SIMPSON MANUFACTURING CO INC /CA/
Form 10-K
February 27, 2019

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

ý Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended December 31, 2018

OR

o 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: 1-13429

Simpson Manufacturing Co., Inc.

(Exact name of registrant as specified in its charter)

Delaware	**94-3196943**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

5956 W. Las Positas Blvd., Pleasanton, CA	**94588**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(925) 560-9000**

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

Common Stock, par value $0.01	**New York Stock Exchange, Inc.**
(Title of each class)	(Name of each exchange on which registered)

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

None

(Title of class)

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

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

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 ý 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 ý 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 to this Form 10-K.
[ ]

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See 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 x	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 has elected not to use the extended transition period for complying with the 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 ý

As of June 30, 2018, there were outstanding 46,324,848 shares of the registrant's common stock, par value $0.01, which is the only outstanding class of common or voting stock of the registrant. The aggregate market value of the shares of common stock held by non-affiliates of the registrant (based on the closing price for the common stock on the New York Stock Exchange on June 30, 2018) was approximately $2,869,585,657

As of February 26, 2019, 44,842,697 shares of the registrant’s common stock were outstanding.

Documents Incorporated by Reference

Portions of the registrant's definitive Proxy Statement for its 2019 annual meeting of the stockholders (the "2019 Annual Meeting") are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. Such Proxy Statement will be filed with the Securities and Exchange Commission (the "SEC") within 120 days of the registrant's fiscal year ended December 31, 2018.

NOTE ABOUT FORWARD-LOOKING STATEMENTS

This document contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements relating to events or results that may occur in the future are forward-looking statements, including but not limited to, statements or estimates regarding our plans, sales, sales trends, sales growth rates, revenues, profits, costs, working capital, balance sheet, inventories, products (including truss and concrete products as well as software offerings), relationships with contractors and partners (including our collaboration with The Home Depot, Inc.), market strategies, market share, expenses (including operating expenses and research, development, engineering and capital investments), inventory turn rates, cost savings or reduction measures, repatriation of funds, results of operations, tax liabilities, losses, capital spending, housing starts, price changes (including product and raw material prices, such as steel prices), profitability, profit margins, operating income, operating income margin (referring to consolidated income from operations as a percentage of net sales), operating expenses as a percentage of net sales, effective tax rates, depreciation or amortization expenses, amortization periods, capital return (also called return on invested capital), technology and system improvements, competitive environment, indemnification obligations, stock repurchases, dividends, compensation arrangements, prospective adoption of new accounting standards, effects of changes in accounting standards, effects and expenses of (including eventual gains or losses related to) mergers and acquisitions and related integrations, effects and expenses of equity investments, effects of changes in foreign exchange rates or interest rates, effects and costs of SAP and other software program implementations (including related expenses, such as capital expenditures, and savings), effects and costs of credit facilities and capital lease obligations, headcount, engagement of consultants, the Company's 2020 Plan and other operating initiatives, the Company's efforts and costs to implement the 2020 Plan and initiatives, the targets and assumptions under the 2020 Plan and such other initiatives (including targets associated with organic compound annual growth rate in consolidated net sales, operating income, operating income margin, operating expenses as a percentage of net sales, cost structure rationalization, improved working capital management, return on invested capital, stock repurchases, and overall balance sheet discipline) and the projected effects and impact of any of the foregoing on our business, financial condition and results of operations. Forward-looking statements generally can be identified by words such as "anticipate," "believe," "estimate," "expect," "intend," "plan," "target," "continue," "predict," "pro "result," "future," "will," "could," "can," "may," "likely," "potentially," or similar expressions. Forward-looking statements ar necessarily speculative in nature, are based on numerous assumptions, and involve known and unknown risks, uncertainties and other factors (some of which are beyond our control) that could significantly affect our operations and may cause our actual actions, results, financial condition, performance or achievements to be substantially different from any future actions, results, financial condition, performance or achievements expressed or implied by any such forward-looking statements. Those factors include, but are not limited to: (i) the impact, execution and effectiveness of the Company's current strategic plan, the 2020 Plan, and initiatives the realization of the assumptions made under the plan and the efforts and costs to implement the plan and initiatives; (ii) general economic cycles and construction business conditions including changes in U.S. housing starts; (iii) customer acceptance of our products; (iv) product liability claims, contractual liability, engineering and design liability and similar liabilities or claims, (v) relationships with partners, suppliers and customers and their financial condition; (vi) materials and manufacturing costs; (vii) technological developments, including system updates and conversions; (viii) increased competition; (ix) changes in laws or industry practices; (x) litigation risks and actions by activist shareholders; (xi) changes in market conditions; (xii) governmental and business conditions in countries where our products are manufactured and sold; (xiii) natural disasters and other factors that are beyond the Company's reasonable control; (xiv) changes in trade regulations, treaties or agreements or in U.S. and international taxes, tariffs and duties including those imposed on the Company's income, imports, exports and repatriation of funds; (xv) effects of merger or acquisition activities; (xvi) actual or potential takeover or other change-of-control threats; (xvii) changes in our plans, strategies, objectives, expectations or intentions; and (xviii) other risks and uncertainties indicated from time to time in our filings with the

U.S. Securities and Exchange Commission, including this Annual Report on Form 10-K under the heading “Item 1A - Risk Factors.” In light of the foregoing, investors are advised to carefully read the Company’s securities filings in connection with the important disclaimers set forth above and are urged not to rely on any forward-looking statements in reaching any conclusions or making any investment decisions about us or our securities. Except as required by law, we do not intend and undertake no obligation to update, revise or publicly release any updates or revisions to any forward-looking statements hereunder, whether as a result of the receipt of new information, the occurrence of future events, the change of circumstances or otherwise. We further do not accept any responsibility for any projections or reports published by analysts, investors or other third parties. Each of the terms the “Company,” “we,” “our,” “us” and similar terms used herein refer collectively to Simpson Manufacturing Co., Inc., a Delaware corporation and its wholly-owned subsidiaries, including Simpson Strong-Tie Company Inc., unless otherwise stated. The Company regularly uses its website to post information regarding its business and governance. The Company encourages investors to use http://www.simpsonmfg.com/ as a source of information about Simpson.

“Strong-Tie” and our other trademarks appearing in this report are our property. This report contains additional trade names and trademarks of other companies. We do not intend our use or display of other companies’ trade names or trademarks to imply an endorsement or sponsorship of us by such companies, or any relationship with any of these companies.

PART I

Item 1. Business.

Company Background

The Company is focused on making structures safe and secure. The Company, through its wholly owned subsidiary, Simpson Strong-Tie Company Inc. ("SST"), designs, engineers and is a leading manufacturer of wood construction products, including connectors, truss plates, fastening systems, fasteners and pre-fabricated lateral systems used in light-frame construction, and concrete construction products used for concrete, masonry, steel construction and for concrete repair, protection and strengthening, including adhesives, chemicals, mechanical anchors, carbide drill bits, powder actuated tools and fiber reinforced materials. The Company markets its products to the residential construction, light industrial and commercial construction, remodeling and do-it-yourself ("DIY") markets. The Company also provides engineering services in support of some of its products and increasingly offers design and other software that facilitates the specification, selection and use of its products. The Company has continuously manufactured structural connectors since 1956 and believes that the Simpson Strong-Tie brand benefits from strong brand name recognition among architects and engineers who frequently request the use of the Company's products.

Business Strategy

The Company attracts and retains customers by designing, manufacturing and selling products that are of high quality and performance, easy to use and cost-effective for customers. The Company manufactures and warehouses its products in geographic proximity to its markets to provide availability and rapid delivery of products to customers and prompt response to customer requests for specially designed products and services. The Company maintains levels of inventory intended to operate with little backlog and fill most customer orders within a few days. High levels of manufacturing automation and flexibility allow the Company to maintain its quality standards while continuing to provide prompt delivery.

The Company intends to continue efforts to increase market share in both the wood construction and concrete construction product groups by:

- maintaining frequent customer contacts and service levels;
- continuing to sponsor seminars to inform architects, engineers, contractors and building officials on appropriate use, proper installation and identification of the Company's products;
- continuing to invest in mobile, web and software applications for customers to help them do their jobs more efficiently and connect with customers utilizing social media, blog posts and videos; and
- continuing to innovate and diversify the product offerings.

The Company's long-term strategy is to develop, acquire or invest in product lines or businesses that have the potential to increase the Company's earnings per share over time and that:

- complement the Company's existing product lines;
- can be marketed through the Company's existing distribution channels;
- might benefit from use of the Company's brand names and expertise;
- are responsive to needs of the Company's customers;
- expand the Company's markets geographically; and
- reduce the Company's dependence on the United States residential construction market.

New Products. The Company commits substantial resources to new product development. The majority of SST’s products have been developed through its internal research and development program. The Company believes it is the only United States manufacturer with the capability to test multi-story wall systems, thus enabling full scale testing rather than analysis alone to prove system performance. The Company’s engineering, sales, product management, and marketing teams work together with architects, engineers, building inspectors, code officials and customers in the new product development process.

The Company’s product research and development is based largely on products or solutions that are identified within the Company or as customers communicate to the Company as well as the Company’s strategic initiatives to develop new markets or product lines. The Company’s strategy is to develop new products on a proprietary basis, to seek patents when appropriate and to rely on trade secret protection for others. The Company typically develops 15 to 25 new products each year.

The Company expanded its product offering in 2018 by adding:

- new connectors for wood framing applications;
- new connectors for cross laminated timber;
- new steel connection for mid-rise steel construction;
- new connectors for cold formed steel applications;
- new products for composite decking; and
- new mechanical anchors for concrete construction.

The Company intends to continue to expand its product offering.

Distribution channels. The Company seeks to expand its product and distribution coverage through several channels:

- *Distributors.* The Company regularly evaluates its distribution coverage and the service levels provided by its distributors, and from time to time implements changes. The Company evaluates distributor product mix and conducts promotions to encourage distributors to add the Company's products that complement the mix of product offerings in their markets.
- *Home Centers.* The Company intends to increase penetration of the DIY markets by continuing to solicit home centers and increase product offerings. The Company's sales force maintains on-going contact with home centers to work with them in a broad range of areas, including inventory levels, retail display maintenance and product knowledge training. The Company's strategy is to ensure that the home center retail stores are fully stocked with adequate supplies of the Company's products carried by those stores. The Company has further developed extensive bar coding and merchandising aids and has devoted a portion of its research efforts to the development of DIY products. The Company's sales to home centers increased year-over-year in 2018, 2017 and 2016.
- *Dealers.* In some markets, the Company sells its products directly to lumber dealers and cooperatives.
- *OEM Relationships.* The Company works closely with manufacturers of engineered wood products and OEMs to develop and expand the application and sales of its engineered wood connector and fastener products. The Company has relationships with several of the largest manufacturers of engineered wood products.
- *International Sales*. The Company has established a presence in the European Community through acquisition of companies with existing customer bases and through servicing United States-based customers operating in Europe. The Company also distributes connector, anchor and epoxy products in Mexico, Chile, Australia, New Zealand, and the Middle East.

See "Item 1A — Risk Factors," "Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Note 18 — Segment Information" to the accompanying audited consolidated financial statements included in Part II, Item 8 — "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K (the "Company's Consolidated Financial Statements").

Operating Segments and Geographic Areas

The Company is organized into three operating segments consisting of the North America, Europe and Asia/Pacific segments. The North America segment includes operations primarily in the United States and Canada. The Europe segment includes operations primarily in France, the United Kingdom, Germany, Denmark, Switzerland, Portugal, Poland, The Netherlands, Belgium, Spain, Sweden and Norway. The Asia/Pacific segment includes operations primarily in Australia, New Zealand, China, Taiwan, and Vietnam. These segments are similar in several ways, including similarities in the products manufactured and distributed, the types of materials used, the production processes, the distribution channels and the product applications.

Products and Services

The Company manufactures and markets building and construction products and is a recognized brand name in residential and commercial applications. The product lines historically have encompassed connectors, anchors, fasteners, lateral resistive systems, truss plates, as well as repair and strengthening product lines for the marine, industrial and transportation markets. See "Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Note 18 — Segment Information" to the Company's Consolidated Financial Statements for financial information regarding revenues by product category.

Most of the Company's products are approved by building code evaluation agencies. To achieve such approvals, the Company conducts extensive product testing, which is witnessed and certified by independent testing laboratories. The tests also provide the basis of load ratings for the Company's structural products. This test and load information is used by architects, engineers, contractors, building officials and homeowners and is useful across all applications of the Company’s products, ranging from the deck constructed by a homeowner to a multi-story structure designed by an architect or engineer.

Wood Construction Products. As described below, the Company’s wood construction products include (1) connectors, (2) truss plates, (3) fastening systems and (4) lateral systems, and are typically made of steel. The Company produces and markets over 15,000 standard and custom wood construction products. These products are used primarily to strengthen, support and connect wood applications in residential and commercial construction and DIY projects. The Company’s wood construction products contribute to structural integrity and resistance to seismic, wind and other forces.

1. The Company’s connectors are prefabricated metal products that attach wood, concrete, masonry or steel together. Connectors are essential for tying wood construction elements together and create safer and stronger buildings.
2. The Company’s truss connector plates and software are marketed under the name Integrated Component Systems. Truss plates are toothed metal plates that join wood members together to form a truss. The Company continues to develop sophisticated software to assist truss and component manufacturers’ in modeling, designing trusses and selecting the appropriate truss plates for the applicable jobs.
3. The Company’s fastener line includes various nails, screws and staples. Complementing these products is the Quik Drive auto-feed screw driving system used in numerous applications such as decking, subfloors, drywall and roofing.
4. The Company’s lateral resistive systems are assemblies used to resist earthquake or wind forces and include Steel and Wood Shearwalls, Anchor Tiedown Systems (“ATS”) and steel moment frames.

Concrete Construction Products. As described below, the Company’s concrete construction products include (1) anchor products, and (2) repair, protection and strengthening products. The Company produces and markets over 1,000 standard and custom concrete construction products. The Company’s concrete construction products are composed of various materials including steel, chemicals and carbon fiber. They are used primarily to anchor, protect and strengthen concrete, brick and masonry applications in industrial, infrastructure, residential, commercial and DYI projects. The Company’s concrete construction products contribute to structural integrity and resistance to seismic, wind and other forces. These products are sold in all segments of the Company worldwide.

1. The Company’s concrete construction anchor products include adhesives, mechanical anchors, carbide drill bits and powder-actuated pins and tools used for numerous applications of anchoring or attaching elements onto concrete, brick, masonry and steel.
2. The Company's concrete construction repair, protection and strengthening products include grouts, coatings, sealers, mortars, fiberglass and fiber-reinforced polymer systems and asphalt products.

Engineering and Design Services. The Company’s engineers not only design and test products, but also provide engineering support for customers in connection with a number of products that the Company manufactures and sells. This support might range from the discussion of a load value in a catalog to testing the suitability of an existing product in a unique application. For certain product lines, industry norms require that the Company’s engineers are more involved in the sales process. For example, in connection with the sale of our truss plates, the Company’s engineers review the output of the Company’s software to assist customers in ensuring that trusses are properly designed and specified, and in some instances seal design diagrams. Generally, in connection with any engineering services the Company provides, the Company’s engineers serve as a point of reference and support for the customer’s engineers and other service professionals, who ultimately determine and are responsible for the engineering approach to any project.

Sales and Marketing

The Company's sales and marketing programs are implemented through its branch system. The Company currently maintains branches in California, Texas, Ohio, Canada, England, France, Germany, Denmark, Switzerland, Poland, Portugal, Austria, The Netherlands, Ireland, Belgium, Sweden, Norway, Spain, Australia, New Zealand, and Chile. Each branch is served by its own sales force, warehouse and office facilities, while some branches have their own manufacturing facilities. Each branch is responsible for setting and executing sales and marketing strategies that are consistent both with the markets in the geographic area that the branch serves and with the goals of the Company. Branch sales forces in North America are supported by marketing managers in the home office in Pleasanton, California. The home office also coordinates issues affecting customers that operate in multiple regions. The sales force maintains close working relationships with customers, develops new business, calls on architects, engineers and building officials and participates in a range of educational seminars.

The Company dedicates substantial resources to customer service. The Company produces numerous publications and point-of-sale marketing aids to serve specifiers, distributors, retailers and users for the various markets that it serves. These publications include general catalogs, as well as various specific catalogs, such as those for its fastener products. The catalogs and publications describe the products and provide load and installation information. The Company also maintains several linked websites centered on www.strongtie.com, which include catalogs, product and technical information, code reports and other general information related to the Company, its product lines and promotional programs. The contents of these websites are not incorporated into this filing. Further, the Company's references to the URLs for these websites are intended to be inactive textual references only.

Manufacturing Process

The Company designs and manufactures most of its products. The Company has developed and uses automated manufacturing processes for many of its products. The Company's innovative manufacturing systems and techniques have allowed it to control manufacturing costs, even while developing both new products and products that meet customized requirements and specifications. The Company's development of specialized manufacturing processes has also permitted increased operating flexibility and enhanced product design innovation. As part of ongoing continuous improvement processes in its factories, the Company's major North American and European manufacturing facilities initiated lean manufacturing practices to improve efficiency and customer service. The Company sources some products from third-party vendors, both domestically and internationally. The Company has 26 manufacturing locations in the United States, Canada, France, Denmark, Germany, Switzerland, Poland, Portugal, Belgium, Sweden, China and England.

Quality Control. The Company has developed a quality system that manages defined procedures to ensure consistent product quality and also meets the requirements of product evaluation reports such as the International Code Council Evaluation Services (ICC-ES) and the International Association of Plumbers and Mechanical Officials Uniform Evaluation Services (IAPMO-UES). Since 1996, the Company's quality system has been registered under ISO 9001, an internationally recognized set of quality-assurance standards. The Company believes that ISO registration is a valuable tool for maintaining and promoting its high quality standards. As the Company establishes new business locations through expansion or acquisitions, projects are established to integrate the Company's quality systems and achieve ISO 9001 registration. In addition, the Company has six testing laboratories accredited to ISO standard 17025, an internationally accepted standard that provides requirements for the competence of testing and the further specialized accreditation for various Acceptance Criteria. The Company implements testing requirements through systematic control of its processes, enhancing the Company's standard for quality products, whether produced by the Company or purchased from others.

Wood Construction Products Manufacturing. Most of the Company's wood construction products are produced with a high level of automation. The Company has significant press capacity and has multiple dies for some of its high volume products to enable production of these products close to the customer and to provide back-up capacity. The balance of production is accomplished through a combination of manual, blanking and numerically controlled (NC) processes that include robotic welders, lasers and turret punches. This capability allows the Company to produce products with little redesign or set-up time, facilitating rapid turnaround for customers. The Company also has smaller specialty production facilities, which primarily use batch production with some automated lines.

Concrete Construction Products Manufacturing. The Company manufactures its concrete construction products at its facilities in Zhangjiagang, China; West Chicago, Illinois; Cardet, France; Seewen, Switzerland; Malbork, Poland; Elvas, Portugal and Madrid, Spain. The mechanical anchor products are produced with a high level of automation. Some products, such as epoxy and adhesive anchors, are mixed in batches and are then loaded into one-part or two-part dispensers, which mix the product on the job site because set-up times are usually very short. In addition, the Company purchases a number of products, powder actuated pins, tools and accessories and certain of its mechanical anchoring products, from various sources around the world. These purchased products undergo inspections on a sample basis for conformance with ordered specifications and tolerances before being distributed.

Regulation

Environmental Regulation. The Company itself is subject to environmental laws and regulations governing emissions into the air, discharges into water, and generation, handling, storage, transportation, treatment and disposal of waste materials. The Company is also subject to other federal and state laws and regulations regarding health and safety matters. The Company believes that it has obtained all material licenses and permits required by environmental, health and safety laws and regulations in connection with the Company’s operations and that its policies and procedures comply in all material respects with existing environmental, health and safety laws and regulations. See “Item 1A — Risk Factors.”

Other. The Company’s product lines are subject to federal, state, county, municipal and other governmental and quasi-governmental regulations that affect product development, design, testing, analysis, load rating, application, marketing, sales, exportation, installation and use.

The Company considers product evaluation, recognition and listing to the building code as a significant tool that facilitates and expedites the use of the Company’s products by design professionals, building officials, inspectors, builders, home centers and contractors. Industry members are more likely to use building products that have the appropriate recognition and listing than products that lack this acceptance. The Company devotes considerable time and testing resources to obtaining and maintaining appropriate listings for its products. The Company actively participates in industry related professional associations and building code committees both to keep abreast of regulatory changes and to provide comments and expertise to these regulatory agencies.

A substantial portion of the Company's products have been evaluated and are recognized by governmental and product evaluation agencies. Some of the entities that recognize the Company's products include the International Code Council Evaluation Service (ICC-ES), the International Association of Plumbing and Mechanical Officials Uniform Evaluation Services (IAPMO-UES), the City of Los Angeles Research Reports (LARR's), California Division of the State Architect Interpretation of Regulations (DSA IR's), the State of Florida, Underwriters Laboratory (UL), Factory Mutual (FM) and state departments of transportation. In Europe, the Company's structural products meet European Technical Agreement (ETA) regulations.

Competition

The Company faces a variety of competition in all of the markets in which it participates. This competition ranges from subsidiaries of large national or international corporations to small regional manufacturers. While price is an important factor, the Company also competes on the basis of quality, breadth of product line, proprietary technology, technical support, availability of inventory, service (including custom design and manufacturing), field support and product innovation. As a result of differences in structural design and building practices and codes, the Company's markets tend to differ by region. Within these regions, the Company competes with companies of varying size, several of which also distribute their products nationally or internationally. See "Item 1A — Risk Factors."

Raw Materials

The principal raw material used by the Company is steel, including stainless steel. The Company also uses materials such as carbon fiber, fiberglass, mortars, grouts, epoxies and acrylics in the manufacture of its chemical anchoring and reinforcing products. The Company purchases raw materials from a variety of commercial sources. The Company's practice is to seek cost savings and enhanced quality by purchasing from a limited number of suppliers.

The steel industry is highly cyclical and prices for the Company's raw materials are influenced by numerous factors beyond the Company's control. The steel market continues to be dynamic, with a high degree of uncertainty about future pricing trends. Given current conditions, including significant import tariffs and duties, and unsettled international trade disputes, the Company currently expects that the high degree of uncertainty regarding steel prices will continue. Numerous factors may cause steel prices to increase in the future. In addition to increases in steel prices, steel mills may add surcharges for zinc, energy and freight in response to increases in their costs. See "Item 1A — Risk Factors" and "Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations." The Company historically has not attempted to hedge against changes in prices of steel or other raw materials. However, the Company may purchase and carry more steel or other raw materials in inventory to meet projected sales demand in a tight raw materials market.

Patents and Proprietary Rights

The Company has United States and foreign patents, the majority of which cover products that the Company currently manufactures and markets. These patents, and applications for new patents, cover various design aspects of the Company's products, as well as processes used in their manufacture. The Company continues to develop new potentially patentable products, product enhancements and product designs. Although the Company does not intend to apply for additional foreign patents covering existing products, the Company has developed an international patent program to protect new products that it may develop. In addition to seeking patent protection, the Company relies on unpatented proprietary technology to maintain its competitive position. See “Item 1A — Risk Factors.”

Acquisitions and Expansion into New Markets

We have invested in our strategic initiative to sell engineered product solutions, to help us perform throughout all industry cycles, which we estimate supports approximately 40% of our connector and truss plate sales. In support of this effort, we acquired CG Visions, Inc. (“CG Visions”) in 2017, and completed our purchase of the LotSpec software asset and entered into a strategic software partnership with Hyphen Solutions ("Hyphen") in 2018.

The LotSpec software asset is a suite of software applications that facilitate builders' abilities to complete complex designs and do full take-offs in collaboration with our CG Visions software. Hyphen offers integrated information exchange between its software and our existing CG Visions' take-off platform to more efficiently create detailed plan estimates, designs and production specifications to automatically flow through to purchasing systems. We believe that the LotSpec software purchase and the Hyphen strategic partnership align well with our strategy to continue strengthening our value proposition by being the industry's trusted partner in construction solutions and building systems software.

In January 2017, the Company acquired CG Visions, Inc. ("CG Visions"), an Indiana corporation, for $20.8 million. CG Visions provides scalable technologies and services in building information modeling ("BIM") technologies, estimation tools and software solutions to a number of the top 100 mid-sized to large builders in the United States, which are expected to complement and support the Company's sales in North America.

In January 2017, the Company acquired Gbo Fastening Systems AB ("Gbo Fastening Systems"), a Sweden limited company, for $10.2 million. Gbo Fastening Systems manufactures and sells a complete line of CE-marked structural fasteners as well as fastener dimensioning software for wood construction applications, currently sold mostly in northern and eastern Europe, which are expected to complement the Company's line of wood construction products in Europe.

In August 2016, the Company purchased all of the outstanding shares of Multi Services Dêcoupe S.A. ("MS Decoupe"), a Belgium public limited company, for $6.9 million. MS Decoupe primarily manufactures and distributes wood construction, plastic, and metal labeling products in Belgium and the Netherlands, including distributing the Company's products manufactured at the Company's production facility in France. With this acquisition, the Company will offer the Belgium market a wider-range of its products, shorten delivery lead times, and expand the Company's sales presence into the Netherlands market.

Seasonality and Cyclicality

The Company's sales are seasonal and cyclical. Operating results vary from quarter to quarter and with economic cycles. The Company's sales are also dependent, to a large degree, on the North American residential home construction industry. See "Item 1A — Risk Factors" and "Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations."

Employees and Labor Relations

As of December 31, 2018, the Company had 3,135 full-time employees, of whom 1,806 were hourly employees and 1,329 were salaried employees. The Company believes that its overall compensation and benefits for the most part meet or exceed industry averages and that its relations with its employees are good.

As of December 31, 2018, approximately 14% of the Company's employees are represented by labor unions and are covered by collective bargaining agreements. We have two-facility locations with collective bargaining agreements covering tool and die craftsmen, maintenance workers, and sheet-metal workers. In Stockton, California, two union contracts will expire in September 2019 and June 2023, respectively. Also, we have two contracts in San Bernardino County, California that will expire in June 2022 and February 2021, respectively. We expect to agree on the extension with the existing labor union contract that will expire in September 2019, while parties are negotiating a new agreement. Based on current information and subject to future events and circumstances, we believe that, even if new agreements are not reached before the existing labor union contracts expire, it is not expected to have a material adverse effect on the Company's ability to provide products to customers or on the Company's profitability. See “Item 1A — Risk Factors.”

Available Information

The Company makes available, free of charge, on its website www.simpsonmfg.com, copies of its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements, and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) after the Company files them with the U.S. Securities and Exchange Commission (“SEC”). Printed copies of any of these materials will also be provided free of charge on request.

The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov.

The contents of the websites referred to above are not incorporated into this filing. Further, our references to the URLs for these websites are intended to be inactive textual references only.

Item 1A. Risk Factors.

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, in addition to other information contained in this Annual Report on Form 10-K, including our consolidated financial statements and related notes thereto, before you decide to buy or hold shares of our common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that adversely affect our business. We may not be able to control any of those risks and uncertainties. If any of those risks and uncertainties, whether described below or not, actually occurs, our business, results of operations, financial condition and future prospects could be materially and adversely affected, and you may lose all or part of your investment.

To facilitate a review of our risk factors, we have organized our risk factors into general groups of risks, including "General Business Risks," "Products, Services and Sales Risks," "Technological and Intellectual Property Risks," "Regulatory Risks," "Capital Expenditures, Expansions, Acquisitions and Divestitures Risk," "International Operations Risks," "Capital Structure Risks," "Employee Risks" and "Other Risks." The grouping of risks is to facilitate your review only, and no ranking of importance of risks or other inference should be made on account of such groups.

<u>General Business Risks</u>

Business cycles and uncertainty regarding the housing market, economic conditions, political climate and other factors beyond our control could adversely affect demand for our products and services, our costs of doing business, and our business, financial condition and results of operations.

With an estimated 60% of our total product sales being dependent on housing starts, our business, financial condition and results of operations depends significantly on the stability of the housing, residential construction and home improvement markets, as well as general economic conditions, including any future increase of interest rates by central banks, including the U.S. Federal Reserve System, or other factors that could impact housing starts. Adverse conditions in or uncertainty about these markets, the economic conditions or the political climate could adversely impact our customers' confidence or financial condition, causing them to determine not to purchase our products and services, causing them to delay purchasing decisions, or impacting their ability to pay for our products and services. Other factors beyond our control - including unemployment and foreclosure rates; inventory loss; interest rate fluctuations; raw material and energy costs; labor and healthcare costs; the availability of financing; the state of the credit markets, including mortgages, the availability, or lack thereof, of credit to builders and developers, home equity loans and consumer credit; weather; natural disasters; acts of terrorism; and other conditions beyond our control - could further adversely affect demand for our products and services, our costs of doing business, and our business, financial condition and results of operations. Due to such factors and other trends, the construction industry is subject to significant volatility.

Further, many of our customers in the construction industry are small and medium-sized businesses. These businesses are more likely to be significantly affected by economic downturns than larger, more established businesses. Uncertainty about current global economic conditions may cause these consumers to postpone or refrain from spending or may cause them to switch to lower-cost alternative products, which could reduce demand for our products and materially and adversely affect our financial condition and operating results.

Additionally, declines in commercial and residential construction, such as housing starts and remodeling projects, which generally occur during economic downturns, have in the past significantly reduced, and in the future can be expected to reduce, the demand for our products and our stock price.

We may not be effective in achieving our stated strategic and operating objectives under our 2020 Plan.

We have been implementing a strategic plan, the 2020 Plan, centered on focusing on our organic growth, rationalizing our cost structure to improve profitability, improving our working capital management primarily through the reduction of inventory levels and other working capital items such as accounts payable and accounts receivable. While the strategy calls for increased emphasis on certain operational targets, such as growing our net sales, reducing our operating expenses as a percentage of net sales and decreasing our inventory levels, it moderates focus on other aspects of our operations that used to be part of our prior strategy, such as certain categories of acquisitions (especially in the concrete space).

There can be no guarantee that the 2020 Plan will yield the results that we currently anticipate or results that will exceed those that might be obtained under our prior strategy if we fail to successfully execute on one or more prongs of the 2020 Plan, even if we successfully implement one or more other prongs.

The successful execution of the 2020 Plan depends on, among other things, our ability to:

- Maintain our top-line growth and achieve a net sales compound annual growth rate of approximately 8% from fiscal 2016 through fiscal 2020 by gaining market share in certain products lines;

- Carry out effective cost reduction measures in Europe and our concrete product line, justify certain expense categories for each new period, and by fiscal 2020, reduce our operating expenses as a percent of net sales to be below or at 27%;

- Eliminate at least 25% to 30% of our product SKUs, implement Lean principles in our factories, and achieve an additional 30% reduction of our raw materials and finished goods inventory by fiscal 2020; and

- Realize return from our investment in software initiatives.

Although we have made progress on meeting 2020 Plan targets, we may not fully execute on one or more elements of the 2020 Plan due to any number of reasons. Going forward, we may choose to refine our strategic and operating objectives, update our current strategic plan, and pursue strategies outside the 2020 Plan that we believe represent great opportunities due to changes in our business, operations, financial conditions and other factors beyond our control or not foreseeable.

Our sales are seasonal and we have little control over the timing of customer purchases. If we miss seasonal forecasts or customers purchase our products in different quarters than we or analysts expect, our stock could materially decline.

Our sales are seasonal, with operating results varying from quarter to quarter. With some exceptions, our sales and income have historically been lower in the first and fourth quarters than in the second and third quarters, as customers tend to purchase construction materials in the late spring and summer months for the construction season. In addition, weather conditions, such as unseasonably warm, cold or wet weather, which affect, and sometimes delay or accelerate installation of some of our products, may significantly affect our results of operations. Sales that we anticipate in one quarter may occur in another quarter, affecting both quarters' results and potentially our stock price.

In addition, we typically ship orders as we receive them and maintain inventory levels to allow us to operate with little backlog. The efficiency of our inventory system, and our ability to avoid backlogs and potential loss of customers, is closely tied to our ability to accurately predict seasonal and quarterly variances. Further, our planned expenditures are also based primarily on sales forecasts. When sales do not meet our expectations, our operating results will be reduced for the relevant quarters, as we will have already incurred expenses based on those expectations. This could result in a material decline in our stock price.

We operate in a competitive industry, and if we fail to anticipate and react appropriately to competitors, technological changes, changing industry trends and other competitive forces our sales and profit margins will decline.

Our ability to compete effectively depends upon our ability to meet changing market conditions and develop enhancements to our products on a timely basis in order to maintain our competitive advantage. Many of our competitors have greater financial and other resources than we do. Our continued growth depends upon our ability to develop additional products, services and technologies that meet our customers' expectation of our brand and quality. There can be no assurance that we will be successful in developing and marketing new products, product enhancements and additional technologies, that we will not experience difficulties that could delay or prevent the successful development, introduction and marketing of these products, or that our new products and product enhancements will adequately meet the requirements of the marketplace, or will achieve market acceptance.

Further, one of the core elements of our strategy is to provide high quality products and customer services. Many of our competitors are dedicating increasing resources to competing with us, especially as our products and services become more affected by technological advances and software innovations. Some of our competitors have more experience producing software and other technology-driven solutions. As a result, we are dedicating increasing resources to research and development in new and changing technologies in order to stay competitive and provide high quality and innovative products and services. These increased expenditures could reduce our operating results.

Additionally, our ability to compete effectively depends, to a significant extent, on the specification or approval of our products by architects, engineers, building inspectors, building code officials and customers and their acceptance of our premium brand. If a significant segment of those communities were to decide that the design, materials, manufacturing, testing or quality control of our products is inferior to that of any of our competitors or the cost differences between our products and any competitors are not justifiable, our sales and profits would be materially reduced.

Our future growth may depend on our ability to develop new products and penetrate new markets, which could reduce our profitability.

Our future success depends upon our continued investment in research and new product development and our ability to continue to develop new products that allow us to expand into new markets. Expansion into new markets and the development of new products may involve considerable costs and may not generate sufficient revenue to be profitable or cover the costs of development. We might not be able to penetrate these product markets and any market penetration that occurs might not be timely or profitable. We may be unable to recoup part or all of the significant investments we will have made in attempting to penetrate new markets.

Our failure to continue to successfully avoid, manage, defend, litigate and accrue for claims and litigation could negatively impact our results of operations or cash flows.

We are exposed to and become involved in various litigation matters arising out of the ordinary routine conduct of our business, including, from time to time, actual or threatened litigation relating to such items as our products and services, product liability, employment-related claims, our distributors, intellectual property claims and regulatory actions.

The defense of litigation, including fees of legal counsel, expert witnesses and related costs, is expensive and difficult to forecast accurately. In general, such costs are unrecoverable even if we ultimately prevail in litigation and could represent a significant use of our capital resources. To defend lawsuits, it is also necessary for us to divert officers and other employees from their normal business functions to gather evidence, give testimony and otherwise support litigation efforts. We expect to experience higher than normal litigation costs arising from the lawsuits disclosed in this Annual Report on Form 10-K.

If we lose any material litigation, we could face material judgments or awards against us. An unfavorable resolution of one or more of the proceedings in which we are involved now or in the future could have a material adverse effect on our business, assets, cash flow and financial condition.

There can be no assurance that we will be able to continue to successfully avoid, manage and defend such matters. In addition, given the inherent uncertainties in evaluating certain exposures, actual costs to be incurred in future periods may vary from our estimates for such contingent liabilities.

Product, Services and Sales Risks

Design defects, labeling defects, product formula defects, inaccurate chemical mixes, product recalls and/or product liability claims could harm our reputation, sales and financial results.

We have on occasion found flaws and deficiencies in the design, manufacturing, assembling, labeling, product formulations, chemical mixes or testing of our products. We also have on occasion found flaws and deficiencies in raw materials and finished goods produced by others and used with or incorporated into our products. Some flaws and deficiencies have not been apparent until after the products were installed by customers.

Many of our products are integral to the structural soundness or safety of the structures in which they are used. If any flaws or deficiencies exist in our products and if such flaws or deficiencies are not discovered and corrected before our products are incorporated into structures, the structures could be unsafe or could suffer severe damage, such as collapse or fire, and personal injury or death could result. Errors in the installation of our products, even if the products are free of flaws and deficiencies, could also cause personal injury or death and unsafe structural conditions. To the extent that such damage or injury is not covered by our product liability insurance and we are held to be liable, we could be required to correct such damage and to compensate persons who might have suffered injury or death, and our reputation, business and financial condition could be materially and adversely affected.

Even if a flaw or deficiency is discovered before any damage or injury occurs, we may need to refund customers and/or repair or recall products (to the extent possible), and we may be liable for any costs necessary to replace recalled products or retrofit or remedy the affected structures. Any such recall, retrofit or other remedy could entail substantial costs and adversely affect our reputation, sales and financial condition. We do not carry insurance against recall costs or the adverse business effect of a recall, and our product liability insurance may not cover retrofit or other remedy costs.

As a result of the nature of many of our products and their use in construction projects, claims (including product warranty claims and claims resulting from a natural disaster) may be made against us with regard to damage or destruction of structures incorporating our products whether or not our products failed. Any such claims, if asserted, could require us to expend material time and efforts defending the claim and may materially and adversely affect our business and financial condition. Costs associated with resolving such claims (such as repair or replacement of the affected parts) could be material and may exceed any amounts reserved in our consolidated financial statements.

While we generally attempt to limit our contractual liability and our exposure to price or expense increases, we may have uncapped liabilities or significant exposure under some contracts, and could suffer material losses under such contracts.

We enter into many types of contracts with our customers, suppliers and other third parties, including in connection with our expansion into new markets and new product lines. Under some of these contracts, our overall liability may not be limited to a specified maximum amount or we may have significant potential exposure to price or expense increases. If we receive claims under these contracts or experience significant price increases or comparable expense increases, we may incur liabilities significantly in excess of the revenues associated with such contracts, which could have a material adverse effect on our results of operations.

Our software provides some design functions to customers, and we are involved both in product sales and engineering services. Any software errors or deficiencies or failures in our engineering services could have material adverse effects on our operations and financial condition.

Our design software facilitates the creation by customers of complex construction and building designs and we are involved both in product sales and engineering services. Our software is extremely complex and is continually being modified and improved. As a result, it may contain defects or errors and new versions may introduce new defects and errors. While we have attempted to limit our potential liability for the failure of any designs created by our software, as a result of defects in our software, the structures could be unsafe or could suffer severe damage, such as collapse or fire, and personal injury or death could result. Errors in construction unconnected with our design could also cause personal injury or death and unsafe structural conditions, even if our software design is sufficient. To the extent that a structure designed by our software suffers any failure or deficiency, we could be required to correct deficiencies and may become involved in litigation, even if our software design was not the cause of such deficiency. Further, if any damage or injury is not covered by our insurance and we are held to be liable, we could be required to correct such damage and to compensate persons who might have suffered injury, and our reputation, business and financial condition could be materially and adversely affected.

While we engage in testing and upgrades, there can be no assurance that, despite our testing and upgrades, errors will not be found in new and existing products resulting in loss of revenues or delay in market acceptance, diversion of development resources, damage to our reputation, adverse litigation, or increased service and warranty costs, any of which would have a material adverse effect upon our business, operating results and financial condition.

We are also involved in providing engineering solutions to our clients. The risks associated with providing these services are materially different than the risks we historically faced when we only produced products. If our engineers prepare, approve or seal drawings that contain defects or otherwise are involved in any design or construction that contains flaws, regardless of whether our engineers caused such flaws, we may be held liable for professional negligence or other damages, which could involve material claims.

We have a few large customers, the loss of any one of which could negatively affect our sales and profits.

Our largest customers accounted for a significant portion of net sales for the years ended December 31, 2018, 2017, and 2016. Any reduction in, or termination of, our sales to these customers would at least temporarily, and possibly on a longer term basis, cause a material reduction in our net sales, income from operations and net income. Such a reduction in or elimination of our sales to any of our largest customers would increase our relative dependence on our remaining large customers.

In addition, our distributor customers have increasingly consolidated over time, which has increased the material adverse effect of losing any one of them and may increase their bargaining power in negotiations with us. These trends could negatively affect our sales and profitability.

Increases in prices of raw materials could negatively affect our sales and profits.

Our principal raw material is steel, including stainless steel. The steel industry can have large fluctuations. Numerous factors beyond our control, such as general economic conditions, competition, worldwide demand, material and labor costs, energy costs, foreign exchange rates, import duties and other trade restrictions influence prices for our raw materials. Further, the domestic steel market is heavily influenced by three major United States manufacturers. We have not always been able, and in the future we might not be able, to increase our product prices in amounts that correspond to increases in costs of raw materials, without materially and adversely affecting our sales and profits.

We have historically not hedged against changes in prices of steel or other raw materials. In past years, however, we have increased our anticipatory purchases of steel in an effort to mitigate the effects of rising steel prices. This strategy, coupled with changing economic conditions, has resulted in substantial fluctuations in our inventory in recent years, which can materially and adversely affect our margins, cash flow and profits.

We depend on third parties for transportation services and the lack of availability of transportation and/or increases in cost could materially and adversely affect our business and operations.

Our business depends on the transportation of both finished goods to our customers and distributors and the transportation of raw materials to us. We rely on third parties for transportation services of these items, which services are occasionally in high demand (especially at the end of calendar quarters) and/or subject to price fluctuations.

If the required supply of transportation services is unavailable when needed, our manufacturing processes may be interrupted or we may be unable to sell our products at full value, or at all. This could harm our reputation, negatively impact our customer relationships and have a material adverse effect on our financial condition and results of operation. In addition, a material increase in transportation rates or fuel surcharges could have a material adverse effect on our profitability.

<u>Technological and Intellectual Property Risks</u>

Our recent efforts to increase our technology offerings and integrate new software and application offerings may prove unsuccessful and may affect our future prospects.

Our industry has experienced increased complexity in some home design and builders are more aggressively trying to reduce their costs. One of our responses has been to design and market sophisticated software to facilitate the design and marketing of our product systems. We have continued to commit substantial resources to our software development endeavors in recent years and expect that trend to continue in 2019.

We have a limited operating history in the technology space and may not be able to create commercially successful software and applications. Even if we are able to create initially successful ideas, the technology industry is subject to rapid changes. We may not be able to adapt quickly enough to keep up with changing demands, and our software may become obsolete.

While we see having a software interface with the construction industry as a potential growth area, we also face competition from other companies that are focused solely or primarily on the development of software and applications. These companies may have significantly greater expertise and resources to devote to software development, and we may be unable to compete with them in that space.

If we cannot protect our technology, we will not be able to compete effectively.

Our ability to compete effectively with other companies depends in part on our ability to maintain the proprietary nature of our technology, in part through patents, copyrights, trade secrets and other intellectual property protections. We might not be able to protect or rely on our patents and copyrights. Patents might not issue pursuant to pending patent applications.

Our software copyright and other protections might not be adequate to protect our software and application code. Others might independently develop the same or similar technology, develop around the patented aspects of any of our products or proposed products, or otherwise obtain access to or circumvent our proprietary technology. We also rely on unpatented proprietary technology to maintain our competitive position. We might not be able to protect our trade secrets, our know-how or other proprietary information. If we are unable to maintain the proprietary nature of our significant products, our sales and profits are likely to be materially reduced.

In attempting to protect our proprietary information, we sometimes initiate lawsuits against competitors and others that we believe have infringed or are infringing our rights. In such an event, the defendant may assert counterclaims to complicate or delay the litigation or for other reasons. Litigation may be very costly and may result in adverse judgments that affect our sales and profits materially and adversely.

Claims that we infringe intellectual property rights of others may materially increase our expenses and reduce our profits.

Other parties have in the past and may in the future claim that our products or processes infringe their intellectual property rights. We may incur substantial costs and liabilities in investigating, defending and resolving such claims, whether or not they are meritorious, which may materially reduce our profitability and materially and adversely affect our business and financial condition. Litigation can be disruptive to normal business operations and may result in adverse rulings or decisions. If any such infringement claim is asserted against us, we may be required to obtain a license or cross-license, modify our existing technology or design a new non-infringing technology, any of which could be costly and time-consuming. A ruling against us in an infringement lawsuit could include an injunction barring our production or sale of any infringing product. A damages award against us could include an award of royalties or lost profits and, if the court finds willful infringement, treble damages and attorneys’ fees.

We have experienced and may in the future experience delays, outages, cyber-based attacks or security breaches in relation to our information systems and computer networks, which have disrupted and may in the future disrupt our operations and may result in data corruption. As a result, our profitability, financial condition and reputation could be negatively affected. In addition, data privacy statements and laws could subject us to liability.

We depend on information technology networks and systems, including the internet, to process, transmit and store electronic information. We depend on our information technology infrastructure for electronic communications among our locations around the world and between our personnel and our subsidiaries, customers and suppliers. We collect and retain large volumes of internal and customer, vendor and supplier data, including some personally identifiable information, for business purposes. We also maintain personally identifiable information about our employees. The integrity and protection of our customer, vendor, supplier, employee and other Company data is critical to our business. The regulatory environment governing information, security and privacy laws is increasingly demanding and continues to evolve. Maintaining compliance with applicable security and privacy regulations may increase our operating costs or adversely affect our business operations.

Despite the security and maintenance measures we have in place, our facilities and systems, and those of the retailers, dealers, licensees and other third-party distributors with which we do business, remain vulnerable to security breaches, cyber-attacks, acts of vandalism, computer viruses, malware, data corruption, delays, disruptions, programming and/or human errors or other similar events, such as those accomplished through fraud, trickery or other forms of deceiving our employees, contractors or other agents or representatives and those due to system updates, natural disasters, malicious attacks, accidents, power disruptions, telecommunications failures, acts of terrorism or war, computer viruses, physical or electronic break-ins or similar events. Such incidents have occurred, continue to occur, and may occur in the future.

Security breaches of our infrastructure could create system disruptions, shutdowns or unauthorized disclosures of confidential information. Despite the security measures we have in place, our facilities and systems, and those of the retailers, dealers, licensees and other third party distributors with which we do business, may be vulnerable to security breaches, cyber-attacks, acts of vandalism, computer viruses, misplaced or lost data, programming and/or human errors or other similar events. Such incidents may involve misappropriation, loss or other unauthorized disclosure of confidential data, materials or information, including those concerning our customers, employees or suppliers, whether by us or by the retailers, dealers, licensees and other third-party distributors with which we do business, disrupt our operations, result in losses, damage our reputation, and expose us to the risks of litigation and liability (including regulatory liability); and may have a material adverse effect on our business, results of operations and financial condition.

We publicly post our privacy policies and practices concerning our processing, use, and disclosure of personally identifiable information on our website. If we fail to adhere to our privacy policy and other published statements or applicable laws concerning our processing, use, transmission and disclosure of protected information, or if our statements or practices are found to be deceptive or misrepresentative, we could face regulatory actions, fines and other liability.

We may experience delays or outages in our information technology system and computer networks.

We may be subject to information technology system failures and network disruptions. These may be caused by delays or disruptions due to system updates, natural disasters, malicious attacks, accidents, power disruptions, telecommunications failures, acts of terrorism or war, computer viruses, physical or electronic break-ins or similar events or disruptions.

Despite our security measures, our systems could be vulnerable to disruption, and any such disruption could negatively affect our financial condition and results of operations.

Some of our agreements for software and software-as-services products have limited terms, and we may be unable to renew such agreements and may lose access to such products.

We have various agreements with a number of third parties that provide software and software-as-service products to us. These agreements often require reoccurring payments for online access to the products and have limited terms. In the future, we will be required to renegotiate the terms of these agreements, and may be unable to renew such agreements on favorable terms. If any such agreement cannot be renewed or can only be renewed on terms that are materially worse for us, we may be unable to access the applicable software, and our business and operating results may be adversely affected.

Regulatory Risks

Failure to comply with industry regulations could result in reduced sales and increased costs.

We are subject to environmental laws and regulations governing emissions into the air, discharges into water, and generation, handling, storage, transportation, treatment and disposal of waste materials. We are also subject to other federal and state laws and regulations regarding health and safety matters.

Our manufacturing operations involve the use of solvents, chemicals, oils and other materials that are regarded as hazardous or toxic. We also use complex and heavy machinery and equipment that can pose severe safety hazards, especially if not properly and carefully used. Some of our products also incorporate materials that are hazardous or toxic in some forms, such as zinc and lead used in some steel galvanizing processes, chemicals used in our acrylic and epoxy anchoring products, and chemicals used in our concrete repair, strengthening and protecting products. The gun powder used in our powder-actuated tools is explosive. We have in the past, and may in the future, need to take steps to remedy our failure to properly label, store, transport, use and manufacture such toxic and hazardous materials.

If we do not obtain all material licenses and permits required by environmental, health and safety laws and regulations, we may be subject to regulatory action by governmental authorities. If our policies and procedures are flawed, or our employees fail or neglect to follow our policies and procedures in all respects, we might incur liability. Relevant laws and regulations could change or new ones could be adopted that require us to incur substantial expense to comply.

Complying or failing to comply with conflict minerals regulations could materially and adversely affect our supply chain, our relationships with customers and suppliers and our financial results.

We are currently subject to conflict mineral disclosure regulations in the U.S. and may be affected by new regulations concerning conflict and similar minerals adopted by other jurisdictions where we operate. While we have been successful to date in adapting to such regulations, we have and will continue to incur added costs to comply with the disclosure requirements, including costs related to determining the source of such minerals used in our products. We may not be able to ascertain the origins of such minerals that we use and may not be able to satisfy requests from customers to certify that our products are free of conflict minerals. These requirements also could constrain the pool of suppliers from which we source such minerals. We may be unable to obtain conflict-free minerals at competitive prices. Such consequences will increase costs and may materially and adversely affect our manufacturing operations and profitability.

When we provide engineering services we are subject to various local, state and federal rules and regulations which can increase our potential liability.

As part of our product offerings, we may provide engineering and design-related services to our clients. Some of these services require us to stamp drawings or otherwise be involved in the engineering process. While we generally attempt to limit our liability through our internal processes and through our legal agreements with third parties to which we provide such services, under various local, state and federal rules and regulations these limitations may not be effective and we may be held liable for engineering failures. Any such liability could materially and adversely affect our profitability.

Capital Expenditures, Expansions, Acquisitions and Divestitures Risks

Our acquisition activities, if any, present unique risks for our business, and any acquisition could materially and adversely affect our business and operating results.

We compete for acquisitions with other potential acquirers, some of which have greater financial or operational resources than we do. As a result, we may not be able to identify suitable acquisition candidates or strategic opportunities. Any acquisitions we undertake involve numerous risks, including, for example:

- inadequate access to information and/or due diligence of acquired businesses;
- diversion of management’s attention from other business concerns;
- overvaluation of acquired businesses;
- difficulties assimilating the operations and products of acquired businesses, including expensive and time consuming integration costs such as employee redeployment, relocation or severance, combining teams and processes in various functional areas, reorganization or closures of facilities, and relocation or disposition of excess equipment;
- inaccurate accounting or public reporting arising from integration of the financial statements and disclosures of acquired businesses;
- undisclosed existing or potential liabilities of acquired businesses;
- slow acceptance or rejection of acquired businesses’ products by our customers;
- risks of entering markets in which we have little or no prior experience;
- litigation involving activities, properties or products of acquired businesses;
- increased cost of regulatory compliance and enforcement;
- consumer and other claims related to products of acquired businesses; and
- the potential loss of key employees of acquired businesses.

In addition, future acquisitions may involve issuance of additional equity securities that dilute the value of our existing equity securities, increase our debt, cause impairment related to goodwill and cause impairment of, and amortization expenses related to, other intangible assets, which could materially and adversely affect our profitability. Any acquisition could materially and adversely affect our business and operating results, and as a result, our business and operating results may differ from any guidance that we may provide.

We may decide to dispose of assets and incur material expenses in doing so.

We have terminated in the past and may terminate in the future product lines or businesses if we determine that the cost of operating them is not warranted by their expected profitability. For example, we closed our sales offices in China, Thailand and Dubai in 2015. There are significant costs with such divestitures, which could materially and adversely affect our sales, assets, profitability and financial condition.

Our capital expenditures may not be adequate to maintain our competitive position and may not be implemented in a timely or cost-effective manner.

Our capital expenditures are limited by our liquidity and capital resources and the amount we have available for capital spending is limited by the need to pay our other expenses and to maintain adequate cash reserves and borrowing capacity to meet unexpected demands that may arise. Productivity improvements through process re-engineering, design efficiency and manufacturing cost improvements may be required to offset potential increases in labor and raw material costs and competitive price pressures. If we are unable to make sufficient capital expenditures, or to maximize the efficiency of the capital expenditures we do make, our competitive position may be harmed and we may be unable to manufacture the products necessary to compete successfully in our targeted market segments.

Additional financing, if needed, to fund our working capital, growth or other business requirements may not be available on reasonable terms, or at all.

If the cash needed for working capital or to fund our growth or other business requirements increases to a level that exceeds the amount of cash that we generate from operations and have available through our current credit arrangements, we will need to seek additional financing. Additional or new borrowings may not be available on reasonable terms, or at all. Our ability to raise money by issuing and selling shares of our common or preferred stock depends on general market conditions and the demand for our stock. If we sell stock, our existing stockholders could experience substantial dilution. Our inability to secure additional financing could prevent the expansion of our business, internally and through acquisitions.

If we change significantly the location, nature or extent of some of our manufacturing operations, we may reduce our net income.

If we decide to change significantly the location, nature or extent of a portion of our manufacturing operations, we may need to record an impairment of our goodwill. Our goodwill totaled $130.3 million at December 31, 2018. Recording an impairment of our goodwill correspondingly reduces our net income. Other changes or events in the future could further impair our recorded goodwill, which could also materially and adversely affect our profitability.

International Operations Risks

Our international operations may be materially and adversely affected by factors beyond our control.

Economic, social and political conditions, laws, practices and customs vary widely among the countries where we produce or sell our products. Our operations outside of the United States are subject to a number of risks and potential costs, including, for example, lower profit margins, less protection of intellectual property and economic, political and social uncertainty in some countries. Our sales and profits depend, in part, on our ability to develop and implement policies and strategies that effectively anticipate and manage these and other risks in the countries where we do business. These and other risks may materially and adversely affect our operations in any particular country and our business as a whole.

International construction standards, techniques and methods differ from those in the United States. Laws and regulations applicable in new markets may be unfamiliar to us. Compliance may be substantially more costly than we anticipate. As a result, we may need to redesign our products, or invent or design new products, to compete effectively and profitably in international markets. Inflation in emerging markets may also make our products more expensive there and increases the market and credit risks that we are exposed to.

Other significant challenges to conducting business in foreign countries include, among other factors, local acceptance of our products, political instability, changes in import and export regulations, changes in tariff and freight rates, fluctuations in foreign exchange rates, currency controls, cash repatriation restrictions and differing economic outcomes.

International operations expose us to foreign exchange rate risk.

We have foreign exchange rate risk in our international operations and through purchases from foreign vendors. We do not currently hedge this risk. Changes in currency exchange rates could materially and adversely affect our sales and profitability.

Because of our international operations, we could be adversely affected by violations of applicable U.S. federal and state or foreign laws and regulations, such as the United States Foreign Corrupt Practices Act and similar worldwide anti-bribery, anti-corruption and anti-kickback laws.

As a result of our expanded international operations, we face increasing compliance and regulatory oversight related to operating in foreign countries. The foreign and U.S. laws and regulations that are applicable to our operations are complex and may increase the costs of regulatory compliance, or limit or restrict the products or services we sell or subject our business to the possibility of regulatory actions or proceedings. The United States Foreign Corrupt Practices Act, and other similar laws and regulations, generally prohibit companies and their intermediaries from making improper payments to foreign governmental officials for the purpose of obtaining or retaining business. While our policies mandate compliance with applicable laws and regulations, including anti-bribery laws and other anti-corruption laws, we cannot guarantee that we will be successful in preventing our employees or other agents from taking actions in violation of these laws or regulations. Such violations, or allegations of such violations, could disrupt our business and result in a material adverse effect on our financial condition, results of operations and cash flows.

Our international operations depend on our successful management of our subsidiaries outside of the United States.

We conduct our international business through wholly owned subsidiaries. Managing distant subsidiaries and fully integrating them into our business is challenging. We cannot directly supervise every aspect of the operations of our subsidiaries operating outside the United States. As a result, we rely on local managers and staff. Cultural factors and language differences can result in misunderstandings among internationally dispersed personnel. The risk that unauthorized conduct may go undetected may be greater in subsidiaries outside of the United States. These problems could adversely affect our sales and profits.

Failure to comply with export, import, and sanctions laws and regulations could affect us materially and adversely.

We are subject to a number of export, import and economic sanction regulations, including the International Traffic in Arms Regulations ("ITAR"), the Export Administration Regulations ("EAR") and U.S. sanction regulations administered by the U.S. Department of Treasury, Office of Foreign Assets ("OFAC"). Foreign governments where we have operations also implement export, import and sanction laws and regulations, some of which may be inconsistent or conflict with ITAR and EAR. Where we face such inconsistencies, it may be impossible for us to comply with all applicable regulations.

If we do not obtain all necessary import and export licenses required by applicable export and import regulations, including ITAR and EAR, or do business with sanctioned countries or individuals, we may be subject to fines, penalties and other regulatory action by governmental authorities, including, among other things, having our export or import privileges suspended. Even if our policies and procedures for exports, imports and sanction regulations comply, but our employees fail or neglect to follow them in all respects, we might incur similar liability.

Any changes in applicable export, import or sanction laws or regulations or any legal or regulatory violations could materially and adversely affect our business and financial condition.

Our manufacturing facilities in China complicate our supply and inventory management.

We maintain manufacturing capability in various parts of the world, in part to allow us to serve our customers with prompt delivery of needed products. Such customer service is a significant factor in our efforts to compete with larger companies that have greater resources than we have. In recent years, we have substantially expanded our manufacturing in China. Nearly all of our manufacturing output in China was and is currently intended for export to other parts of the world. Because of the great distances between our manufacturing facilities in China and the markets to which the products made there will be shipped, we may have difficulty providing adequate service to our customers, which may put us at a competitive disadvantage. Our attempts to provide prompt delivery may necessitate that in China we produce and keep on hand substantially more inventory of finished products than would otherwise be needed. Inventory fluctuations can materially and adversely affect our margins, cash flow and profits. Any tariffs, duties, taxes, penalties imposed by the United States on imports from China would negatively affect our inventory management and profits.

If significant tariffs or other restrictions are placed on our imports or any related counter-measures are taken by other countries, our costs of doing business, revenue and results of operations may be negatively impacted.

If significant tariffs or other restrictions are placed on Chinese or other imports or any related counter-measures are taken by China or other countries, our costs of doing business, revenue and results of operations may be materially harmed. The Trump Administration announced a list of thousands of categories of goods that could face tariffs of up to 25% assessed on the cost of goods as imported. If these duties are imposed on our imports, we may be required to raise our prices, which may result in the loss of customers and harm our operating performance. Alternatively, we may seek to shift production outside of China, resulting in significant costs and disruption to our operations as we would need to pursue the time-consuming processes of recreating a new supply chain, identifying substitute components and establishing new manufacturing locations. Additionally, the Trump Administration continues to signal that it may alter trade agreements and terms between China and the United States, including limiting trade with China, and may impose additional tariffs on imports from China. Even if the currently proposed duties are not imposed on our imports, it is possible further tariffs will be imposed on our imports, or that our business will be impacted by retaliatory trade measures taken by China or other countries in response to existing or future tariffs, causing us to raise prices or make changes to our operations, any of which could materially harm our revenue or operating results.

We are subject to U.S. and international tax laws that could affect our financial results.
We generally conduct international operations through our wholly-owned subsidiaries. Our income tax liabilities in the different countries where we operate depend in part on internal settlement prices and administrative charges among us and our subsidiaries. These arrangements require us to make judgments with which tax authorities may disagree. Tax authorities may impose additional tariffs, duties, taxes, penalties and interest on us. Transactions that we have arranged in light of current tax rules could have material and adverse consequences if tax rules change, and changes in tax rules or imposition of any new or increased tariffs, duties and taxes could materially and adversely affect our sales, profits and financial condition.

Tax laws are dynamic and subject to change as new laws are passed and new interpretations are issued or applied. For example, the U.S. enacted significant tax reform at the end of 2017, and certain provisions of the tax reform may adversely affect us. If the U.S. or other foreign tax authorities change applicable tax laws, our overall taxes could increase, and our business, financial condition or results of operations may be adversely impacted.

Recent changes in applicable law regarding the transfer of personally identifiable information by U.S. companies doing business in the European Union could lead us to spend significant resources trying to comply with the newly developed rules. We may not succeed in meeting such requirements, and we may face governmental actions and suffer business losses.

We have in the past relied on adherence to the U.S. Department of Commerce’s Safe Harbor Policy Principles and compliance with the Safe Harbor Frameworks as agreed to and set forth by the European Commission and the United States, which established a means for legitimating the transfer of personally identifiable information by U.S. companies doing business in the European Union (“EU”) to the U.S. under the EU Data Protection Directive (95/46/EC). New EU legislation, the General Data Protection Regulation (Regulation (EU) 2016/679) (“GDPR”) became effective as of May 25, 2018, in replacement of the EU Data Protection Directive, and is expected to have a significant impact on how businesses can collect and process the personal data of EU individuals.

In light of the GDPR, we have made and continue to engage in additional compliance efforts when transferring certain data from the EU. We may be unsuccessful in complying with the new EU data transfer requirements, and as a result, we may be at risk of enforcement actions taken by an EU data protection authority until such point in time that we ensure all data transfers to us from the EU are in compliance with applicable law. We may find it necessary to establish systems to maintain EU-origin data in the European Economic Area, which may involve substantial expense and distraction from other aspects of our business.

Capital Structure Risks

Any issuance of preferred stock may dilute your investment and reduce funds available for dividends.
Our Board of Directors is authorized by our Certificate of Incorporation to determine the terms of one or more series of preferred stock and to authorize the issuance of shares of any such series on such terms as our Board of Directors may approve. Any such issuance could be used to impede an acquisition of our business that our Board of Directors does not approve, further dilute the equity investments of holders of our common stock and reduce funds available for the payment of dividends to holders of our common stock.

Future sales of our common stock could adversely affect our stock price.

Our Board of Directors has the authority to issue, from time to time, authorized and unissued shares of our common stock. Our issuance of substantial amounts of new shares of our common stock could adversely affect the prevailing market price for our common stock.

All of the outstanding shares of our common stock are freely tradable without restriction under the Securities Act of 1933, as amended (the “Securities Act”), other than shares of our common stock held by our “affiliates,” as that term is defined in Rule 144 under the Securities Act, which, however, may be sold by our affiliates pursuant to Rule 144. If a substantial number of shares of our common stock are sold in the public market pursuant to Rule 144 by our affiliates or issued upon the exercise of our outstanding options, the trading price of our common stock in the public market could be adversely affected. As of February 26, 2019, there were 254,715 thousand shares held by our affiliates.

Delaware law and our corporate governance documents could deter takeover attempts that might otherwise be beneficial to our stockholders.

Provisions of Delaware law could make it more difficult for a third party to acquire us. Section 203 of the Delaware General Corporation Law may make the acquisition of the Company more difficult for potential acquirers by prohibiting stockholders holding 15% or more of our outstanding voting stock from acquiring us without the consent of our Board of Directors for at least three years from the date they first hold 15% or more of the voting stock.

Pursuant to the Company's current corporate governance documents, our stockholders cannot call special meetings and cannot take action by written consent. In addition, a change in the composition of our Board of Directors that is not approved by the existing Board of Directors could trigger a default under our existing credit facilities.

These provisions may discourage, delay or make difficult a merger or acquisition of the Company, including a transaction that may offer a premium price for our common stock.

We will continue to incur increased costs as a result of being a publicly-traded company, including costs arising from the scrutiny of our business, practice and governance as a publicly-traded company.

As a U.S. public company, we are generally subject to the reporting and other requirements of applicable federal and state securities laws, rules and regulations and scrutiny by stockholders and proxy advisors. Compliance with these laws, rules and regulations and attending to stockholder requests, requires us to continue to incur significant legal, accounting and other expenses and costs, makes some activities more difficult, time-consuming or costly and increases demands on our systems and resources, and may continue to do so. For example, we recently expended significant time and resources in terminating our stockholder rights plan, creating a compensation recovery policy and an anti-hedging and anti-pledging policy, redesigning our executive compensation program and responding to other requests from our stockholders. We continue to implement strategic and board initiatives to comply with recent and updated best-practices related to our public company status and respond to stockholder feedback, and expect that will have to continue to allocate significant time and resources to such endeavors.

In addition, as a result of disclosure of information in filings required of a public company, our business and financial condition will become more visible, which may result in threatened or actual litigation, including by competitors and other third parties. If such claims are successful, our business and operating results could be harmed, and even if the claims do not result in litigation or are resolved in our favor, these claims, and the time and resources necessary to resolve them, could divert the resources of our management and adversely affect our business, brand and reputation and results of operations.

Employee Risks

We depend on key management and technical personnel, the loss of whom could harm our business.

We depend on our key management and technical personnel. The loss of one or more key employees could materially and adversely affect us.

Our success also depends on our ability to attract and retain highly qualified technical, sales and marketing and management personnel necessary for the maintenance and expansion of our activities. We face strong competition for such personnel and may not be able to attract or retain such personnel. In addition, when we experience periods with little or no profits, a decrease in compensation based on our profits may make it difficult to attract and retain highly qualified personnel.

In order to attract and retain executives and other key employees, we must provide a competitive compensation package, including cash and stock-based compensation. Our primary form of stock-based compensation is restricted stock units (“RSUs”). We have issued a substantial number of RSUs in various forms to our management and staff. We cannot guarantee that such stock-based incentive awards are tax deductible. As a result, we may be required to pay additional tax on stock-based compensation to our employees.

If the anticipated value of our stock-based incentive awards does not materialize so that they cease to be viewed as valuable, if our profits decrease, or if our total compensation package is not viewed as competitive, our ability to attract, retain and motivate executives and key employees could be weakened. The failure to successfully hire and retain executives and key employees or the loss of any executives and key employees could have a significant impact on our operations.

Any work stoppage or interruption by employees could materially and adversely affect our business and financial condition.

A significant number of our employees are represented by labor unions and covered by collective bargaining agreements that will expire between 2019 and 2023. Although we believe that our relations with our employees are generally good, no assurance can be given that we will be able to successfully extend or renegotiate our collective bargaining agreements as they expire from time to time. If we fail to extend or renegotiate our collective bargaining agreements, if disputes with our unions arise, or if our unionized workers engage in a strike or other work stoppage or interruption, we could experience a significant disruption of, or inefficiencies in, our operations or incur higher labor costs, which could have a material adverse effect on our business, results of operations, financial position and liquidity.

<u>Other Risks</u>

Natural disasters could decrease our manufacturing capacity.

Some of our current manufacturing facilities are located in geographic regions that have experienced major natural disasters, such as earthquakes, floods and hurricanes. Our disaster recovery plan may not be adequate or effective. We do not carry earthquake insurance. Other insurance that we carry is limited in the risks covered and the amount of coverage. Our insurance would not be adequate to cover all of our resulting costs, business interruption and lost profits when a major natural disaster occurs. A natural disaster rendering one or more of our manufacturing facilities totally or partially unusable, whether or not covered by insurance, would materially and adversely affect our business and financial condition.

Climate change could materially and adversely affect our business.

We cannot predict the effects that climate change may have on our business. They might, for example:

- depress or reverse economic development,
- reduce the demand for construction,
- increasing the cost and reducing the availability of wood products used in construction,
- increase the cost and reduce the availability of raw materials and energy,
- increase the cost and reduce the availability of insurance covering damage from natural disasters, and
- lead to new laws and regulations that increase our expenses and reduce our sales.

Any of these consequences, and other consequences of climate change that we do not foresee, could materially and adversely affect our sales, profits and financial condition.

We may have exposure to greater than anticipated tax liabilities.

We provide guidance on our anticipated tax rates. Failure to meet these anticipated rates could cause us to miss analyst forecasts and could result in material declines in our stock price. Our future income taxes could be adversely affected by earnings being lower than anticipated in jurisdictions that have lower statutory tax rates and higher than anticipated in jurisdictions that have higher statutory tax rates, by changes in the valuation of our deferred tax assets and liabilities, as a result of changes in foreign tax exchanges, or changes in tax laws, regulations, or accounting principles, as well as certain discrete items. The determination of our worldwide provision for income taxes and other tax liabilities requires significant judgment, and there are many transactions and calculations where the ultimate tax determination is uncertain. Although we believe our estimates are reasonable, the ultimate tax outcome may differ from the amounts recorded in our financial statements and may materially affect our financial results in the period or periods for which such determination is made.

On December 22, 2017, the U.S. Tax Cuts and Jobs Act of 2017 (the "Tax Reform Act") was signed into law. The impact of the Tax Reform Act and any future Treasury rules, regulations or guidance thereunder on our business and our stockholders is uncertain and could be adverse and cause our future results of operations and financial condition to differ materially from our expectations, estimates and assumptions disclosed in this Annual Report on Form 10-K or previously.

Contracts that we file as exhibits to our public reports contain recitals, representations and warranties that may not be factually correct.

The parties to any agreement or other instrument that we file as an exhibit to this or any other report did not necessarily intend that any recital, representation, warranty or other statement of purported fact in the instrument establish or confirm any fact, even if it is worded as such. Often such statements are used to allocate contractual risk between the parties, and the statements often are subject to standards of materiality that differ from the standards applicable to our reports. In addition, such statements may have been qualified by other materials that we have not filed with (or incorporated by reference into) this or any other report or document. Such exhibits should be read in the context of our other disclosures in our reports and it should not be assumed that any statement, representation or warranty of any party is necessarily factually accurate.

Impairment charges on goodwill or other intangible assets adversely affect our financial position and results of operations.

We are required to perform impairment tests on our goodwill, indefinite-lived intangible assets and definite-lived intangible assets annually or at any time when events occur that could affect the value of such assets. To determine whether a goodwill impairment has occurred, we compare fair value of each of our reporting units with its carrying value. In the past, these tests have led us to incur significant impairment charges. Significant and unanticipated changes in circumstances, such as significant adverse changes in business climate, adverse actions by regulatory authorities, unanticipated competition, loss of key customers or changes in technology or markets, can require a charge for impairment that can materially and adversely affect our reported net income and our stockholders' equity.

We rely on complex software systems and hosted applications to operate our business, and our business may be disrupted if we are unable to successfully/efficiently update these systems or convert to new systems.

We are increasingly dependent on technology systems to operate our business, reduce costs, and enhance customer service. These systems include complex software systems and hosted applications that are provided by third parties such as financial management and human capital management platforms from SAP America, Inc. and Workday, Inc. Software systems need to be updated on a regular basis with patches, bug fixes and other modifications. Hosted applications are subject to service availability and reliability of hosting environments. We also migrate from legacy systems to new systems from time to time. Maintaining existing software systems, implementing upgrades and converting to new systems are costly and require a significant allocation of personnel and other resources. The implementation of these systems upgrades and conversions is a complex and time-consuming project involving substantial expenditures for implementation activities, consultants, system hardware and software, often requires transforming our current business and financial processes to conform to new systems, and therefore, may take longer, be more disruptive, and cost more than forecast and may not be successful. If the implementation is delayed or otherwise is not successful, it may hinder our business operations and negatively affect our financial condition and results of operations. There are many factors that may materially and adversely affect the schedule, cost, and execution of the implementation process, including, without limitation, problems during the design and testing phases of new systems; system delays and malfunctions; the deviation by suppliers and contractors from the required performance under their contracts with us; the diversion of management attention from our daily operations to the implementation project; reworks due to unanticipated changes in business processes; difficulty in training employees in the operation of new systems and maintaining internal control while converting from legacy systems to new systems; and integration with our existing systems. Some of such factors may not be reasonably anticipated or may be beyond our control.

Failure of our internal control over financial reporting or our accounting systems could harm our business and financial results.

Because of the inherent limitations of internal control, our internal control over financial reporting might not detect or prevent misstatements of our consolidated financial statements on a timely basis. We have used accounting and other financial management software systems in connection with our operations. Defects in such systems or their implementation could result in errors in our consolidated financial statements. Our growth and entry into globally dispersed markets as well as periodic conversions from legacy software systems to new software systems puts significant additional pressure on our internal control. Failure to maintain an effective internal control could limit our ability to report our financial results accurately or to detect and prevent deficiencies timely, cause investors to lose confidence in the accuracy and completeness of our financial reports, and subject us to regulatory investigations and litigation. As a result, our business and the market price of our common stock could be materially and adversely affected.

Changes in accounting standards could materially and adversely affect our financial results.

The accounting rules applicable to public companies are subject to frequent revision. Future changes in accounting standards, guidance and interpretations could require us to change the way we measure revenue, expense or balance sheet amounts, which could result in material and adverse change to our reported results of operations or financial condition.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

We own our home office in Pleasanton, California, and our principal United States manufacturing facilities in Stockton and San Bernardino County, California, McKinney, Texas, West Chicago, Illinois, Columbus, Ohio, and Gallatin, Tennessee. The principal manufacturing facilities located outside the United States, the majority of which we own, are in Canada, France, Denmark, Germany, Poland, Switzerland, Sweden, Portugal and China. We also own and lease smaller manufacturing facilities, warehouses, research and development facilities and sales offices in the United States, the United Kingdom, Europe, Asia, Australia, New Zealand, and Chile. As of February 27, 2019, the Company’s owned and leased facilities were as follows:

	Number Of Properties	Approximate Square Footage		
		Owned	Leased	Total
		(in thousands of square feet)		
North America	27	2,323	631	2,954
Europe	20	561	329	890
Asia/Pacific	10	175	75	250
Administrative and all other	1	89	—	89
Total	58	3,148	1,035	4,183

Our headquarters and principal executive offices are located in Pleasanton, California. We believe that our properties are maintained in good operating condition. Our manufacturing facilities are equipped with specialized equipment and use extensive automation. We consider our existing and planned facilities to be adequate for operations as currently conducted and as planned through 2018. Our leased facilities typically have renewal options and have expiration dates through 2028. We believe we will be able to extend leases on our various facilities as necessary, or as they expire. Currently, our manufacturing facilities are being operated with at least one full-time shift. Based on current information and subject to future events and circumstances, we anticipate that we may require additional facilities to accommodate possible future growth.

In November 2018, we sold our real estate in Vacaville, California and received net proceeds of $17.5 million, after closing costs and sales price adjustments. These properties are classified under the “Administrative & All other” segment.

Item 3. Legal Proceedings.

From time to time, the Company is involved in various legal proceedings and other matters arising in the normal course of business.

Corrosion, hydrogen enbrittlement, cracking, material hardness, wood pressure-treating chemicals, mis-installations, misuse, design and assembly flaws, manufacturing defects, labeling defects, product formula defects, inaccurate chemical mixes, adulteration, environmental conditions, or other factors can contribute to failure of fasteners, connectors, anchors, adhesives, specialty chemicals, such as fiber reinforced polymers, and tool products. In addition, inaccuracies may occur in product information, descriptions and instructions found in catalogs, packaging, data sheets, and the Company’s website.

Certain of the legal proceedings in which we are involved are discussed under “Litigation and Potential Claims” in Note 14, “Commitments and Contingencies,” to the Company’s Consolidated Financial Statements, and are hereby incorporated by reference. The resolution of any claim or litigation is subject to inherent uncertainty and could have a material adverse effect on the Company’s financial condition, cash flows or results of operations.

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 for Common Stock

The information presented below is our historical data and not necessarily indicative of our future financial condition or results of operations.

The Company's common stock is listed on the New York Stock Exchange (the "NYSE") under the symbol "SSD."

Record Holders

As of February 19, 2019, there were 13,233 holders of record of the Company's common stock. Because many of our shares of common stock are held by brokers and other nominees on behalf of stockholders, including in trust, we are unable to estimate the total number of stockholders represented by these record holders.

Dividends

Future dividends, if any, will be determined by the Company's Board of Directors, based on the Company's future earnings, cash flows, financial condition and other factors deemed relevant by the Board of Directors. See "Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations."

Stock Performance Graph

This performance graph shall not be deemed "soliciting material" or to be "filed" with the SEC for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any filing of the Company under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such filing. The information presented below is our historical data and not necessarily indicative of our future financial condition or results of operations.

The graph below compares the cumulative total stockholder return on the Company's common stock from December 31, 2013, through December 31, 2018, with the cumulative total return on the S&P 500 Index (a broad equity market index), the Dow Jones U.S. Building Materials & Fixtures Index (a published industry or line-of-business index) and a Peer Group Index over the same period (assuming the investment of $100 in the Company's common stock and in each of the indices on December 31, 2013, and reinvestment of all dividends into additional shares of the same class of equity securities at the frequency with which dividends are paid on such securities during the applicable fiscal year). To provide an additional comparison to our performance, we included an index consisting of companies in the building products or construction materials industries that are most comparable to us in terms of size and nature of operations, which group has also been referenced by us in connection with setting our executive compensation.

The Peer Group Index below consisted of AAON, Inc., PGT Innovations, Inc., Continental Building Products, Inc., Trex Company, Inc., Insteel Industries, Inc., Quanex Building Products Corp., American Woodmark Corp, Patrick Industries, Inc., Apogee Enterprises, Inc., U.S. Concrete, Inc., Gibraltar Industries, Inc., Eagle Materials Corp., Summit Material, LLC., Advanced Drainage System, Armstrong World Industries, Inc., and Masonite International Corp. In 2018, we added Advanced Drainage System, Armstrong World Industries, Inc., to the stock performance graph below to ensure that it continues to reflect an appropriate comparison to our business operations. During 2018, NCI Building Systems, Inc. acquired Ply Gem Holdings, Inc., both of which were included as our peer companies in 2017. These two companies are not included as peer companies this year. We review our peer companies annually against revenue, industry and other company characteristics and as a result, we no longer consider these companies to be peers as of the acquisition date. As a result of this review, we also added two new peer companies to the peer group this year Advanced Drainage Systems and Armstrong World Industries.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The table below presents the monthly repurchases of shares of our common stock in the fourth quarter of the fiscal year ended December 31, 2018.

Period	(a) Total Number of Shares Purchased	(b) Average Price Paid per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Approximate Value of Shares that May Yet Be Purchased Under the Plans or Programs (1)
October 1 - October 31, 2018	528,100	$ 68.26	528,100	$66.0 million
November 1 - November 30, 2018	220,359	$ 56.65	220,359	$53.5 million
December 1 - December 31, 2018	221,634	$ 56.48	221,634	$41.0 million
Total	970,093			

(1) Pursuant to the $275.0 million repurchase authorization that was publicly announced on August 1, 2017, and expired on December 31, 2018. See “Note 3 — Net Income per Share” to the Company’s Consolidated Financial Statements.

On January 28, 2019, the Company's Board of Directors authorized the Company to repurchase up to $100.0 million of the Company’s common stock. The authorization is in effect from January 1, 2019 through December 31, in 2019.

Item 6. Selected Financial Data.

The following selected consolidated financial data should be read in conjunction with Part II, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the Company's Consolidated Financial Statements and the related Notes thereto appearing in Part II, Item 8 “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K, including any discussion of presentation changes, accounting changes, business combinations or dispositions of business operations therein to fully understand factors that may affect the comparability of the information. Historical performance is not necessarily indicative of future results.

The consolidated statements of operations data for each of the years ended December 31, 2018, 2017 and 2016 and the consolidated balance sheets data as of December 31, 2018 and 2017 are derived from our audited consolidated financial statements of this Form 10-K. The consolidated statements of operations data for the years ended December 31, 2015 and 2014 and the consolidated balance sheets data as of December 31, 2016, 2015 and 2014 are derived from our audited consolidated financial statements, except as otherwise noted, that are not included in this Annual Report on Form 10-K. The information presented below is our historical data and not necessarily indicative of our future financial condition or results of operations. The financial data below includes the results of operations of acquired companies following their acquisition. The consolidated statements of operations data for the years ended December 31, 2015 and 2014 include reclassification adjustments to gross profit, operating expenses and operating income, that had no affect on net income for the years therein. For a summary of acquisitions that took place during the fiscal years ended December 31, 2018, 2017 and 2016, see “Note 10 — Acquisitions and Dispositions” to the Company’s Consolidated Financial Statements.

	Years Ended December 31,				
(in thousands, except per-share data)	2018	2017	2016	2015	2014
Statement of Operations Data:					
Net sales	$1,078,809	$977,025	$860,661	$794,059	$752,148
Gross profit	480,519	443,381	409,880	356,406	339,211
Gross profit margin	44.5%	45.4%	47.6%	44.9%	45.1%
Total operating expenses	312,080	305,626	269,450	246,976	238,793
Percentage of sales	28.9%	31.3%	31.3%	31.1%	31.7%
Income from operations	172,332	137,915	141,210	109,819	100,213
Percentage of sales	16.0%	14.1%	16.4%	13.8%	13.3%
Net income	$126,633	$92,617	$89,734	$67,888	$63,531
Percentage of sales	11.7%	9.5%	10.4%	8.5%	8.4%
Earnings per share of common stock:					
Basic	$2.74	$1.95	$1.87	$1.39	$1.30
Diluted	$2.72	$1.94	$1.86	$1.38	$1.29
Cash dividends declared per share of common stock	$0.870	$0.810	$0.700	$0.620	$0.545

(in thousands)	2018	2017	2016	2015	2014
Balance Sheet Data:					
Working capital	$447,949	$447,450	$476,451	$494,308	$509,838
Property, plant and equipment, net	254,597	273,020	232,810	213,716	207,027
Goodwill	130,250	137,140	124,479	123,950	123,881
Total assets	1,021,663	1,037,523	979,974	961,309	973,065
Line of credit and long-term liabilities, including current portion	16,443	17,310	5,336	16,521	15,138

Total liabilities	166,149	152,745	114,132	111,485	109,600
Total stockholders' equity	855,514	884,778	865,842	849,824	863,465

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

The following is a discussion and analysis of the financial condition and results of operations, unless stated otherwise, for the Company for the fiscal years ended December 31, 2018, 2017 and 2016, and of certain factors that may affect the Company’s prospective financial condition and results of operations. The following discussion and analysis contain forward-looking statements as discussed in the “Note About Forward-Looking Statements” at the beginning of this Annual Report on Form 10-K and should be read in conjunction with the Company's Consolidated Financial Statements and related Notes included therein. In addition to our historical consolidated financial information, the following discussion contains forward-looking statements that reflect our plans, estimates, and beliefs. Our actual results could differ materially from those plans, estimates, and beliefs. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly "Item 1A — Risk Factors."

All comparisons below (which are generally indicated by words such as “increased,” “decreased,” “remained,” or “compared to”), unless otherwise noted, are comparing the year ended December 31, 2018 with the year ended December 31, 2017. In 2018, the Company recorded an out-of-period adjustment for the years ended December 31, 2017 and December 31, 2016, which increased cost of sales and decreased general and administrative expenses by $2.9 million and $2.6 million for the years ended December 31, 2017 and December 31, 2016, respectively. Such adjustment only applied to the North America segment, which resulted from recording certain depreciation expense on company-owned real estate as general and administrative expense rather than cost of goods sold. Income from operations and net income for the year ended December 31, 2017 as presented below were not affected by the adjustment. In 2018, the Company changed its presentation of its consolidated statement of operations to display foreign exchange gain (loss), net, as a separate item below income from operations. Foreign exchange gain (loss), net, was previously included in general and administrative expenses and in income from operations. Income before tax and net income for the years ended December 31, 2017 and December 31, 2016 presented below were not affected by the change in presentation.

Overview

We design, manufacture and sell building construction products that are of high quality and performance, easy to use and cost-effective for customers. We operate in three business segments determined by geographic region: North America, Europe and Asia/Pacific.

Our primary business strategy is to grow through increasing our market share and profitability in Europe; growing our share in the concrete space; and continuing to develop our software to support our core wood products offering while leveraging our strengths in engineering, sales and distribution, and our strong brand name. We believe these initiatives and objectives are crucial to not only offer a more complete solution to our customers and bolster our sales of core wood connector products, but also to mitigate the cyclicality of the U.S. housing market.

On October 30, 2017, we announced the 2020 Plan to provide additional transparency into our strategic plan and financial objectives. We remain focused on achieving our aggressive financial targets under the 2020 Plan, assuming (i) there are mid-single digit growth in U.S. housing starts and in the repair and remodel market, (ii) we can increase our market share and profitability in Europe, and (iii) we can gain market share for both our truss and concrete product offerings. Subject to future events and circumstances, our 2020 Plan is centered on three key aggressive operational objectives as further described below.

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- First, a continued focus on organic growth with a goal to achieve a net sales compound annual growth rate of approximately 8% (from $860.7 million reported in fiscal 2016) through fiscal 2020. Since 2016, net sales has grown at a compound annual growth rate of 12%.
- Second, rationalizing our cost structure to improve company-wide profitability by reducing total operating expenses as a percentage of net sales from 31.8% in fiscal 2016 to a range of 26.0% to 27.0% by fiscal 2020. We expect to achieve this initiative, aside from top-line growth, through cost reduction measures in Europe and our concrete product line, zero-based budgeting for certain expense categories and a commitment to remaining headcount neutral (except in the production and sales departments to meet demands from sales growth). Offsetting these reductions will be the Company’s ongoing investment in its software initiatives as well as the expenses associated with our ongoing SAP implementation.
- Third, improving our working capital management and overall balance sheet discipline primarily through the reduction of inventory levels as well as implementing Lean principles in many factories. With these efforts, we believe we could achieve an additional 25% to 30% reduction of our raw materials and finished goods inventory through 2020 without impacting day-to-day production and shipping procedures.

Many of our key operating initiatives stem from the 2020 Plan, including those focused on rationalizing our cost structure to drive improved profitability without sacrificing our competitive edge, on growing our market share and on improving our technologies and systems to provide best-in-class services to our customers.

Operating expenses as a percentage of net sales were 28.9% for the year ended 2018 and 31.3% for both years ended 2017 and 2016. In dollars, operating expenses for the year ended December 31, 2018 was $6.5 million above our operating expenses for the year ending December 31, 2017, which was mostly due to increased consulting and legal expenses, sales and sales agent commissions on increased sales volumes and SAP implementation expenses. In late 2017 and throughout 2018, we engaged a leading management consultant to perform an independent in-depth analysis of our operations, which contributed towards a reduction of expenses in 2018 and could potentially result in initiatives that reduce expenses beyond the 2020 Plan as well as improvements to net working capital. We will incur additional consulting expenses in 2019 due to these initiatives, and we expect all of the consulting fees we incurred in 2018 and will incur in 2019 for the leading management consultant will have a one-year or less pay back.

We believe our efforts to achieve the 2020 Plan will contribute to improved business performance and operating results, improve returns on invested capital and allow us to be more aggressive in repurchasing shares of our stock in the near-term. Through execution on the 2020 Plan, we expect by the end of fiscal year 2020 to achieve a return on invested capital (1) target within the range of 17% to 18% from 10.5% in 2016. The Company's return on invested capital was 14.3% for the fiscal year ended 2018.

We believe our ability to achieve industry-leading margins from a gross profit and operating income standpoint is due to the high level of value-added services that we provide to our customers. Aside from our strong brand recognition and trusted reputation, Simpson is unique due to our extensive product testing capabilities and our state-of-the-art test lab; strong customer support and education for engineers, builders and contractors; deep 40-plus year relationships with engineers that get our products specified on the blueprint and pulled through to the job site; product availability with delivery in typically 24 hours to 48 hours; and an active involvement with code officials to improve building codes and construction practices. Based on current information, we expect the competitive environment to be relatively stable with U.S. single-family housing to grow in the low to mid single digits for fiscal year 2019. For the purposes of defining our 2020 objectives, during years 2017 to 2020 we assume U.S. single-family housing starts growing as a percentage in the mid single digits on average, which should support a sustainable organic revenue growth outlook in North America for many of our products.

We have invested in our strategic initiative to sell engineered product solutions, to help us perform throughout all industry cycles, which we estimate supports approximately 40% of our connector and truss plate sales. In support of this effort, we acquired CG Visions, Inc. (“CG Visions”) in 2017, and completed our purchase of the LotSpec software asset and entered into a strategic software partnership with Hyphen Solutions ("Hyphen"), in 2018.

The LotSpec software asset is a suite of software applications that facilitate builders’ abilities to complete complex designs and do full take-offs in collaboration with our CG Visions software. Hyphen offers integrated information exchange between its software and our existing CG Visions' take-off platform to more efficiently create detailed plan estimates, designs and production specifications to automatically flow through to purchasing systems. We believe that the LotSpec software purchase and the Hyphen strategic partnership align well with our strategy to continue strengthening our value proposition by being the industry's trusted partner in construction solutions and building systems software.

While acquisitions were part of a dual-fold approach to growth in the past, our go-forward strategy will primarily focus on organic growth, supported by strategic capital investments in the business. As such, we will de-emphasize acquisitions activities going forward, especially in the concrete repair space. An exception may occur if the right opportunity were to arise in other areas of our business, such as in our core fastener space, which is the particular area where we believe it would be beneficial to gain additional production capacity to support our wood business or to enhance our wood and concrete product portfolio with additional value–added products.

Factors Affecting Our Results of Operations

Unlike lumber or other products that have a more direct correlation to housing starts, our products are used to a greater extent in areas that are subject to natural forces, such as seismic or wind events. Our products are generally used in a sequential process that follows the construction process. Residential and commercial construction begins with the foundation, followed by the wall and the roof systems, and then the installation of our products, which flow into a project or a house according to these schedules. Foundation product sales could be considered a leading indicator for our product sales.

Our sales also tend to be seasonal, with operating results varying from quarter to quarter. With some exceptions, our sales and income have historically been lower in the first and fourth quarters than in the second and third quarters of a fiscal year, as our customers tend to purchase construction materials in the late spring and summer months for the construction season. In addition, weather conditions, such as extended cold or wet weather, which affect and sometimes delay installation of some of our products, could negatively affect our results of operations. Political and economic events can also affect our sales and profitability.

ERP Integration

In July 2016, our Board of Directors (the "Board") approved a plan to replace our current in-house enterprise resource planning ("ERP") and externally sourced accounting platforms with a fully integrated ERP platform from SAP America, Inc. ("SAP") in multiple phases by location over a period of four years at all facilities plus our headquarters, with a focus on configuring, instead of customizing, the standard SAP modules.

We went live with our first wave of the SAP implementation project in February of 2018. The first wave of the SAP implementation has taken longer than expected. As a result, we now believe the SAP implementation will be completed by the end of 2021, and associated costs will increase by approximately 15% from prior estimates. While we believe the SAP implementation will be beneficial to the Company over time, annual operating expenses are expected to increase from 2018 to 2024 as a result of the ERP project, partly due to the amortization of related capitalized costs. As of December 31, 2018, we have capitalized $16.6 million and expensed $13.1 million of the costs associated with the ERP project.

Business Segment Information

Our North America segment has generated revenues primarily from wood construction products compared to concrete construction products. Due to improved economic conditions, net sales in regions of the segment have trended up, including increases in housing starts, particularly in the north-western, south-western and south-eastern regions of the United States. Our wood product net sales increased 12.6% for the year ended December 31, 2018 compared to the year ended December 31, 2017, primarily due to increased sales volumes and an 11% price increase on a majority of our wood connector products sold in the United Stated effective in the third quarter of 2018. Our truss sales increased for the year ended 2018 due to increased sales volumes from customer conversions and unit sales prices. Our truss specialists are focusing on converting medium size truss customers to our design and management software in 2019, while continuing to support our smaller truss customers. To improve truss plate gross profit margins, we have relocated our truss manufacturing into our wood connector plants, which will increase efficiency and plant utilization in the wood connector plants. Our concrete construction product sales increased 18.3% for the year ended December 31, 2018 compared to the year ended December 31, 2017, mostly due to increased sales volumes and unit sales prices.

In late 2016, we collaborated with The Home Depot, Inc. (“The Home Depot”) to make available our mechanical anchor line of products in The Home Depot. This collaboration increased a portion of our finished goods inventory and we expect to continue to introduce our mechanical anchor line of products through approximately 1,900 of The Home Depot store locations by 2020. As of December 31, 2018, the product line had rolled out to 373 The Home Depot locations with another 400 expected by the end of the second quarter of 2019. The roll-out is occurring a much slower rate than expected due to space restrictions at The Home Depot stores. This slower roll-out; however, is not expected to affect our 2020 Plan target for compound annual sales growth. See “*North America*” below.

Our Europe segment generates more revenues from wood construction products than concrete construction products. Wood construction product sales decreased 6.5% for the year ended December 31, 2018 compared to the year ended December 31, 2017. Net sales on wood construction products for the year ended December 31, 2017 included $12.8 million of net sales provided by Gbo Fastening Systems' Poland and Romania, both of which were sold during the latter part of 2017. Concrete construction product sales are mostly project based, and net sales increased 7.4% for the year ended 2018 compared to the year ended 2017, primarily due to increased sales volumes. The roll-out of the complete line of of Gbo fastener products into the Nordic region and France is progressing as planned. We are increasing our wood connector sales presence in the Nordic region as expected, which will partially replace third-party suppliers and improve related profit margins. Operating expenses decreased $3.1 million for the year ended 2018 compared to the year ended 2017, partly due to the sale of Gbo Fastening Systems' Poland and Romania subsidiaries as well as other cost reductions measures. See "*Europe*" below.

Our Asia/Pacific segment has generated revenues from both wood and concrete construction products. We believe that the Asia/Pacific segment is not significant to our overall performance.

(1) When referred to above, the Company's return on invested capital ("ROIC") for a fiscal year is calculated based on (i) the net income of that year as presented in the Company's consolidated statements of operations prepared pursuant to generally accepted accounting principles in the U.S. ("GAAP"), as divided by (ii) the average of the sum of the total stockholders' equity and the total long-term liabilities at the beginning of and at the end of such year, as presented in the Company's consolidated balance sheets prepared pursuant to GAAP for that applicable year. As such, the Company's ROIC, a ratio or statistical measure, is calculated using exclusively financial measures presented in accordance with GAAP.

Business Outlook

Based on current information and subject to future events and circumstances:

- The Company currently anticipates that the market price of steel will be flat during the first quarter of 2019.

- The Company estimates that its full-year 2019 gross profit margin will be between approximately 44.5% and 45.5%.

- The Company estimates that its full-year 2019 operating expenses, as a percentage of net sales, will be between approximately 27.5% and 28.5%.

- The Company estimates that its 2019 full-year effective tax rate will be between approximately 25% to 27% including both federal and state income tax rates. The ultimate impact of the Tax Reform Act may differ materially from the Company's estimates due to changes in the interpretations and assumptions made by the Company as well as additional regulatory guidance that may be issued and actions the Company may have taken or may take as a result of the Tax Cuts and Jobs Act, such as cash repatriation to the United States. The Company will continue to assess the expected impacts of the new tax law and provide additional disclosures at appropriate times.

Results of Operations

The following table sets forth, for the years indicated, the Company's operating results as a percentage of net sales for the years ended December 31, 2018, 2017 and 2016, respectively:

	Years Ended December 31,		
	2018	2017	2016
Net sales	100.0 %	100.0 %	100.0 %
Cost of sales	55.5 %	54.6 %	52.4 %
Gross profit	44.5 %	45.4 %	47.6 %
Research and development and other engineering	4.0 %	4.9 %	5.4 %
Selling expense	10.2 %	11.8 %	11.4 %
General and administrative expense	14.7 %	14.6 %	14.5 %
Total operating expense	28.9 %	31.3 %	31.3 %
Net gain on disposal of assets	(1.0)%	— %	(0.1)%
Impairment of goodwill	0.6 %	— %	— %
Income from operations	16.0 %	14.1 %	16.4 %
Loss in equity investment, before tax	— %	— %	— %
Foreign exchange gain (loss)	— %	0.1 %	(0.2)%
Interest expense, net	(0.1)%	(0.1)%	(0.1)%
Gain on bargain purchase of a business	— %	0.6 %	— %

Loss on disposal of a business	—	%	—	%	—	%
Income before taxes	15.9	%	14.8	%	16.1	%
Provision for income taxes	4.2	%	5.3	%	5.7	%
Net income	11.7	%	9.5	%	10.4	%

Comparison of the Years Ended December 31, 2018 and 2017

Unless otherwise stated, the results announced below, when providing comparisons (which are generally indicated by words such as "increased," "decreased," "unchanged" or "compared to"), compare the results of operations for the year ended December 31, 2018, against the results of operations for the year ended December 31, 2017. Unless otherwise stated, the results announced below, when referencing "both years," refer to the year ended December 31, 2017 and the year ended December 31, 2018. To avoid fractional percentages, all percentages presented below were rounded to the nearest whole number.

The following table shows the change in the Company's operations from 2017 to 2018, and the increases or decreases for each category by segment:

		Increase (Decrease) in Operating Segment				
(in thousands)	**2017**	**North America**	**Europe**	**Asia/ Pacific**	**Admin & All Other**	**2018**
Net sales	$977,025	$106,890	$(6,128)	$1,022	$—	$1,078,809
Cost of sales	533,644	68,120	(3,307)	(93)	(74)	598,290
Gross profit	443,381	38,770	(2,821)	1,115	74	480,519
Operating expenses:						
Research and development and other engineering expense	47,616	(3,728)	(1,166)	244	90	43,056
Selling expense	114,903	(1,418)	(3,917)	169	194	109,931
General and administrative expense	143,107	13,467	1,950	(74)	643	159,093
Operating expenses	305,626	8,321	(3,133)	339	927	312,080
Net gain (loss) on disposal of assets	(160)	(1,009)	(624)	32	(8,818)	(10,579)
Impairment of goodwill	—	—	6,686	—	—	6,686
Income from operations	137,915	31,458	(5,750)	744	7,965	172,332
Loss in equity investment, before tax	(86)	23	—	—	—	(63)
Foreign exchange gain	1,252	2,359	(3,026)	161	(316)	430
Interest expense, net	(788)	(341)	126	(185)	617	(571)
Gain on bargain purchase of a business	6,336	—	(6,336)	—	—	—
Loss on disposal of a business	(211)	—	211	—	—	—
Income before income taxes	144,418	33,499	(14,775)	720	8,266	172,128
Provision for income taxes	51,801	(7,796)	822	(305)	973	45,495
Net income	$92,617	$41,295	$(15,597)	$1,025	$7,293	$126,633

Net Sales increased 10.4% to $1,078.8 million from $977.0 million. Net sales to contractor distributors, dealer distributors, home centers and lumber dealers increased primarily due to increased home construction activity and average net sales unit prices. Wood construction product net sales, including sales of connectors, truss plates, fastening systems, fasteners and shearwalls, represented 85% of the Company's total net sales in both years. Concrete construction product net sales, including sales of adhesives, chemicals, mechanical anchors, powder actuated tools and reinforcing fiber materials, represented 15% of the Company's total net sales in both years.

Gross profit increased to $480.5 million from $443.4 million. Gross profit margins decreased to 44.5% from 45.4%, which was lower than our expected gross profit margins of 45.5% to 46.5%. This was due to an unexpected sharp decline in net sales and increased labor and factory and tooling costs during December 2018 resulting in increases in factory, material and labor costs as a percentage of net sales. The gross profit margins, including some intersegment expenses, which were eliminated in consolidation, and excluding other expenses that are allocated according to product group, decreased to 45.2% from 46.5% for wood construction products and increased to 37.1% from 34.7%, respectively.

Research and development and engineering expense decreased 9.6% to $43.1 million from $47.6 million, primarily due to decreases of $2.1 million in personnel costs, $1.0 million in severance expenses, $0.6 million in cash profit sharing on lower operating income and $0.2 million in professional fees.

Selling expense decreased 4.3% to $109.9 million from $114.9 million primarily due to decreases of $2.4 million in personnel costs, $2.1 million in advertising and promotional costs, $1.9 million in severance expense and $1.0 million in stock-based compensation expense, which was partly offset by an increase of $2.6 million in sales and agent commissions.

General and administrative expense increased 11.2% to $159.1 million from $143.1 million, primarily due to increases of $13.2 million in consulting and legal expenses, $3.3 million in depreciation expense, $0.5 million in bad debt expense and $0.4 million in subscription, licensing, maintenance and hosting fees, which was partly offset by decreases of $1.0 million in personnel costs and $0.6 million in stock-based compensation. Included in general and administrative expense are costs associated with the SAP implementation of $6.5 million, an increase of $3.3 million over the prior year. These expenses were primarily for professional fees and 2018 included $1.6 million in incremental related amortization expense.

Gain on sale of assets - In November 2018, the Company sold a facility that was previously leased exclusively to a third party. The Company received net proceeds of $17.5 million, which resulted in a gain of $8.8 million. In 2016, an eminent domain claim was exercised on land owned by the Company and included an offer for loss of property. The Company challenged the offer, which resulted in the Company receiving an additional $1.0 million in the first quarter of 2018 for the taking of the land, which occurred in 2016.

Impairment of goodwill - The Company completed its 2018 annual goodwill impairment analysis in the fourth quarter of 2018 and it resulted in the impairment charge of $6.7 million associated with assets acquired in Denmark in 2001. The impairment was due to a reduction in expected future operating profits for the reporting unit alone, and not for the Company as a whole, and as a result, the goodwill of the Denmark reporting unit was fully impaired. The Company's 2018 annual goodwill impairment analysis did not result in additional impairment of goodwill. See “Critical Accounting Policies and Estimates — Goodwill Impairment Testing."

Our *effective income tax rate* decreased to 26.4% from 35.9%, primarily due to the Tax Reform Act, which reduced the United States statutory federal corporate tax rate from 35% to 21%. The effective income tax rate for the year ended December 31, 2017 was also reduced by a nonrecurring gain on a bargain purchase related to the Gbo Fastening Systems acquisition, which was not taxable. The effective income tax rate for the year ended December 31, 2018 was increased by a nonrecurring impairment of goodwill related to the Europe segment, which was also not taxable.

Net income was $126.6 million compared to $92.6 million. Diluted net income per share of common stock was $2.72 compared to $1.94. The $92.6 million consolidated net income for the year ended December 31, 2017 included a $6.3 million nonrecurring gain on a bargain purchase of a business, which increased diluted earnings per share for the same period by $0.13.

Net Sales

The following table shows net sales by segment for the years ended December 31, 2017 and 2018, respectively:

(in thousands)	**North America**	**Europe**	**Asia/ Pacific**	**Total**
December 31, 2017	$803,697	$165,155	$8,173	$977,025
December 31, 2018	910,587	159,027	9,195	1,078,809
Increase (decrease)	$106,890	$(6,128)	$1,022	$101,784
Percentage increase (decrease)	13.3%	(3.7)%	12.5%	10.4%

The following table shows segment net sales as percentages of total net sales for the years ended December 31, 2017 and 2018, respectively:

	North America	**Europe**	**Asia/ Pacific**	**Total**
Percentage of total 2017 net sales	82 %	17 %	1 %	100%
Percentage of total 2018 net sales	84 %	15 %	1 %	100%

Gross Profit

The following table shows gross profit by segment for the years ended December 31, 2017 and 2018, respectively:

(in thousands)	North America	Europe	Asia/ Pacific	Admin & All Other	Total
December 31, 2017	$383,282	$58,973	$971	$ 155	$443,381
December 31, 2018	422,053	56,152	2,085	229	480,519
Increase (decrease)	$38,771	$(2,821)	$1,114	$ 74	$37,138
Percentage increase (decrease)	10.1 %	(4.8)%	*	*	8.4 %

* The statistic is not meaningful or material.

The following table shows gross profit percentages by segment for the years ended December 31, 2017 and 2018, respectively:

	North America	Europe	Asia/ Pacific	Admin & All Other	Total
2017 gross profit percentage	48 %	36 %	12 %	*	46%
2018 gross profit percentage	46 %	35 %	23 %	*	45%

* The statistic is not meaningful or material.

North America

- Net sales increased 13.3% mostly due to increased sales volume and average unit price in the United States. Canada's net sales increased primarily due to increased sales volumes and were not significantly affected by foreign currency translation.

- Gross profit margin decreased to 46.3% from 47.7%, primarily due to increased material, labor and shipping costs, as a percentage of net sales, partly offset by decreased factory and overhead costs as a percentage of net sales.

- Research and development and engineering expense decreased $3.7 million primarily due to decreases of $2.1 million in personnel costs, $0.5 million in severance expense, $0.5 million in cash profit sharing expense and $0.4 million in professional fees.

- Selling expense decreased $1.4 million, primarily due to decreases of $1.7 million in advertising expense, $0.8 million in stock-based compensation expense, $0.8 million in severance expense and $0.3 million in personnel costs, partly offset by an increase of $1.6 million in sales and agent commissions.

- General and administrative expense increased $13.5 million, primarily due to increases of $13.9 million in consulting and legal expenses, $3.3 million in depreciation expense, $1.1 million mostly in software subscription, licensing, maintenance and hosting fees and $0.2 million in bad debt expense, partly offset by decreases of $1.8 million in severance expense, $1.7 million in stock-based compensation and $1.1 million in personnel costs. Included in general and administrative expense are costs associated with the SAP implementation of $6.4 million, an increase of $4.1 million over the prior year quarter. These expenses were primarily for professional fees.

- Income from operations increased $31.5 million, mostly due to increased gross profit, which were partially offset by higher operating expenses. Severance expenses of $3.6 million were recorded in 2017.

Europe

- Net sales decreased 3.7% primarily due to reduced sales volume as a result of the late 2017 sale of Gbo Fastening Systems' Poland and Romania subsidiaries (acquired in January 2017), which contributed $12.8 million in net sales for the year ended December 31, 2017. Net sales were positively affected by approximately $4.9 million in foreign currency translations, primarily related to the strengthening of the Euro, British pound, Danish Kroner and Polish zloty against the United States dollar.

- Gross profit margin decreased to 35.3% from 35.7% primarily due to increased factory and overhead and warehousing costs, partly offset by decreased material and labor costs.

- Research and development and engineering expense decreased $1.2 million primarily due to decreases of $0.5 million in personnel costs and $0.5 million in severance expenses, partly offset by an increase of $0.2 million in professional fees.

- Selling expense decreased $3.9 million primarily due to decreases of $2.2 million in personnel costs, $1.2 million in severance expenses, $0.4 million mostly for advertising costs and $0.2 million in stock-based compensation expense.

- General and administrative expense increased $1.9 million primarily due to increases of $2.5 million in personnel costs, including $1.7 million in severance expense, $0.5 million in amortization expenses and $0.2 million in bad debt expense, partly offset by decreases of $1.1 million of consulting fees and $0.5 million mostly for software subscription, licensing, maintenance and hosting fees. Included in general and administrative expense are costs associated with the SAP implementation of $1.9 million, an increase of $0.8 million over the prior year quarter. These expenses were primarily for professional fees.

- *Impairment of goodwill* - The impairment charge of $6.7 million taken in the fourth quarter of 2018 was associated with assets acquired in Denmark in 2001, and as a result, the goodwill of the Denmark reporting unit was fully impaired. The impairment resulted from a reduction in expected future operating profits of the reporting unit, but not for Europe as a whole. The Company’s 2018 annual goodwill impairment analysis did not result in additional impairment of goodwill for other reporting units. See “Critical Accounting Policies and Estimates — Goodwill Impairment Testing."

- Income from operations decreased $5.8 million, mostly due to a $6.7 million impairment of goodwill.

Asia/Pacific

- For information about the Company's Asia/Pacific segment, please refer to the table above setting forth changes in our operating results for the years ended December 31, 2018 and 2017.

Administrative and All Other

- *Gain on sale of assets* - In November 2018, the Company sold a facility that was previously leased exclusively to a third party. The Company received net proceeds of $17.5 million, which resulted in a gain of $8.8 million.

Comparison of the Years Ended December 31, 2017 and 2016

Unless otherwise stated, the results announced below, when providing comparisons (which are generally indicated by words such as “increased,” “decreased,” “unchanged” or “compared to”), compare the results of operations for the year ended December 31, 2017, against the results of operations for the year ended December 31, 2016. Unless otherwise stated, the results announced below, when referencing “both years,” refer to the year ended December 31, 2016 and the year ended December 31, 2017. To avoid fractional percentages, all percentages presented below were rounded to the nearest whole number.

The following table shows the change in the Company’s operations from 2016 to 2017, and the increases or decreases for each category by segment:

		Increase (Decrease) in Operating Segment				
(in thousands)	**2016**	**North America**	**Europe**	**Asia/ Pacific**	**Admin & All Other**	**2017**
Net sales	$860,661	$61,676	$53,881	$807	$—	$977,025
Cost of sales	450,781	41,581	38,946	2,255	81	533,644
Gross profit	409,880	20,095	14,935	(1,448)	(81)	443,381
Research and development and other engineering expense	46,248	201	1,224	6	(63)	47,616
Selling expense	98,343	8,042	8,268	227	23	114,903
General and administrative expense	124,859	15,553	4,853	(1,103)	(1,055)	143,107
Operating expenses	269,450	23,796	14,345	(870)	(1,095)	305,626
Gain on sale of assets	(780)	769	(18)	(67)	(64)	(160)
Income from operations	141,210	(4,470)	608	(511)	1,078	137,915
Loss in equity method, before tax	—	(86)	—	—	—	(86)
Foreign exchange gain (loss)	(1,733)	(200)	2,918	(450)	717	1,252
Interest expense, net	(577)	89	(204)	63	(159)	(788)
Gain on bargain purchase of a business	—	—	6,336	—	—	6,336
Loss on disposal of a business	—	—	(211)	—	—	(211)
Income before income taxes	138,900	(4,667)	9,447	(898)	1,636	144,418
Provision for income taxes	49,166	4,278	697	(302)	(2,038)	51,801
Net income	$89,734	$(8,945)	$8,750	$(596)	$3,674	$92,617

Net Sales increased 13.5% to $977.0 million from $860.7 million. Recently acquired businesses accounted for $47.9 million (41%) of the increase in net sales. Net sales to contractor distributors, lumber dealers, dealer distributors and home centers increased primarily due to increased home construction activity and average net sales unit prices. Wood construction product net sales, including sales of connectors, truss plates, fastening systems, fasteners and shearwalls, represented 85% of the Company's total net sales in both years. Concrete construction product net sales, including sales of adhesives, chemicals, mechanical anchors, powder actuated tools and reinforcing fiber materials, represented 15% of the Company's total net sales in both years.

Gross profit increased to $443.4 million from $409.9 million. Gross profit margins decreased to 45.4% from 47.6%. Recently acquired businesses had an average gross profit margin of 30% for the year ended 2017. The gross profit margins, including some intersegment expenses, which were eliminated in consolidation, and excluding other expenses that are allocated according to product group, decreased to 47% from 49% for wood construction products and remained at 35% for both years for concrete construction products.

Research and development and engineering expense increased 3.0% to $47.6 million from $46.2 million, primarily due to increases of $2.2 million in personnel costs mainly attributable to the addition of staff and pay rate increases instituted on January 1, 2017, and $1.2 million in severance expenses, partly offset by a decreases of $1.4 million in professional fees and $0.8 million in cash profit sharing on lower operating income.

Selling expense increased 16.8% to $114.9 million from $98.3 million primarily due to increases of $10.3 million in personnel costs mostly related to recent acquisitions and the addition of staff and pay rate increases instituted on January 1, 2017, $3.1 million in advertising costs, $2.0 million in severance expenses, $0.7 million in depreciation expense, $0.3 million in donation expense, $0.3 million in facility expenses and $0.2 million in computer and phone expenses, which was partly offset by a decrease of $0.9 million in cash profit sharing expense. Recent acquisitions increased selling expense by $7.2 million.

General and administrative expense increased 14.6% to $143.1 million from $124.9 million, primarily due to increases of $10.3 million in personnel costs mostly related to recent acquisitions and the addition of staff and pay rate increases instituted on January 1, 2017, $6.5 million in legal and professional fees mostly related to strategic initiatives such as software and systems integration and compensation and governance changes, $3.7 million in software licensing, maintenance and hosting fees, $1.8 million in depreciation expense and $2.0 million in severance expenses, which was partly offset by a decrease of $6.0 million in cash profit sharing expense on lower operating income and reduced payouts under our executive officer cash profit sharing plan and $0.4 million in stock-based compensation. Recently acquired businesses were responsible for $11.2 million of the total increase in general and administrative expenses.

Gain on bargain purchase of a business - On January 3, 2017, we acquired Gbo Fastening Systems for approximately $10.2 million. This transaction was recorded as a business combination in accordance with the business acquisition method. We recorded a bargain purchase gain of $6.3 million, which represents the fair value of the net assets acquired and liabilities assumed over the consideration exchanged as of the acquisition date. This nonrecurring, non-operating income gain is included in the line item “Gain (adjustment) on bargain purchase of a business” in our results of operations for 2017.

Loss on disposal of a business - In 2017, we sold all of the outstanding shares of Gbo Poland and Gbo Romania for approximately $10.2 million, resulting in a loss of $0.2 million. In February 2018, post-closing adjustments were finalized, which resulted in the Company receiving an additional $69 thousand in sales proceeds.

Our *effective income tax rate* increased to 36% from 35%, primarily due to the Tax Reform Act toll tax (repatriation), partly offset by a decrease in the deferred tax liability due to the December 31, 2017 re-measurement the liability using the new 21% U.S. corporate tax rate.

Net income was $92.6 million compared to $89.7 million. Diluted net income per share of common stock was $1.94 compared to $1.86. The increase in net income was primarily due to the $6.3 million nonrecurring bargain purchase gain (see "Gain on bargain purchase of a business" above), which increased diluted net income by $0.13 per share of common stock.

Net Sales

The following table shows net sales by segment for the years ended December 31, 2016 and 2017, respectively:

(in thousands)	**North America**	**Europe**	**Asia/ Pacific**	**Total**
December 31, 2016	$742,021	$111,274	$7,366	$860,661
December 31, 2017	803,697	165,155	8,173	977,025
Increase	$61,676	$53,881	$807	$116,364
Percentage increase	8.3 %	48.4 %	11.0 %	13.5 %

The following table shows segment net sales as percentages of total net sales for the years ended December 31, 2016 and 2017, respectively:

	North America	**Europe**	**Asia/ Pacific**	**Total**
Percentage of total 2016 net sales	86 %	13 %	1 %	100%
Percentage of total 2017 net sales	82 %	17 %	1 %	100%

Gross Profit

The following table shows gross profit by segment for the years ended December 31, 2016 and 2017, respectively:

(in thousands)	**North America**	**Europe**	**Asia/ Pacific**	**Admin & All Other**	**Total**

December 31, 2016	$363,187	$44,038	$2,419	$236	$409,880
December 31, 2017	383,282	58,973	971	155	443,381
Increase (decrease)	$20,095	$14,935	$(1,448)	$(81)	$33,501
Percentage increase (decrease)	5.5 %	33.9 %	*	*	8.2 %

* The statistic is not meaningful or material.

The following table shows gross profit percentages by segment for the years ended December 31, 2016 and 2017, respectively:

	North America	Europe	Asia/ Pacific	Admin & All Other	Total
2016 gross profit percentage	48.9%	39.6%	32.8%	*	47.6%
2017 gross profit percentage	47.7%	35.7%	11.9%	*	45.4%

* The statistic is not meaningful or material.

North America

- Net sales increased 8.3% mostly due to increased average unit price in the United States and increased overall sales volumes. Canada's net sales increased primarily due to increased sales volumes on flat average net sales unit prices. Canada's net sales were not significantly affected by foreign currency translation. The recent North America acquisition increased net sales by $5.8 million.

- Gross profit margin decreased to 47.7% from 48.9% due to increased material, factory and overhead expenses and labor expenses, which was partly offset by the effect of increased average net sales unit prices.

- Research and development and engineering expense increased $0.2 million primarily due to increases of $1.5 million in personnel costs mainly related to the addition of staff and pay rate increases instituted on January 1, 2017, and $0.6 million in severance expenses, partly offset by a decreases of $1.4 million in consulting fees and $0.9 million in cash profit sharing expense.

- Selling expense increased $8.0 million, primarily due to increases of $4.5 million in personnel costs mostly related to the addition of staff and pay rate increases instituted on January 1, 2017, $2.4 million in advertising expense mostly in point of purchase advertising, trade show and sale promotion costs, $0.8 million in severance expenses, $0.7 million in depreciation expense and $0.3 million in donation expense, partly offset by a decrease of $1.0 million in cash profit sharing costs on lower operating income.

- General and administrative expense increased $15.6 million, primarily due to increases of $6.9 million in personnel costs, mostly related to the North America acquisition and the addition of staff and pay rate increases instituted on January 1, 2017, $6.4 million in legal and professional fees, mostly related to strategic initiatives such as software and systems integration and compensation and governance changes, $2.6 million mostly in software licensing, maintenance and hosting fees, $2.3 million in depreciation expense, $1.8 million in severance expenses, $0.6 million in intangible amortization expense and $0.5 million in stock-based compensation, partly offset by a decrease of $3.8 million in cash profit sharing expense. The recent North America acquisition increased general and administrative expense by $6.5 million.

- Income from operations decreased $4.5 million, mostly due to increased operating expenses, which were partially offset by higher gross profit. Severance expenses of $3.6 million were recorded in 2017.

Europe

- Net sales increased 48% primarily due acquired net sales of $42.1 million, which accounted for 78% of the total increase. Net sales were positively affected by approximately $1.4 million in foreign currency translations primarily related to the strengthening of the Euro, Polish zloty and Danish Kroner against the United States dollar.

- Gross profit margin decreased to 36% from 40% primarily due to our recent Europe acquisitions. The acquired businesses in Europe had an average gross profit margin of 20% in 2017.

- Research and development and engineering expense increased $1.2 million primarily due to increases of $0.6 million in severance expenses and $0.5 million in personnel costs mainly related to the addition of staff and pay rate increases instituted on January 1, 2017.

- Selling expense increased $8.3 million primarily due to an increase of $5.4 million in personnel costs mostly related to acquisitions and the addition of staff, $1.2 million in severance expenses, $0.6 million mostly in advertising costs, $0.3 million in facility expenses and $0.2 million in agent commissions. The recent Europe acquisitions increased selling expense by $6.6 million.

- General and administrative expense increased $1.9 million primarily due to increases of $2.4 million in personnel costs, mostly related to the addition of staff and pay rate increases instituted on January 1, 2017, $1.0 million in computer expenses mostly in software licensing and data processing fees, $0.6 million in cash profit sharing expense, $0.2 million in severance expenses, $0.2 million in stock based compensation and $0.2 million in professional fees, partly offset by a decrease in amortization expense of $0.5 million as well as the benefit from $2.9 million in net foreign currency translation in the current period. Recent Europe acquisitions increased general and administrative expense by $4.7 million.

- Income from operations increased $3.5 million, mostly due to increased gross profits, which were partially offset by higher operating expenses, which included $2.0 million in severance expenses.

Asia/Pacific

- For information about the Company's Asia/Pacific segment, please refer to the table above setting forth changes in our operating results for the years ended December 31, 2017 and 2016.

Administrative and All Other

- General and administrative expenses decreased, primarily due to a decreases of $2.8 million in cash profit sharing expense, partly offset by an increase of $1.3 million in personnel costs.

Critical Accounting Policies and Estimates

The critical accounting policies described below affect the Company’s more significant judgments and estimates used in the preparation of the Company's Consolidated Financial Statements. If the Company’s business conditions change or if it uses different assumptions or estimates in the application of these and other accounting policies, the Company’s future results of operations could be adversely affected.

Inventory Valuation

Inventories are stated at the lower of cost or net realizable value (market). Cost includes all costs incurred in bringing each product to its present location and condition, as follows:

- Raw materials and purchased finished goods — principally valued at cost determined on a weighted average basis; and
- In-process products and finished goods — cost of direct materials and labor plus attributable overhead based on a normal level of activity.

The Company applies net realizable value and obsolescence to the gross value of inventory. The Company estimates net realizable value based on estimated selling price less further costs to completion and disposal. The Company impairs slow-moving products by comparing inventories on hand to projected demand. If on-hand supply of a product exceeds projected demand or if the Company believes the product is no longer marketable, the product is considered obsolete inventory. The Company revalues obsolete inventory to its net realizable value. The Company has consistently applied this methodology. The Company believes that this approach is prudent and makes suitable impairments for slow-moving and obsolete inventory. When impairments are established, a new cost basis of the inventory is created. Unexpected change in market demand, building codes or buyer preferences could reduce the rate of inventory turnover and require the Company to recognize more obsolete inventory.

Business Combinations

The Company recognizes separately from goodwill or any gain from a bargain purchase the assets acquired and the liabilities assumed at their acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of consideration transferred and the net of the acquisition date fair values of the assets acquired and the liabilities assumed. A gain on a bargain purchase as of the acquisition date is measured as the excess of the net of the fair value of the assets acquired less liabilities assumed and consideration transferred. While the Company uses its best estimates and assumptions as a part of the purchase price allocation process to value assets acquired and liabilities assumed at the acquisition date, the Company's estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, the Company records adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. On the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, the Company records subsequent adjustments, if any, to its consolidated statements of operations. None of the subsequent adjustments for the fiscal years ended 2016, 2017 and 2018 were material.

Accounting for business combinations requires the Company's management to make significant estimates and assumptions, especially at the acquisition date with respect to intangible assets. Although the Company believes that the assumptions and estimates it has made in the past have been reasonable and appropriate, they are based in part on historical experience and information obtained from the management of the acquired companies and are inherently uncertain.

Examples of critical estimates in valuing certain of the intangible assets that the Company has acquired include:

- Future expected cash flows from customer relationships and acquired unpatented technologies and patents;
- The acquired company's brand and competitive position and assumptions about the period of time the acquired brand will continue to be used in the combined company's product portfolio; and
- Discount rates.

Unanticipated events and circumstances may affect the accuracy or validity of such assumptions, estimates or actual results.

For a given acquisition, the Company may identify pre-acquisition contingencies as of the acquisition date and may extend its review and evaluation of these pre-acquisition contingencies throughout the measurement period (up to one year from the acquisition date) to obtain sufficient information to assess whether the Company includes these contingencies as a part of the purchase price allocation and, if so, to determine their estimated amounts.

If the Company determines that a pre-acquisition contingency (that is not income-tax related) is probable and estimable as of the acquisition date, the Company records its best estimate for such a contingency as a part of the preliminary purchase price allocation. The Company often continues to gather information and evaluate its pre-acquisition contingencies throughout the measurement period. If the Company changes the amounts recorded or identifies additional pre-acquisition contingencies during the measurement period, such amounts are included in the purchase price allocation during the measurement period and, subsequently, in the Company's results of operations.

In addition, the Company estimates uncertain tax positions and income tax related valuation allowances assumed in connection with a business combination initially as of the acquisition date. The Company reevaluates these items quarterly with any adjustments to its preliminary estimates being recorded to goodwill if the Company is within the measurement period. The Company continues to collect information to determine estimated values. Subsequent to the measurement period or the Company's final determination of the uncertain tax positions estimated value or tax-related valuation allowances, whichever comes first, changes to these uncertain tax positions and tax-related valuation allowances will affect the Company's provision for income taxes in its consolidated statement of operations and could have a material effect on the Company's results of operations and financial position.

Goodwill Impairment Testing

The Company tests goodwill for impairment at the reporting unit level on an annual basis (in the fourth quarter for the Company). The Company also reviews goodwill for impairment whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable. These events or circumstances could include a significant change in the business climate, legal factors, operating performance indicators, competition, or disposition or relocation of a significant portion of a reporting unit.

The reporting unit level is generally one level below the operating segment, which is at the country level, except for the United States, Australia and S&P Clever reporting units.

The Company determined that the United States reporting unit includes four components: Northwest United States, Southwest United States, Northeast United States and Southeast United States (collectively, the “U.S. Components”). The Company aggregates the U.S. Components into a single reporting unit because management concluded that they are economically similar and that the goodwill is recoverable from the U.S. Components working in concert. The U.S. Components are economically similar because of a number of factors, including selling similar products to shared customers and sharing assets and services such as intellectual property, manufacturing assets for certain products, research and development projects, manufacturing processes, management of inventory excesses and shortages and administrative services. These activities are managed centrally at the U.S. Components level and costs are allocated among the four U.S. Components.

The Company determined that the Australia reporting unit includes three components: Australia, New Zealand, and United Arab Emirates (collectively, the “AU Components”). The Company aggregates the AU Components into a single reporting unit because management concluded that they are economically similar and that the goodwill is recoverable from the AU Components working in concert. The AU Components are economically similar because of a number of factors, including that New Zealand, and United Arab Emirates operate as extensions of their Australian parent company selling similar products and sharing assets and services such as intellectual property, manufacturing assets for certain products, management of inventory excesses and shortages and administrative services. These activities are managed centrally at the AU Components level and costs are allocated among the AU Components.

The Company determined that the S&P Clever reporting unit includes ten components: S&P Switzerland, S&P Poland, S&P Austria, S&P The Netherlands, S&P Portugal, S&P Germany, S&P France, Socom, S&P Nordic and S&P Spain (collectively, the "S&P Components”). The Company aggregates the S&P Components into a single reporting unit because management concluded that they are economically similar and that the goodwill is recoverable from the S&P Components working in concert. The S&P Components are economically similar because of a number of factors, including sharing assets and services such as intellectual property, manufacturing assets for certain products, research and development projects, manufacturing processes, management of inventory excesses and shortages and administrative services. These activities are managed centrally at the S&P Components level and costs are allocated among the S&P Components.

The Company may first assess qualitative factors related to the goodwill of the reporting unit to determine whether it is necessary to perform an impairment test. If the Company judges that it is more likely than not that the fair value of the reporting unit is greater than the carrying amount of the reporting unit, including goodwill, no further testing is required. This assessment method was not utilized in our 2018 annual goodwill impairment test.

For all reporting units, the Company compares the fair value of the reporting unit to its carrying value. The fair value calculation uses both the income approach (discounted cash flow method) and the market approach, equally weighted. If the Company judges that the carrying value of the net assets assigned to the reporting unit, including goodwill, exceeds the fair value of the reporting unit, the Company would record an impairment charge equal to the difference between the implied fair value of the goodwill and the carrying value, not to exceed the goodwill asset's carrying amount.

Determining the fair value of a reporting unit or an indefinite-lived purchased intangible asset is a judgment involving significant estimates and assumptions. These estimates and assumptions include revenue growth rates, operating margins and working capital requirements used to calculate projected future cash flows, risk-adjusted discount rates, selected multiples, control premiums and future economic and market conditions (Level 3 fair value inputs). The Company bases its fair value estimates on assumptions that it believes to be reasonable, but that are unpredictable and inherently uncertain. Actual future results may differ from those estimates.

Assumptions about a reporting unit’s operating performance in the first year of the discounted cash flow model used to determine whether or not the goodwill related to that reporting unit is impaired are derived from the Company’s budget. The fair value model considers such factors as macro-economic conditions, revenue and expense forecasts, product line changes, material, labor and overhead costs, tax rates, working capital levels and competitive environment. Future estimates, however derived, are inherently uncertain but the Company believes that this is the most appropriate source on which to base its fair value calculations.

The Company uses these parameters only to provide a basis for the determination of whether or not the goodwill related to a reporting unit is impaired. No inference whatsoever should be drawn from these parameters about the Company’s future financial performance and they should not be taken as projections or guidance of any kind.

The 2018 annual testing of goodwill for impairment resulted in an impairment charge.

The carrying value of the Denmark reporting unit exceeded its fair value in an amount that approximated the carrying value of its goodwill, primarily due to the reporting unit not meeting management's pre-tax operating profit objectives. As a result, the Company impaired all of the Denmark reporting unit’s goodwill, which was $6.7 million at December 31, 2018.

Revenue Recognition

Generally, the Company's revenue contract with a customer exists when the goods are shipped, and services are rendered; and its related invoice is generated. The duration of the contract does not extend beyond the promised goods or services already transferred. The transaction price of each distinct promised product or service specified in the invoice is based on its relative stated standalone selling price. The Company recognizes revenue when it satisfies a performance obligation by transferring control over a product to a customer at a point in time. The Company’s shipping terms provide the primary indicator of the transfer of control. The Company's general shipping terms are F.O.B. shipping point, where title and risk and rewards of ownership transfer at the point when the products leave the Company's warehouse. The Company recognizes revenue based on the consideration specified in the invoice with a customer, excluding any sales incentives, discounts, and amounts collected on behalf of third parties (i.e., governmental tax authorities). Based on historical experience with the customer, the customer's purchasing pattern and its significant experience selling products, the Company concluded that a significant reversal in the cumulative amount of revenue recognized will not occur when the uncertainty (if any) is resolved (that is, when the total amount of purchases is known). Refer to Note 2 for revenue disaggregation disclosure.

Revenue from Contracts with Customers

On January 1, 2018, the Company adopted the New Revenue Standard ("Topic 606") using the modified retrospective method and recorded an $0.8 million, net of tax, increase to opening retained earnings on January 1, 2018 as the cumulative effect of adopting Topic 606 for estimated rights of return assets on product sales.

Disaggregated revenue

Under Topic 606, the Company disaggregates net sales consistent with the distribution of the Company's net sales by the following product groups as noted in Note 18 segment information of these financial statements.

- *Wood Construction Products Revenue*. Wood construction products represented almost 85% of total net sales in the year ended December 31, 2018.

- *Concrete Construction Products Revenue.* Concrete construction products represented 15% of total net sales in the year ended December 31, 2018.

Customer acceptance criteria. Generally, there are no customer acceptance criteria included in the Company's standard sales agreement with customers. When an arrangement with the customer does not meet the criteria to be accounted for as a revenue contract under the standard, the Company recognizes revenue in the amount of nonrefundable consideration received when the Company has transferred control of the goods or services and has stopped transferring (and has no obligation to transfer) additional goods or services. The Company offers certain customers discounts for paying invoices ahead of the due date, which are generally 30 to 60 days.

Other revenue. Service sales, representing after-market repair and maintenance, engineering activities and software license sales and services are less than 1.0% of net sales and recognized as the services are completed or the software products and services are delivered. Services may be sold separately or in bundled packages. The typical contract length for service is generally less than one year. For bundled packages, the Company accounts for individual services separately if they are distinct. A distinct service is separately identifiable from other items in the bundled package if a customer can benefit from it on its own or with other resources that are readily available to the customer. The consideration (including any discounts) is allocated between separate services in a bundle based on their stand-alone selling prices. The stand-alone selling prices are determined based on the prices at which the Company separately sells the services.

Reconciliation of contract balances

Contract assets are the rights to consideration in exchange for goods or services that the Company has transferred to a customer when that right is conditional on something other than the passage of time. Contract liabilities are recorded for any services billed to customers and not yet recognizable if the contract period has commenced or for the amount collected from customers in advance of the contract period commencing. As of December 31, 2018, the Company had no contract assets or contract liabilities from contracts with customers.

Other accounting issues

Volume discounts. Volume discounts are accounted for as variable consideration because the transaction price is uncertain until the customer completes or fails to purchase the specified volume of purchases (consideration is contingent on a future outcome - occurrence or nonoccurrence). In addition, the Company applies the volume rebate or discount retrospectively, because the final price of each products or services sold depends on the customer's total purchases subject to the rebate program. The estimated rebates are deducted from the transaction price revenues based on the historical experience with the customer.

Rights of return and other allowances. Rights of return creates variability in the transaction price. The Company accounts for returned product during the return period as a refund to customer and not a performance obligation. The estimated allowance for returns is based on historical percentage of returns and allowance from prior periods and the customer's historical purchasing pattern. This estimate is deducted from revenues based on the gross transaction price.

Principal versus Agent. The Company considered the principal versus agent guidance of the new revenue recognition standard and concluded that the Company is the principal in a third-party transaction. The Company manufactures its products and has control over transfer of its products to Dealer Distributors, Contract Distributors, and end customers.

Costs to obtain or fulfill a contract. Costs incurred to obtain a contract are immaterial. Commission cost is not an incremental cost directly related to obtaining a contract.

Shipping costs. The Company recognizes shipping and handling activities that occur after the customer has obtained control of goods as a fulfillment cost rather than as an additional promised service. Therefore, the Company recognizes revenue and accrues shipping and handling costs when the control of goods transfers to the customer upon shipment.

Advertising costs. Cooperative advertising and partnership discounts are consideration payable to a customer and not a payment in exchange for a distinct product or service at fair value. Estimated cooperative advertising and partnership discounts are reductions to the transaction price.

Practical Expedients. The Company did not use either the practical expedient for the existence of a significant financing component or, the practical expedient for expensing certain costs of obtaining a contract.

Effect of New Accounting Standards

See "Note 1 — Recently Adopted Accounting Standards" and "Note 1 — Recently Issued Accounting Standards Not Yet Adopted" to the Company's Consolidated Financial Statements.

Liquidity and Sources of Capital

Our primary sources of liquidity are cash and cash equivalents, our cash flow from operation and our $300.0 million credit facility that expires on July 23, 2021. As of December 31, 2018, there were no amounts outstanding under this facility.

Our principal uses of liquidity include the costs and expenses associated with our operations, continuing our capital allocation strategy, which includes growing our business by internal improvements, repurchasing our common stock, paying cash dividends, and meeting other liquidity requirements for the next twelve months.

As of December 31, 2018, our cash and cash equivalents consisted of deposits and money market funds held with established national financial institutions. Cash and cash equivalents of $45.4 million are held in the local currencies of our foreign operations and could be subject to additional taxation if repatriated to the United States. Due to changes resulting from the Tax Reform Act, the Company repatriated $63.5 million in cash held outside of the United States in 2018. The Company is maintaining a permanent reinvestment assertion on its foreign earnings relative to remaining cash held outside the United States after completion of the repatriation plan.

The following table presents selected financial information as of December 31, 2018, 2017 and 2016, respectively:

	At December 31,		
(in thousands)	**2018**	**2017**	**2016**
Cash and cash equivalents	$160,180	$168,514	$226,537

Property, plant and equipment, net	254,597	273,020	232,810
Equity investment, goodwill and intangible assets	157,139	169,015	149,843
Working capital	447,949	447,450	476,451

The following table provides cash flow indicators for the twelve months ended December 31, 2018, 2017 and 2016, respectively: