904 and $5,828 in 2018 and 2017, respectively, and are expected to approximate $7,000 in 2019.

Net cash flows used in investing activities for continuing operations were $1,220 and $11,293 in 2018 and 2017, respectively. The decrease is primarily due to proceeds from the sale of a division of ours for approximately $7,200 (see Note 2 to the Consolidated Financial Statements) and a reduction in capital expenditures for our Forged and Cast Engineered Products segment. As of December 31, 2018, expected future capital expenditures approximated $888, which are anticipated to be spent over the next 12 months.

Net cash flows (used in) provided by financing activities for continuing operations equaled $(3,421) and $8,925 for 2018 and 2017, respectively. During 2018, we completed a sale and leaseback financing transaction providing $19,000. The majority of the proceeds was used to repay borrowings under our revolving credit facility or loaned to ASW. By comparison, a portion of our borrowings under the revolving credit facility in 2017 was loaned to ASW to repay debt. In June 2017, we announced that we would suspend quarterly dividends, beginning with the second quarter of 2017. Dividends paid in 2017 equaled $0.18 per common share (including $0.09 per common share for dividends declared in 2016 but paid in 2017) and dividends paid on restricted stock issued prior to June 2017 that vested in 2017. Dividends paid in 2018 represent dividends paid on restricted stock issued prior to June 2017 that vested in 2018. The three-year promissory notes, and accrued interest, issued in connection with a 2016 acquisition were paid on March 4, 2019.

The effect of exchange rate changes on cash and cash equivalents is primarily attributable to the fluctuation of the British pound and Swedish krona against the U.S. dollar.

Cash flows from discontinued operations represent the cash activity for ASW. The increase in net cash flows used in operating activities is primarily attributable to net losses incurred during 2018 and an increase in net trade working capital. While the net loss for ASW for 2018 includes the non-cash charge of $15,000 for the write down of its assets to their estimated fair value less costs to sell, the non-cash charge did not affect cash flows for ASW. Net cash flows used in investing activities represent capital expenditures for each of the years. Net cash flows provided by financing activities for 2018 include borrowings under the revolving credit facility and intercompany advances from continuing operations. Similarly, net cash flows provided by financing activities for 2017 include intercompany advances from continuing operations which were used by ASW to repay its outstanding borrowings under its separate credit and term debt facilities.

As a result of the above, cash and cash equivalents of continuing operations increased by $1,057 in 2018 and ended the year at $19,713, in comparison to $18,656 at December 31, 2017. Cash held by our foreign operations, excluding ASW, equaled $10,662 and $13,765 at December 31, 2018, and 2017, respectively. Cash held by our foreign operations is considered to be permanently reinvested; accordingly, a provision for estimated local and withholding tax has not been made. If we were to remit any foreign earnings to the U.S., the estimated tax impact would be insignificant.

Funds on hand, funds generated from future operations and availability under our revolving credit facility are expected to be sufficient to finance our operational and capital expenditure requirements and to repay our financial obligations. As of December 31, 2018, remaining availability under the revolving credit facility approximated $35,000, net of availability reserves associated with the proceeds from the sale and leaseback financing transaction and the sale of a division of ours in 2018. The availability from these reserves was used toward the settlement of the three-year promissory notes and interest paid on March 4, 2019. While the revolving credit agreement limits the amount of distributions upstream, we have not historically relied on or have been dependent on distributions from our subsidiaries and are not expected to be in the future.

With respect to environmental matters, we are currently performing certain remedial actions in connection with the sale of real estate previously owned and periodically incur costs to maintain compliance with environmental laws and regulations. Environmental exposures are difficult to assess and estimate for numerous reasons, including lack of reliable data, the multiplicity of possible solutions, the years of remedial and monitoring activity required, and the identification of new sites. However, we believe the potential liability for remedial actions and environmental compliance measures of approximately $324 accrued at December 31, 2018, is considered adequate based on information known to date (see Note 20 to the Consolidated Financial Statements).

The nature and scope of our business brings us into regular contact with a variety of persons, businesses and government agencies in the ordinary course of business. Consequently, we and certain of our subsidiaries from time to time are named in various legal actions. Generally, we do not anticipate that our financial condition or liquidity will be materially affected by the costs of known, pending or threatened litigation (see Note 18 to the Consolidated Financial Statements). However, claims have been asserted, principally against Air & Liquid, alleging personal injury from exposure to asbestos-containing components historically used in some products and there can be no assurance that future claims will not present significantly greater and longer lasting financial exposure than presently contemplated.

OFF-BALANCE SHEET ARRANGEMENTS

Our off-balance sheet arrangements include operating leases (see Note 16 to the Consolidated Financial Statements), the previously mentioned expected future capital expenditures, and letters of credit unrelated to the Industrial Revenue Bonds (see Note 10 to the Consolidated Financial Statements). These arrangements are not considered significant to our liquidity, capital resources, market risk or credit risk.

EFFECTS OF INFLATION

While inflationary and market pressures on costs are likely to be experienced, it is anticipated that ongoing improvements in manufacturing efficiencies and cost savings efforts will mitigate the effects of inflation on our 2019 operating results. The ability to pass on increases in the price of commodities to the customer is contingent upon current market conditions, with us potentially having to absorb some portion or all of the increase. Product pricing for the Forged and Cast Engineered Products segment is reflective of current costs, with a portion of orders subject to a variable-index surcharge program which helps to protect the segment and its customers against the volatility in the cost of certain raw materials. Additionally, long-term labor agreements exist at each of the key locations. Certain of these agreements will expire in 2019. As is consistent with past practice, we will negotiate with the intent to secure mutually beneficial arrangements covering multiple years. (See Note 10 to the Consolidated Financial Statements). Finally, commitments have been executed for certain commodities (copper and aluminum) to cover a portion of orders in the backlog (see Note 12 to the Consolidated Financial Statements).

APPLICATION OF CRITICAL ACCOUNTING POLICIES

We have identified critical accounting policies that are important to the presentation of our financial condition, changes in financial condition and results of operations and involve the most complex or subjective assessments. Critical accounting policies relate to assessing recoverability of property, plant and equipment, intangibles and assets of discontinued operations; pension and other postretirement benefits; litigation and loss contingencies; and income taxes.

Property, plant and equipment is reviewed for recoverability at least annually, as of October 1, or whenever events or circumstances indicate the carrying amount of the long-lived assets may not be recoverable. If the undiscounted cash flows generated from the use and eventual disposition of the assets are less than their carrying value, then the asset value may not be fully recoverable, potentially resulting in a write-down of the asset value. Estimates of future cash flows are based on expected market conditions over the remaining useful life of the primary asset(s). Accordingly, assumptions are made about pricing, volume and asset-resale values. Actual results may differ from these assumptions. We believe the amounts recorded in the accompanying consolidated financial statements for property, plant and equipment are recoverable and are not impaired as of December 31, 2018.

Intangible assets with finite lives are amortized using the straight-line method over their estimated useful life, which is determined by identifying the period over which most of the cash flows are expected to be generated. Additionally, intangible assets, both finite and indefinite lived, are assessed for impairment at least annually, as of October 1, or whenever events or circumstances indicate the carrying amount may not be recoverable. For finite-lived intangible assets, if the undiscounted cash flows attributable to the assets are less than their carrying value, then the asset value may not be fully recoverable, potentially resulting in a write-down of the asset value. For indefinite-lived intangible assets, if the discounted cash flows attributable to the assets are less than their carrying value, then the asset value may not be fully recoverable, potentially resulting in a write-down of the asset value. In assessing recoverability, we make assumptions regarding estimated future cash flows and discount rates. If these estimates or related assumptions change in the future, we may be required to record an impairment charge. Also, if the estimate of an intangible asset's remaining useful life changes, we will amortize the remaining carrying value of the intangible asset prospectively over the revised remaining useful life. We believe the amounts recorded in the accompanying consolidated financial statements for intangible assets are recoverable and are not impaired as of December 31, 2018, based on information known to date.

Assets of discontinued operations are reported at the lower of their carrying value or fair value less costs to sell. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Consideration is given to market comparables, asset valuations and asking price. If the amount received is less than the estimated fair value, then an additional loss will be recorded. If the amount received is more than the fair value estimated, then a gain will be recognized. We believe the amounts recorded in the accompanying consolidated financial statements for assets of discontinued operations are recoverable as of December 31, 2018.

Accounting for pension and other postretirement benefits involves estimating the cost of benefits to be provided well into the future and attributing that cost over the time period each employee works. To accomplish this, input from our actuaries is evaluated and extensive use is made of assumptions about inflation, long-term rate of return on plan assets, longevity, employee turnover and discount rates. The curtailment of certain defined benefit plans and the amendment of various other postretirement benefit plans has helped to mitigate the volatility in net periodic pension and other postretirement benefit costs resulting from changes in these assumptions.

The expected long-term rate of return on plan assets is an estimate of average rates of earnings expected to be earned on funds invested or to be invested to provide for the benefits included in the projected benefit obligation. Since these benefits will be paid over many years, the expected long-term rate of return is reflective of current investment returns and investment returns over a longer period. Also, consideration is given to target and actual asset allocations, inflation and real risk-free return. We believe the expected long-term rate of return ranging between 6.95% and 7.50% for our domestic plans and 4.65% for our UES-UK plan to be reasonable. Actual returns on plan assets for 2018 approximated (2.50%) for our domestic plans and (4.59%) for our UES-UK plan. Because of deteriorating conditions in the global financial markets during the year, we do not believe current returns to be indicative of future investment returns. The remaining foreign plans are not funded, and the obligations are not significant.

The discount rates used in determining future pension obligations and other postretirement benefits for each of our plans are based on rates of return for high-quality fixed-income investments currently available and expected to be available during the period to maturity of the pension and other postretirement benefits. High-quality fixed-income investments are defined as those investments which have received one of the two highest ratings given by a recognized rating agency with maturities of 10+ years. We believe the assumed discount rates ranging between 4.23% and 4.34% for our domestic plans, 4.09% and 4.33% for our other postretirement benefits plans and 3.00% for our foreign plans as of December 31, 2018, to be reasonable.

We believe that the amounts recorded in the accompanying consolidated financial statements related to pension and other postretirement benefits are based on appropriate assumptions although actual outcomes could differ. A percentage point decrease in the expected long-term rate of return would increase annual pension expense by approximately $2,400. A 1/4 percentage point decrease in the discount rate would increase projected and accumulated benefit obligations by approximately $8,300. Conversely, a percentage point increase in the expected long-term rate of return would decrease annual pension expense by approximately $2,400, and a 1/4 percentage point increase in the discount rate would decrease projected and accumulated benefit obligations by approximately $8,300.

Litigation and loss contingency accruals are made when it is determined that it is probable that a liability has been incurred and the amount can be reasonably estimated. Specifically, we and certain of our subsidiaries are involved in various claims and lawsuits incidental to their businesses. In addition, claims have been asserted, principally against Air & Liquid, alleging personal injury from exposure to asbestos-containing components historically used in some products manufactured by certain companies which now operate as divisions of Air & Liquid. To assist us in determining whether an estimate could be made of the potential liability for pending and unasserted future claims for Asbestos Liability along with applicable insurance coverage, and the amounts of any estimates, we hire a nationally recognized asbestos-liability expert and insurance consultant. Based on their analyses, reserves for probable and reasonably

estimable costs for the Asbestos Liability, including defense costs, and receivables for the insurance recoveries that are deemed probable are established. These amounts rely on assumptions which are based on currently known facts and strategy.

In 2018, we undertook a review of Asbestos Liability claims, defense costs and the likelihood for insurance recoveries. We extended our estimate of the Asbestos Liability, including the costs of settlement and defense costs relating to currently pending claims and future claims projected to be filed against us through 2052, the estimated final date by which we expect to have settled all asbestos-related claims. Key variables in these assumptions, including our ability to reasonably estimate Asbestos Liability through the expected final date by which we expect to have settled all asbestos-related claims, are summarized in Note 18 to the Consolidated Financial Statements. Key assumptions include the number and type of new claims to be filed each year, the average cost of disposing of each new claim, average annual defense costs, and the solvency risk with respect to the relevant insurance carriers. Other factors that may affect the Asbestos Liability and our ability to recover under our insurance policies include uncertainties surrounding the litigation process from jurisdiction to jurisdiction and from case to case, reforms that may be made by state and federal courts, and the passage of state or federal tort reform legislation. Actual expenses or insurance recoveries could be significantly higher or lower than those recorded if assumptions used in the calculations vary significantly from actual results.

We intend to evaluate the estimated Asbestos Liability and related insurance receivables as well as the underlying assumptions on a regular basis to determine whether any adjustments to the estimates are required. Due to the uncertainties surrounding asbestos litigation and insurance, these regular reviews may result in the incurrence of future charges or credits; however, we are currently unable to estimate such future changes. Adjustments, if any, to our estimate of recorded Asbestos Liability and/or insurance receivables could be material to our operating results for the periods in which the adjustments to the liability or receivable are recorded, and to our liquidity and consolidated financial position when such liabilities are paid.

Accounting for income taxes includes our evaluation of the underlying accounts, permanent and temporary differences, our tax filing positions and interpretations of existing tax law. A valuation allowance is recorded against deferred income tax assets to reduce them to the amount that is “more likely than not” to be realized. In doing so, assumptions are made about the future profitability of our operations and the nature of that profitability. Actual results may differ from these assumptions. If we determined we would not be able to realize all or part of the deferred income tax assets in the future, an adjustment to the valuation allowance would be established resulting in a charge to net income (loss). Likewise, if we determined we would be able to realize deferred income tax assets in excess of the net amount recorded, we would release a portion of the existing valuation allowance resulting in a credit to net income (loss). As of December 31, 2018, the valuation allowance approximates $33,881 reducing our deferred income tax assets, net of deferred income tax liabilities, to $3,024, an amount we believe is “more likely than not” to be realized.

We do not recognize a tax benefit in the financial statements related to a tax position taken or expected to be taken in a tax return unless it is “more likely than not” that the tax authorities will sustain the tax position solely on the basis of the position’s technical merits. Consideration is given primarily to legislation and statutes, legislative intent, regulations, rulings and case law as well as their applicability to the facts and circumstances of the tax position when assessing the sustainability of the tax position. In the event a tax position no longer meets the “more likely than not” criteria, we would reverse the tax benefit by recognizing a liability and recording a charge to earnings. Conversely, if we subsequently determined that a tax position meets the “more likely than not” criteria, we would recognize the tax benefit by reducing the liability and recording a credit to earnings. As of December 31, 2018, based on information known to date, we believe the amount of unrecognized tax benefits for tax positions taken or expected to be taken in a tax return which may be challenged by the tax authorities not to be significant.

See Note 19 to the Consolidated Financial Statements.

RECENTLY IMPLEMENTED and ISSUED ACCOUNTING PRONOUNCEMENTS

See Note 1 to the Consolidated Financial Statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

CONSOLIDATED BALANCE SHEETS

(in thousands, except par value)	December 31, 2018	2017
Assets		
Current assets:		
Cash and cash equivalents	$19,713	$18,656
Receivables, less allowance for doubtful accounts of $978 in 2018 and $962 in 2017	69,448	81,462
Inventories	94,196	93,452
Insurance receivable – asbestos	17,000	13,000
Other current assets	7,271	11,319
Current assets of discontinued operations	20,238	22,358
Total current assets	227,866	240,247
Property, plant and equipment, net	185,661	204,133
Insurance receivable – asbestos	135,508	87,342
Deferred income tax assets	3,188	1,590
Intangible assets, net	9,225	11,021
Investments in joint ventures	2,175	2,175
Other noncurrent assets	7,496	7,659
Noncurrent assets of discontinued operations	0	11,432
Total assets	$571,119	$565,599
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	$38,900	$35,443
Accrued payrolls and employee benefits	20,380	22,328
Debt – current portion	45,728	19,335
Asbestos liability – current portion	24,000	18,000
Other current liabilities	28,987	36,441
Current liabilities of discontinued operations	9,458	13,124
Total current liabilities	167,453	144,671
Employee benefit obligations	72,658	79,750
Asbestos liability	203,922	131,750
Deferred income tax liabilities	164	433
Long-term debt	31,881	46,818
Other noncurrent liabilities	2,072	416
Total liabilities	478,150	403,838
Commitments and contingent liabilities (Note 10)		
Shareholders' equity:		
Common stock – par value $1; authorized 20,000 shares; issued and outstanding 12,495 shares in 2018 and 12,361 shares in 2017	12,495	12,361
Additional paid-in capital	154,889	152,992
Retained (deficit) earnings	(30,355)	38,348
Accumulated other comprehensive loss	(49,434)	(44,760)

Total Ampco-Pittsburgh shareholders’ equity	87,595	158,941
Noncontrolling interest	5,374	2,820
Total shareholders’ equity	92,969	161,761
Total liabilities and shareholders’ equity	$571,119	$565,599

See Notes to Consolidated Financial Statements.

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CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share amounts)	For The Year Ended December 31, 2018	2017
Net sales	$419,432	$385,155
Operating costs and expenses:		
Costs of products sold (excluding depreciation and amortization)	351,839	316,983
Selling and administrative	58,068	60,164
Depreciation and amortization	21,379	21,376
Charge for asbestos litigation	32,910	0
Loss on disposal of assets	128	401
	464,324	398,924
Loss from continuing operations	(44,892)	(13,769)
Other income (expense):		
Investment-related income	533	133
Interest expense	(4,130)	(3,085)
Other – net	4,682	(721)
	1,085	(3,673)
Loss from continuing operations before income taxes and gain on sale of joint venture	(43,807)	(17,442)
Income tax (provision) benefit	(268)	1,355
Gain on sale of joint venture	500	1,036
Net loss from continuing operations	(43,575)	(15,051)
(Loss) income from discontinued operations, net of tax	(23,901)	3,749
Net loss	(67,476)	(11,302)
Less: Net income attributable to noncontrolling interest	1,859	787
Net loss attributable to Ampco-Pittsburgh	$(69,335)	$(12,089)
Net loss from continuing operations per common share:		
Basic	$(3.50)	$(1.22)
Diluted	$(3.50)	$(1.22)
(Loss) income from discontinued operations per common share:		
Basic	$(1.92)	$0.30
Diluted	$(1.92)	$0.30
Net loss per common share attributable to Ampco-Pittsburgh:		
Basic	$(5.57)	$(0.98)
Diluted	$(5.57)	$(0.98)
Weighted average number of common shares outstanding:		
Basic	12,448	12,330
Diluted	12,448	12,330

See Notes to Consolidated Financial Statements.

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CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	For The Year Ended December 31,	
(in thousands)	2018	2017
Net loss	$(67,476)	$(11,302)
Other comprehensive (loss) income, net of income tax where applicable:		
Adjustments for changes in:		
Foreign exchange translation	(6,710)	11,041
Unrecognized employee benefit costs (including effects of foreign currency translation)	3,205	7,299
Unrealized holding gains on marketable securities	0	602
Fair value of cash flow hedges	(713)	804
Reclassification adjustments for items included in net loss:		
Amortization of unrecognized employee benefit costs	89	3,283
Realized gains from sale of marketable securities	0	(29)
Realized gains from settlement of cash flow hedges	(90)	(670)
Other comprehensive (loss) income	(4,219)	22,330
Comprehensive (loss) income	(71,695)	11,028
Less: Comprehensive income attributable to noncontrolling interest	1,682	904
Comprehensive (loss) income attributable to Ampco-Pittsburgh	$(73,377)	$10,124

See Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(in thousands, except per share amounts)	Common Stock	Additional Paid-in Capital	Retained Earnings (Deficit)	Accumulated Other Comprehensive Loss	Noncontrolling Interest	Total
Balance January 1, 2017	$ 12,271	$ 151,089	$ 45,443	$ (60,885)	$ 1,916	$ 149,834
Stock-based compensation		1,555				1,555
Comprehensive income:						
Net (loss) income			(12,089)		787	(11,302)
Other comprehensive income				22,213	117	22,330
Comprehensive income					904	11,028
Impact from adoption of ASU 2018-02 (Note 1)			6,088	(6,088)		0
Issuance of common stock including excess tax benefits of $0	90	348				438
Cash dividends ($0.09 per share)			(1,094)			(1,094)
Balance December 31, 2017	12,361	152,992	38,348	(44,760)	2,820	161,761
Impact from adoption of ASU 2016-01 (Note 1)			632	(632)		0
Balance January 1, 2018, adjusted	12,361	152,992	38,980	(45,392)	2,820	161,761
Stock-based compensation		1,539				1,539
Debt-to-equity conversion (Note 8)					872	872
Comprehensive (loss) income:						