

SOLVING CHALLENGES THAT MATTER2016 ANNUAL REPORT



YEAR ENDED DECEMBER 31,

| INCOME STATEMENT DATA | 2016 ⁽¹⁾ | 2015 ⁽²⁾ | 2014 ⁽³⁾ | 2013 (4) | 2012 ⁽⁵⁾ |
|--|---------------------|---------------------|---------------------|------------------|---------------------|
| | | ALL | . AMOUNTS ARE IN 1 | THOUSANDS, EXCEP | T PER SHARE DATA |
| Net Sales | \$ 483,514 | 624,523 | 607,192 | 597,963 | 588,541 |
| Operating (loss) profit (a) | \$ (5,195) | 28,760 | 37,082 | 41,571 | 22,657 |
| (Loss) income from continuing operations, net of tax | \$ (141,660) | (44,445) | 25,656 | 29,290 | 14,764 |
| Income from discontinued operations, net of tax | \$ | | | | 1,424 |
| Net (loss) income | \$ (141,660) | (44,445) | 25,656 | 29,290 | 16,188 |
| Basic (loss) earnings per common share: | | | | | |
| Continuing operations | \$ (13.79) | (4.33) | 2.51 | 2.88 | 1.46 |
| Discontinued operations | \$ | | | | 0.14 |
| Basic (loss) earnings per common share | \$ (13.79) | (4.33) | 2.51 | 2.88 | 1.60 |
| Diluted (loss) earnings per common share: | | | | | |
| Continuing operations | \$ (13.79) | (4.33) | 2.48 | 2.85 | 1.44 |
| Discontinued operations | \$ - | - | - | - | 0.14 |
| Diluted (loss) earnings per common share | \$ (13.79) | (4.33) | 2.48 | 2.85 | 1.58 |
| Dividends paid per common share | \$ 0.12 | 0.16 | 0.13 | 0.12 | 0.10 |

- (a) Operating (loss) profit represents the gross profit less selling and administrative expenses and amortization expense.
- (1) 2016 includes long-lived tangible and intangible, including goodwill, asset impairments of \$135,884. More information about the impairments can be found in Part II, Item 8, Financial Statements and Supplementary Data, Note 4 Goodwill and Other Intangible Assets, and Note 7 Property, Plant, and Equipment.
- (2) 2015 includes the results of the acquisitions of TEW Plus, Ltd. ("TEW Plus") (November 23), IOS Holdings, Inc ("IOS") (March 13), and TEW Holdings, Ltd. ("TEW") (January 13). The results also include an \$80,337 impairment of goodwill related to the IOS and Chemtec reporting units. More information about the impairment can be found in Part II, Item 8, Financial Statements and Supplementary Data, Note 4 Goodwill and Other Intangible Assets.
- (3) 2014 includes CXT® Concrete Tie UPRR warranty charges of \$9,374 within the Rail Products and Services segment. The 2014 results also include the acquisitions of Carr Concrete (July 7), FWO (October 29), and Chemtec (December 30).
- (4) 2013 includes the acquisition of Ball Winch, (November 7).
- (5) 2012 includes CXT Concrete Tie UPRR warranty charge of \$22,000 within Rail Products and Services segment and a pre-tax gain of \$3,193, from the dispositions of the SSD and Precise divisions, in income from discontinued operations, net of tax.

L.B. FOSTER COMPANY

L.B. Foster Company (NASDAQ: FSTR) is a leading manufacturer and distributor of products and services for transportation and energy infrastructure with locations in North America and Europe. Our Company is bringing to market products and solutions that meet the challenges that matter most to our customers.

To Our Shareholders, Employees, and Business Partners

The most recent year reminded us of why we describe our people as the most important resource in the Company. We have withstood what may be the most challenging environment that the Company has faced driven by a commodity cycle that led to reduced investment in energy and freight rail infrastructure. L.B. Foster sales declined by \$141 million in 2016. Circumstances like this call for leadership and teamwork to make the adjustments necessary to cope with the impact that substantial volume reductions bring. Our team responded!

Throughout the year, our actions became more critical as markets deteriorated. The prices for many steel products were under pressure as factory utilization among steel producers declined. Coal shipments by the North American freight railroads were well below prior year levels. The price of oil dropped below \$30, sending upstream energy developers to cut capital spending further. Each time we faced another unfavorable event, we dug deeper and created plans to protect both the future of the Company and our shareholders. No event was more significant than the decline in the price of oil that led to an 80% reduction from peak to trough for our test and inspection services of tubulars for drilling and production applications. I applaud what our management team has done to confront these issues and restructure our business.

We ended the year as a much smaller company with \$484 million in sales. Ultimately, our stock price reflected the declining profitability brought about by this environment. But we also ended as a much leaner company with lower manufacturing expenses and SG&A costs. Investments made in operating efficiency helped several factories run at profitable levels despite significant volume reductions. Facility consolidation



actions led to leaner operations and our recent investments in modernization have contributed to overall efficiency. Once again, the commitment from our people was on display as we faced incredibly difficult actions. With several restructuring actions completed, we are better positioned to leverage from added sales volume as markets rebound.

The market outlook for 2017 shows several signs typically associated with improving conditions. Among the more significant indicators are several commodities where rising prices typically bring about healthier market conditions. The prices of oil, natural gas, and certain steel commodities are forecasted to stay above 2016 levels. Coupled with the increasing demands for transportation and energy infrastructure investment in North America and Europe, we believe our future is brighter.

The energy services sector serving upstream customers is forecasting an increase in investment in 2017, and bookings in our test and inspection services division were showing signs of strength as we exited 2016. Developers we serve in the shale regions have been



announcing capital spending plans with an improved outlook for 2017. Following our restructuring actions, we are well positioned with both service centers in the key regions and a cost structure that will benefit from added volume. With the expertise of our skilled service technicians, protective coatings services, and custom-engineered measurement systems, we are prepared to help energy customers address critical applications for both the safe deployment of tubulars in energy applications and precision measurement for oil and gas transport. This is very important to us as we strive for significant improvement in the operating results in our tubular & energy services segment.

Equally significant, is the spending outlook for rail and transportation infrastructure. Our backlog in Europe was at record level at the start of 2017, and forecasted spending on transit systems globally reflects continued demand. North American freight rail is likely to search for a new level of investment as volume from coal traffic remains below peak levels. However, we are optimistic that industrial projects, intermodal growth, and the need for better operating performance will drive demand in North America for our products and services. Friction management and automation solutions are products that utilize new technologies to deliver performance improvement for global rail customers seeking lower cost and passenger convenience. The ever-present need to improve safety and reliability is being addressed by many of our new products, and the Company's expertise in the application of bridge decking and steel piling for transportation infrastructure contributes to the strength of our brand. These, along with other unique offerings from L.B. Foster, make us an important worldwide supplier and partner.

We are turning our attention now to what we can accomplish in 2017. Relying on our management system, we are sharply focused on actions intended to restore profitability. There are attractive growth opportunities upon which we intend to capitalize. However, our primary focus will be on strengthening our balance sheet. We will rely on processes that have led to a strong record of operating cash flow performance. Our continuous sustainable improvement and business performance management pillars will provide support for our management team to achieve these goals. With some help from recovering markets, we aim to make meaningful progress toward restoring profit margins, improving free cash flow, and debt reduction in 2017.

On behalf of the employees at L.B. Foster Company, we are committed to excellence and look forward to improving performance for the benefit of all stakeholders.

Sincerely,

 ROBERT P. BAUER

PRESIDENT and CHIEF EXECUTIVE OFFICER

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ENERGY SERVICES

Integrated Solutions Across Energy Supply Chain

L.B. Foster plays an integral role in each stage of the oil and gas industry, from the drilling and production market segment to transportation to refineries, as well as in distribution networks carrying hydrocarbon fluids and natural gas.

The Company's Tubular and Energy segment is focused on the safe deployment of tubulars for energy transport applications, and the critical measurement required for the transport of liquids and gases. Our breadth of conversion services such as corrosion protection of pipelines, asset integrity services, and premium connections prepare tubulars for critical oil and gas transport applications across the entire energy delivery path. Our engineered liquid and gas flow metering system solutions provide critical custody transfer for oil and gas projects around the world. The Company also manufactures complete additive and dye injection systems that are used in petroleum and petrochemical applications.

UPSTREAM

MIDSTREAM

DOWNSTREAM

Oil and Natural Gas Production Mainly focuses on the exploration of crude oil and natural gas fields, as well as production and recovery.

Transport and Storage

Primarily involves storage and transport of upstream oil and gas through a network of pipelines, trucks, rail, ships, tankers, and barges to the downstream sector.

Product Preparation and Usage

The downstream sector focuses on the refining of crude oil and purifying natural gas, as well as marketing, product distribution, and retail.



Drilling



Production





Pipeline Gathering



End Market Use

Test and Inspection Services

Services include non-destructive testing, inspection, and other asset integrity services such as repair and threading for Oil Country Tubular Goods and drill tools.

Protective Coatings

Services include a variety of protective coatings for steel line pipe and custom coatings for specialty diameter pipe and fittings.

Precision Measurement Systems

Services include custom built metering systems for custody transfer applications including crude oil and other petroleumbased products.

Precision Measurement Systems

Services include custom built additive and dye injection systems that are used to inject additives and/or dyes into petroleum and petrochemical products. Custom built metering systems are also deployed at downstream processing facilities.



Members of L.B. Foster Automation demonstrate LIDAR based detection systems at Nottingham, UK manufacturing Center of Excellence.

RAIL TECHNOLOGY

Committed to Engineering Excellence

Technology and a solutions-based philosophy are becoming key drivers to our future success in supporting the transportation industry.

Leading the way is our Center of Excellence in the UK. We provide capability to address transit rail and other transportation industry applications focusing on passenger safety, comfort, and convenience. Passenger information systems enable safe and efficient navigation of individuals through busy public areas.

In addition, Light Detection and Ranging (LIDAR) based detection systems are improving safety standards for a variety of railway applications, including grade crossings.

Our industrial automation business can design, build, and supply systems and machines to precisely suit custom production demands, including the automobile industry.

We see globalization of these solutions as a long term goal for the Company, with the ability to support multiple customer segments and markets worldwide.

OPERATIONS MANAGEMENT

Driven by Efficiencies and Quality in our Operations

L.B. Foster Company maintains ongoing programs that drive continued improvement in product quality, employee health and safety, and efficiencies in productivity.

Our investments in programs that support companywide modernization to areas that cut costs and drive operational efficiency are producing solid results. The Company's recent investment in a new internal diameter pipe coating line at its Birmingham, Alabama plant is driving higher facility throughput that improves protection and operational performance of gas and oil pipelines.

L.B. Foster's high-mix, late stage customization facility in Waverly, West Virginia helps our precast concrete buildings business expand market reach and deliver a variety of custom designed products to meet customer specifications.

The Company's production facility in Bedford, Pennsylvania has recently implemented an advanced back-end software automation system to improve the way we handle high-mix custom orders and short lead times in our bridge forms business.

Acting as a guide to managing our quality process is a recently deployed automated, cloud-based data management system. This system enables our employees with new ways to capture and record



New 12" - 24" diameter pipe coating line at Birmingham, AL facility provides enhanced flow efficiency to oil and gas pipelines.

vital business data, and use that data to drive leaner processes, provide accurate quality outputs, and make more informed business decisions.

Our custom-engineered measurement systems business in Houston, Texas is utilizing advanced 3D design software to provide greater detail and accuracy of their custom engineered products. The software improves the way we custom engineer solutions for our customers and provides new capabilities for our engineers managing complex development projects.

Quality, health, safety, and the environment is L.B. Foster's number one priority for all operations and its workforce. Reducing the environmental footprint through more efficient operations, as well as making work safe and productive for our employees, is a top priority driving our business.

L.B. FOSTER BUSINESS SYSTEM

Focused on Performance and Value

The L.B. Foster Business System brings necessary structure to drive performance and value creation across the Company.

The Business System creates a framework to help management organize and prioritize critical programs behind the processes we believe are most critical to maximizing our success.

The six components contain the most valuable processes that when applied consistently, will create a high performance culture driven by talented people that have a continuous improvement and customer centric mindset.

Among the areas of people, customer centricity, strategy, continuous improvement (CSI), talent management, and business performance management, we believe that we have created a dynamic interrelated set of components through which our Company will maximize its potential.

We will utilize the guidance and energy that the business system will deliver to enhance the culture of the Company, and ultimately maximize our profitability and shareholder value.



BUSINESS SYSTEM



L.B. FOSTER BUSINESS GROUPS

L.B. Foster operates individual business units that specialize in energy, transportation, and construction infrastructure products and services. These groups manage worldwide customer support from manufacturing, distribution, and sales facilities located in the United States, Canada, and the United Kingdom.

RAIL PRODUCTS and SERVICES

L.B. Foster Company's Rail Products and Services segment is comprised of several manufacturing and distribution businesses that provide a variety of products and services for freight and passenger railroads and industrial companies throughout the world.

The Rail segment has sales offices throughout the Americas and Europe, and frequently bids on rail projects where it offers both products either manufactured by the Company or sourced from numerous supply chain partners, and also aftermarket services. The Rail segment is comprised of the following business units: Rail Products, Rail Technologies, and CXT®Concrete Ties.

CONSTRUCTION PRODUCTS

The Construction Products segment is composed of the following product groups: Piling Products, Fabricated Bridge Products, and Precast Concrete Products.

Piling Products supplies flat, pipe, H beam and Z sheet pile, and piling accessories for sale or rent to the construction industry from convenient regional stocking locations.

L.B. Foster Fabricated Bridge Products provides steel grid bridge flooring, corrugated bridge forms, bridge drainage systems, bridge railing, custom pedestrian railing, and complete bridge solutions.

The precast concrete products segment primarily manufactures concrete buildings for national, state, and municipal parks. This unit manufactures restrooms, concession stands, and other protective storage buildings available in multiple designs, textures, and colors. The unit also manufactures various other precast products such as burial vaults, bridge beams, box culverts, septic tanks, and other custom pre-stressed and precast concrete products. The products are manufactured in Spokane, WA, Hillsboro, TX, and Waverly, WV.

TUBULAR and ENERGY SERVICES

The Tubular and Energy Services segment has four primary product or service groups: Protective Coatings, Threaded Products, Precision Measurement Systems, and Test and Inspection Services.

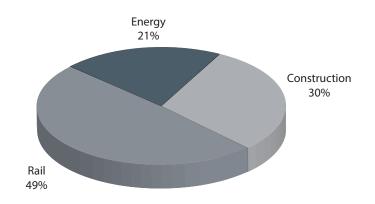
Protective Coatings provides a variety of protective coatings for steel line pipe and custom coatings for specialty diameter pipe and fittings at its two facilities located in Birmingham, AL and Willis, TX.

Test and Inspection Services provides non-destructive testing, inspection, and other asset integrity services such as repair and threading for OCTG and drill tools.

Precision Measurement Systems engineers and custom builds metering systems for custody transfer applications including crude oil and other petroleum-based products. This unit also builds additive and dye injection systems that are used to inject additives and/or dyes into petroleum and petrochemical products.

Threaded Products provides quality threading of water well pipe from its production facility in Magnolia, TX. L.B. Foster also maintains a joint venture operation, LB Pipe & Coupling Products, LLC adjacent to our Magnolia threading plant.

Percentage of Net Sales by Market Segment



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

| FORM | I 10-K |
|---|--|
| (Mark One) | |
| ✓ Annual Report Pursuant to Section 13 or 15 (| (d) |
| of the Securities Exchange Act of 1934 | |
| For the fiscal year ended December 31, 2016 | |
| 0 | r |
| ☐ Transition Report Pursuant to Section 13 or 1 | 15(d) |
| of the Securities Exchange Act of 1934 | |
| For the transition period from to | |
| Commission File | Number 0-10436 |
| L.B. FOSTER | |
| Pennsylvania | 25-1324733 |
| (State of Incorporation) | (I.R.S. Employer Identification No.) |
| 415 Holiday Drive, Pittsburgh, Pennsylvania | 15220 |
| (Address of principal executive offices) | (Zip Code) |
| Registrant's telephone num (412) 92 | |
| Securities registered pursuan | |
| Title of Each Class | Name of Each Exchange On Which Registered |
| Common Stock, Par Value \$0.01 | NASDAQ Global Select Market |
| Preferred Stock Purchase Rights | NASDAQ Global Select Market |
| Securities registered pursuan No | |
| Indicate by check mark if the registrant is a well-know \triangle Act. \square Yes \boxtimes No | n seasoned issuer, as defined in Rule 405 of the Securities |
| Indicate by check mark if the registrant is not required to Act . \square Yes \boxtimes No | o file reports pursuant to Section 13 or 15(d) of the Exchange |
| | 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 and (2) has been subject to such filing requirements for the past 90 of | |
| Indicate by check mark whether the registrant has submitted interactive Data File required to be submitted and posted pursuan during the preceding 12 months (or for shorter period ties). \boxtimes Yes \square No | |
| Indicate by check mark if disclosure of delinquent filers pursuant be contained, to the best of registrant's knowledge, in definitive III of this Form 10-K or any amendment to this form 10-K. | ant to Item 405 of Regulation S-K is not contained herein, and will be proxy or information statements incorporated by reference in Part |
| Indicate by check mark whether the registrant is a large accele reporting company. See the definitions of "large accelerated filer," of the Exchange Act. (Check one): | rated filer, an accelerated filer, a non-accelerated filer, or a smaller "accelerated filer" and "smaller reporting company" in Rule 12b-2 |
| Large accelerated filer Accelerated filer (Do not che | Non-accelerated filer Smaller reporting company ceck if a smaller reporting company) |
| | hell company (as defined in Rule 12b-2 of the Exchange |
| The aggregate market value of the voting and non-voting co | mmon equity held by non-affiliates computed by reference to the |

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter was \$94,386,134.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Class

Outstanding at February 17, 2017

Common Stock, Par Value \$0.01

10,320,130 shares

Documents Incorporated by Reference:

Portions of the Proxy Statement prepared for the 2016 Annual Meeting of Shareholders are incorporated by reference in Items 10, 11, 12, 13 and 14 of Part III of this Form 10-K. The 2017 Proxy Statement will be filed with the U.S. Securities and Exchange Commission within 120 days after the end of the fiscal year to which this report relates.

TABLE OF CONTENTS

PART I

| Item 1. | Business | 4 |
|----------|--|----|
| Item 1A. | Risk Factors | 10 |
| Item 1B. | Unresolved Staff Comments | 16 |
| Item 2. | Properties | 17 |
| Item 3. | Legal Proceedings | 17 |
| Item 4. | Mine Safety Disclosures | 17 |
| | PART II | |
| Item 5. | Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities | 18 |
| Item 6. | Selected Financial Data | 22 |
| Item 7. | Management's Discussion and Analysis of Financial Condition and Results of Operations | 23 |
| Item 7A. | Quantitative and Qualitative Disclosures About Market Risk | 40 |
| Item 8. | Financial Statements and Supplementary Data | 41 |
| Item 9. | Changes in and Disagreements with Accountants on Accounting and Financial Disclosure | 85 |
| Item 9A. | Controls and Procedures | 85 |
| Item 9B. | Other Information | 87 |
| | PART III | |
| Item 10. | Directors, Executive Officers and Corporate Governance | 87 |
| Item 11. | Executive Compensation | 87 |
| Item 12. | Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters | 87 |
| Item 13. | Certain Relationships and Related Transactions, and Director Independence | 87 |
| Item 14. | Principal Accountant Fees and Services | 87 |
| | PART IV | |
| Item 15. | Exhibits and Financial Statement Schedules | 88 |
| Item 16. | Form 10-K Summary | 89 |
| | Signatures | 90 |

Forward-Looking Statements

This Annual Report on Form 10-K contains "forward-looking" statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended. Many of the forward-looking statements are located in "Management's Discussion and Analysis of Financial Condition and Results of Operations." Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Sentences containing words such as "believe," "intend," "plan," "may," "expect," "should," "could," "anticipate," "estimate," "predict," "project," or their negatives, or other similar expressions generally should be considered forward-looking statements. Forward-looking statements in this Annual Report on Form 10-K may concern, among other things, L.B. Foster Company's (the "Company's") expectations relating to our strategy, goals, projections and plans regarding our financial position, liquidity, capital resources and results of operations, the outcome of litigation and product warranty claims, decisions regarding our strategic growth initiatives, market position, and product development, all of which are based on current estimates that involve inherent risks and uncertainties. The Company has based these forward-looking statements on current expectations and assumptions about future events. While the Company considers these expectations and assumptions to be reasonable, they are inherently subject to significant business, economic, competitive, regulatory and other risks and uncertainties, most of which are difficult to predict and many of which are beyond the Company's control. The Company cautions readers that various factors could cause the actual results of the Company to differ materially from those indicated by forward-looking statements. Accordingly, investors should not place undue reliance on forward-looking statements as a prediction of actual results. Among the factors that could cause the actual results to differ materially from those indicated in the forwardlooking statements are risks and uncertainties related to: a continuation or worsening of the current economic slowdown in the markets we serve; the risk of doing business in international markets; our ability to effectuate our strategy including cost reduction initiatives and our ability to effectively integrate new businesses and realize anticipated benefits; costs of and impacts associated with shareholder activism; a decrease in freight or passenger rail traffic; the timeliness and availability of materials from our major suppliers, including the impact on our access to supplies of customer preferences as to the origin of such supplies, such as customer's concerns about conflict minerals; labor disputes; the effective implementation of an enterprise resource planning system; changes in current accounting estimates and their ultimate outcomes; the adequacy of internal and external sources of funds to meet financing needs, including our ability to negotiate any additional necessary amendments to our credit agreement; the Company's ability to manage its working capital requirements and indebtedness; domestic and international taxes; foreign currency fluctuations; inflation; economic conditions and regulatory changes caused by the United Kingdom's likely exit from the European Union; volatile changes in energy prices; a lack of state or federal funding for new infrastructure projects; increased domestic and foreign government regulation; an increase in manufacturing or material costs; the ultimate number of concrete ties that will have to be replaced pursuant to the previously disclosed product warranty claim of the Union Pacific Railroad ("UPRR") and an overall resolution of the related contract claims as well as the possible costs associated with the outcome of the lawsuit filed by the UPRR; the loss of future revenues from current customers; and risks inherent in litigation. Should one or more of these risks or uncertainties materialize, or should the assumptions underlying the forward-looking statements prove incorrect, actual outcomes could vary materially from those indicated. The risks and uncertainties that may affect the operations, performance, and results of the Company's business and forward-looking statements include, but are not limited to, those set forth under Item 1A, "Risk Factors," and elsewhere in this Annual Report on Form 10-K.

The forward-looking statements in this report are made as of the date of this report and we assume no obligation to update or revise any forward-looking statement, whether as a result of new information, future developments, or otherwise, except as required by securities laws.

PART I

(Dollars in thousands, except share data unless otherwise noted)

ITEM 1. BUSINESS

Summary Description of Businesses

Formed in 1902, L.B. Foster Company is a Pennsylvania corporation with its principal office in Pittsburgh, PA. L.B. Foster Company is a leading manufacturer and distributor of products and services for the transportation and energy infrastructure. As used herein, "Foster," the "Company," "we," "us," and "our" or similar references refer collectively to L.B. Foster Company and its divisions and subsidiaries, unless the context otherwise requires.

The following table shows, for the last three fiscal years, the net sales generated by each business segment as a percentage of total net sales.

| | Percenta | age of Net | t Sales | |
|-----------------------------|----------|--------------|--------------|--|
| | 2016 | 2015 | 2014 | |
| Rail Products and Services | 49% | 53% | 62% | |
| Construction Products | 30 | 28 | 29 | |
| Tubular and Energy Services | _21 | <u>19</u> | _9 | |
| | 100% | <u>100</u> % | <u>100</u> % | |

Financial information concerning these segments is set forth in Part II, Item 8, Financial Statements and Supplementary Data, Note 2 Business Segments, to the Consolidated Financial Statements included herein, which is incorporated by reference into this Item 1.

Rail Products and Services

L.B. Foster Company's Rail Products and Services ("Rail") segment is comprised of several manufacturing and distribution businesses that provide a variety of products and services for freight and passenger railroads and industrial companies throughout the world. The Rail segment has sales offices throughout the Americas and Europe, and frequently bids on rail projects where it offers products manufactured by the Company, or sourced from numerous supply chain partners, and aftermarket services. The Rail segment is comprised of the following business units: Rail Products, Rail Technologies, and CXT Concrete Ties.

Rail Products

The Rail Products business is comprised of the Company's Rail Distribution, Allegheny Rail, Transit, and Trackwork divisions.

Rail Distribution sells new rail mainly to passenger and shortline freight railroads, industrial companies, and rail contractors for the replacement of existing lines or expansion of new lines. Rail accessories sold by the Rail Distribution division include track spikes, bolts, angle bars, and other products required to install or maintain rail lines. These products are manufactured by the Company or purchased from other manufacturers and distributed accordingly.

The Company's Allegheny Rail Products ("ARP") division engineers and fabricates insulated rail joints and related accessories for freight and passenger railroads and industrial customers. Insulated joints are manufactured at the Company's facilities in Pueblo, CO and Niles, OH.

The Company's Transit Products division supplies power rail, direct fixation fasteners, coverboards, and special accessories primarily for passenger railroad systems. These products are fabricated at Company facilities or by subcontractors and are usually sold by sealed bid to passenger railroads or to rail contractors.

The Company's Trackwork division sells trackwork products to Class II and III railroads, industrial, and export markets.

Rail Technologies

The Company's Rail Technologies division engineers, manufactures, and fabricates friction management products and application systems, railroad condition monitoring equipment, wheel impact load detection, railroad condition monitoring systems, rail anchors and spikes, wayside data collection and management systems, epoxy and nylon-encapsulated insulated rail joints, and track fasteners, and provides aftermarket services. The Company's friction management products control the friction at the rail/wheel interface, helping our customers reduce fuel consumption, improve operating efficiencies, extend the life of operating assets such as rail and wheels, and reduce track stresses, and lower related maintenance and operating costs. Friction management products include mobile and wayside systems that apply lubricants and liquid or solid friction modifiers. These products and systems are designed, engineered, manufactured, and fabricated by certain wholly-owned subsidiaries located in the United States, Canada, United Kingdom, and Germany.

CXT Concrete Ties

L.B. Foster's subsidiary, CXT Incorporated, manufactures engineered concrete railroad ties for freight and passenger railroads and industrial companies at its facility in Spokane, WA.

Construction Products

The Construction products segment is composed of the following product groups: Piling Products, Fabricated Bridge Products, and Precast Concrete Products.

Piling Products

Sheet piling products are interlocking structural steel sections that are generally used to provide lateral support at construction sites. Bearing piling products are steel H-beam sections which are driven into the ground for support of structures such as bridge piers and high-rise buildings. Piling is often used in water and land applications including cellular cofferdams and OPEN CELL® structures in inland river systems and ports.

Piling products are sourced from various manufacturers and either sold or rented to project owners and contractors. The piling division, via a sales force deployed throughout the United States, markets and sells piling domestically and internationally. This division offers its customers various types and dimensions of structural beam piling, sheet piling, and pipe piling. The Company is the primary distributor of domestic steel sheet piling for its primary supplier.

Fabricated Bridge Products

The fabricated products facility in Bedford, PA manufactures a number of fabricated steel and aluminum products primarily for the highway, bridge, and transit industries including concrete reinforced steel grid deck, open steel grid deck, aluminum bridge railing, and stay-in-place steel bridge forms.

Precast Concrete Products

The precast concrete products unit primarily manufactures concrete buildings for national, state, and municipal parks. This unit manufactures restrooms, concession stands, and other protective storage buildings available in multiple designs, textures, and colors. The Company is a leading high-end supplier in terms of volume, product options, and capabilities. The unit also manufactures various other precast products such as burial vaults, bridge beams, box culverts, septic tanks, and other custom pre-stressed and precast concrete products. The products are manufactured in Spokane, WA, Hillsboro, TX, and Waverly, WV.

Tubular and Energy Services

The Tubular and Energy Services segment has four primary product or service groups: Protective Coatings, Threaded Products, precision measurement systems and upstream test and inspection services. The segment provides products and services predominantly to the mid and upstream oil and gas markets.

Protective Coatings

There are two pipeline service locations that make up the Protective Coatings business unit. The Birmingham, AL facility coats the outside diameter and, to a lesser extent, the inside diameter of pipe primarily for oil & gas transmission pipelines. This location partners with its primary customer, a pipe manufacturer, to market fusion bonded epoxy coatings, abrasion resistant coatings, and internal linings for a wide variety of pipe diameters for pipeline projects throughout North America. The second location is in Willis, TX. The Willis facility applies specialty outside and inside diameter coatings for a wide variety of pipe diameters for oil & gas transmission, mining, and waste water pipelines. This location also provides custom coatings for specialty fittings and field service connections.

Threaded Products

The Company's Magnolia, TX facility cuts, threads, and paints pipe primarily for water well applications for the agriculture industry, municipal water authorities, and Oil Country Tubular Goods ("OCTG") markets.

Precision Measurement Systems

The Company manufactures and provides a turnkey solution for metering and injection systems for the oil and, to a lesser extent, gas industry. The Willis, TX location operates a fabrication plant that builds metering systems for custody transfer applications including crude oil and other petroleum-based products. These systems are used at well sites, pipelines, refineries, chemical plants, and loading/unloading facilities. The Willis location also manufactures and installs additive and dye injection systems. These systems are used to inject performance additives and/or dyes into petroleum products.

Upstream Test and Inspection Services

The Company provides inspection and tubular integrity management services for the upstream oil and gas industry. Services include non-destructive testing, inspection, and other asset integrity services such as repair and threading for OCTG and drill tools. Inspection and testing of these products, which include replaceable and reusable products such as casing, production tubing, drill pipe, directional motors, drill collars, and related equipment, is a critical preventative measure to ensure personnel and well-site safety, enhance efficiency, and avoid costly equipment failures and well-site shutdowns. The Company offers these services in every major oil and gas producing region throughout the United States.

L.B. Pipe Joint Venture

The Company is a member of a joint venture, LB Pipe & Coupling Products, LLC ("LB Pipe JV"), in which it maintains a 45% ownership interest. LB Pipe JV manufactures, markets, and sells various precision couplings and other tubular products for the energy, utility, and construction markets and is scheduled to terminate on June 30, 2019. More information concerning LB Pipe JV is set forth in Part II, Item 8, Financial Statements and Supplementary Data, Note 8 Investments, to the Consolidated Financial Statements included herein, which is incorporated by reference into this Item 1.

Marketing and Competition

L.B. Foster Company generally markets its rail products directly in all major industrial areas of the United States, Canada, and Europe. The construction and tubular and energy products and services are primarily marketed domestically. The Company employs a sales force of approximately 103 people that is supplemented with a network of agents across Europe, South America, and Asia to reach current customers and cultivate potential customers in these areas. For the years ended 2016, 2015, and 2014, approximately 19%, 16%, and 18%, respectively, of the Company's total sales were outside the United States.

The major markets for the Company's products are highly competitive. Product availability, quality, service, and price are principal factors of competition within each of these markets. No other company provides the same product mix to the various markets the Company serves. However, there are one or more companies that compete with the Company in each product line. Therefore, the Company faces significant competition from different groups of companies.

During 2016, 2015, and 2014, no single customer accounted for more than 10% of the Company's consolidated net sales.

Raw Materials and Supplies

Most of the Company's products are purchased in the form of finished or semi-finished products. The Company purchases the majority of its supplies from domestic and foreign steel producers. Generally, the Company has a number of vendor options. However, the Company has an arrangement with a steel mill to distribute steel sheet piling in North America. Should sheet piling from its present supplier not be available for any reason, the Company risks not being able to provide product to its customers.

The Company's purchases from foreign suppliers are subject to the usual risks associated with changes in international conditions and to United States and international laws that could impose import restrictions on selected classes of products and for anti-dumping duties if products are sold in the United States at prices that are below specified prices.

Backlog

The dollar amount of firm, unfilled customer orders at December 31, 2016 and 2015 by business segment is as follows:

| | December 31, | | |
|-----------------------------|------------------|-----------|--|
| | 2016 | 2015 | |
| Rail Products and Services | \$ 62,743 | \$ 85,199 | |
| Construction Products | 71,954 | 45,371 | |
| Tubular and Energy Services | 12,759 | 34,137 | |
| Total | <u>\$147,456</u> | \$164,707 | |

Approximately 5% of the December 31, 2016 backlog is related to projects that will extend beyond 2017.

Research and Development

Expenditures for research and development approximated \$3,511, \$3,937, and \$3,096 in 2016, 2015, and 2014, respectively. These expenditures were predominately associated with expanding product lines and capabilities within the Company's Rail Technologies business.

Patents and Trademarks

The Company owns a number of domestic and international patents and trademarks primarily related to its Rail Technologies products. Our business segments are not dependent upon any individual patent or related group of patents, or any licenses or distribution rights. We believe that, in the aggregate, the rights under our patents, trademarks, and licenses are generally important to our operations, but we do not consider any individual patent or trademark, or any licensing or distribution rights related to a specific process or product, to be of material importance in relation to our total business.

Environmental Disclosures

Information regarding environmental matters is included in Part II, Item 8, Financial Statements and Supplementary Data, Note 19 Commitments and Contingent Liabilities, which is incorporated by reference into this Item 1.

Employees and Employee Relations

At December 31, 2016, the Company had approximately 1,241 employees, 1,062 within the Americas and 179 of whom were located in Europe. There were 617 hourly production workers and 624 salaried employees. Of the hourly production workers, approximately 146 are represented by unions. The Company has not suffered any major work stoppages during the past five years and considers its relations with its employees to be satisfactory.

Two contracts covering approximately 43 and 76 employees expire in March and September 2017, respectively. The Company anticipates successfully renegotiating both of these contracts.

Substantially all of the Company's hourly paid employees are covered by one of the Company's non-contributory, defined benefit plans or defined contribution plans. Substantially all of the Company's salaried employees are covered by defined contribution plans.

Financial Information about Liquidity and Capital Resources

Information concerning the Company's liquidity and capital resources and the Company's working capital requirements can be found in Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations.

Financial Information about Geographic Areas

Financial information about geographic areas is set forth in Part II, Item 8, Financial Statements and Supplementary Data, Note 2 Business Segments, to the Consolidated Financial Statements included herein, which is incorporated by reference into this Item 1.

Financial Information about Segments

Financial information about segments is set forth in Part II, Item 8, Financial Statements and Supplementary Data, Note 2 Business Segments, to the Consolidated Financial Statements included herein, which is incorporated by reference into this Item 1.

Code of Ethics

L.B. Foster Company has a legal and ethical conduct policy applicable to all directors and employees, including its Chief Executive Officer, Chief Financial Officer, and Controller. This policy is posted on the Company's website, www.lbfoster.com. The Company intends to satisfy the disclosure requirement regarding certain amendments to, or waivers from, provisions of its policy by posting such information on the Company's website. In addition, our ethics hotline can also be used by employees and others for the anonymous communication of concerns about financial controls, human resource concerns, and other reporting matters.

Available Information

The Company makes certain filings with the Securities and Exchange Commission ("SEC"), including its Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and all amendments and exhibits to those reports, available free of charge through its website, www.lbfoster.com, as soon as reasonably practicable after they are filed with the SEC. These filings are also available at the SEC's Public Reference Room at 100 F Street N.E. Washington, D.C. 20549 or by calling 1-800-SEC-0330. These filings are also available on the internet at www.sec.gov. The Company's press releases and recent investor presentations are also available on its website.

Executive Officers of the Registrant

Information concerning the executive officers of the Company is set forth below.

| Name | Age | Position |
|------------------------|-----|---|
| Robert P. Bauer | 58 | President and Chief Executive Officer |
| Patrick J. Guinee | 47 | Vice President, General Counsel and Secretary |
| John F. Kasel | 51 | Senior Vice President — Rail Products and Services |
| Brian H. Kelly | 57 | Vice President — Human Resources and Administration |
| Alexandre Kosmala | 51 | Senior Vice President — Tubular and Energy Services and Construction |
| Gregory W. Lippard | 48 | Vice President — Rail Sales and Products |
| David J. Russo | 58 | Senior Vice President, Chief Financial Officer and Treasurer |
| Christopher T. Scanlon | 41 | Controller and Chief Accounting Officer |

Mr. Bauer was elected President and Chief Executive Officer upon joining the Company in 2012. Prior to joining the Company, beginning in 2011, Mr. Bauer previously served as President of the Refrigeration Division of the Climate Technologies business of Emerson Electric Company, a diversified global manufacturing and technology company. From 2002 until 2011, Mr. Bauer served as President of Emerson Network Power's Liebert Division.

Mr. Guinee was elected Vice President, General Counsel and Secretary in 2014. Prior to joining the Company, Mr. Guinee served as Vice President — Securities & Corporate and Assistant Secretary at Education Management Corporation from 2013 to early 2014, and was employed by H. J. Heinz Company from 1997 to 2013, last serving as Vice President - Corporate Governance & Securities and Assistant Secretary.

Mr. Kasel was elected Senior Vice President — Rail Products and Services in 2012 having previously served as Senior Vice President — Operations and Manufacturing since 2005 and Vice President — Operations and Manufacturing since 2003. Mr. Kasel served as Vice President of Operations for Mammoth, Inc., a Nortek company from 2000 to 2003.

Mr. Kelly was elected Vice President — Human Resources and Administration in 2012 having previously served as Vice President, Human Resources since 2006. Prior to joining the Company, Mr. Kelly headed Human Resources for 84 Lumber Company from 2004. Previously, he served as a Director of Human Resources for American Greetings Corp. from 1994 to 2004.

Mr. Kosmala was elected Senior Vice President — Tubular and Energy Services and Construction in August 2016. Prior to joining the Company, Mr. Kosmala served as Executive Vice President for Saltel Industries beginning in May 2013. Mr. Kosmala was President and CEO of Artificial Lift Company from October 2010 through May 2013 and served in various managerial capacities at Schlumberger from 1990 through 2010.

Mr. Lippard was elected Vice President — Rail Sales and Products in 2012 having previously served as Vice President — Rail Product Sales since 2000. Prior to re-joining the Company in 2000, Mr. Lippard served as Vice President — International Trading for Tube City, Inc. from 1998. Mr. Lippard served in various other capacities with the Company since his initial employment in 1991.

Mr. Russo is the Senior Vice President, Chief Financial Officer and Treasurer having resigned as Chief Accounting Officer in 2012 upon the appointment of Mr. Scanlon as Controller and Chief Accounting Officer in 2012. Mr. Russo was previously elected Senior Vice President, Chief Financial and Accounting Officer and Treasurer in 2010 having served previously as Senior Vice President, Chief Financial Officer and Treasurer since 2002. Mr. Russo was Corporate Controller of WESCO International Inc. from 1999 until joining the Company in 2002.

Mr. Scanlon was elected Controller and Chief Accounting Officer in 2012. Prior to joining the Company, Mr. Scanlon served as the Online Higher Education Division Controller of Education Management Corporation from 2009 to 2012. Mr. Scanlon served as Manager of Central Accounting Services for Bayer Corporation from 2007 until 2009.

Officers are elected annually at the organizational meeting of the Board of Directors following the annual meeting of stockholders.

ITEM 1A. RISK FACTORS

Risks and Uncertainties

We operate in a changing environment that involves numerous known and unknown risks and uncertainties that could have a material adverse effect on our business, financial condition, and results of operations. The following risks highlight some of the more significant factors that have affected us and could affect us in the future. We may also be affected by unknown risks or risks that we currently believe are immaterial. If any such events actually occur, our business, financial condition, and results of operations could be materially adversely affected. You should carefully consider the following factors and other information contained in this Annual Report on Form 10-K before deciding to invest in our common stock.

Our inability to successfully manage joint ventures, divestitures, and other significant transactions could harm our financial results, business, and prospects.

As part of our business strategy, we may divest businesses or assets, enter into strategic alliances and joint ventures, and make investments to realize anticipated benefits, which actions involve a number of inherent risks and uncertainties. We can give no assurances that the opportunities will be consummated or that financing will be available. We may not be able to achieve the synergies and other benefits we expect from strategic transactions as successfully or rapidly as projected, if at all.

Our future performance and market value could cause additional write-downs of long-lived and intangible assets in future periods.

We are required under U.S. generally accepted accounting principles to review intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Goodwill is required to be tested for impairment at least annually. Factors that may be considered to be a change in circumstances indicating that the carrying value of our intangible assets may not be recoverable include, but are not limited to, a decline in stock price and resulting market capitalization, a significant decrease in the market value of an asset, or a significant decrease in operating or cash flow projections. During 2016, we performed an interim goodwill test and concluded that the carrying amounts of the Rail Technologies, Protective Coatings and Chemtec reporting units' goodwill exceeded the implied fair values of that goodwill. We recognized non-cash goodwill impairment charges of \$61,142 to write down the carrying values to the implied fair values, of which \$16,560 represents the full carrying value of goodwill related to the 2013 Ball Winch acquisition and \$11,873 representing the remaining carrying value related to the Chemtec reporting unit. During the third quarter of 2015, we performed an interim goodwill test and concluded that the carrying amounts of the IOS and Chemtec reporting units' goodwill exceeded the implied fair values of that goodwill. We recognized a non-cash goodwill impairment charge of \$80,337 to write down the carrying values to the implied fair values, of which \$69,908 represented the full carrying value of goodwill related to the IOS acquisition and the remaining \$10,429 related to the Chemtec reporting unit.

During 2016, we performed interim long-lived asset recoverability tests and concluded that the long-lived assets related to the IOS and Chemtec divisions had carrying values in excess of the asset groups' fair value. We recognized non-cash definite-lived intangible asset impairment charges of \$59,786 to write down the carrying values to the implied fair values, of which \$42,982 relates to the IOS acquisition and \$16,804 relates to the Chemtec reporting unit. Finally in 2016, we recognized \$14,956 non-cash tangible long-lived impairment charges related to the carrying value of certain long-lived tangible assets exceeding their fair value, all of which related to the IOS acquisition.

No assurances can be given that we will not be required to record future significant charges related to tangible or intangible asset impairments.

Our indebtedness could materially adversely affect our business, financial condition, and results of operations and prevent us from fulfilling our obligations.

Our indebtedness could materially adversely affect our business, financial condition, and results of operations. For example, it could:

- require us to dedicate a substantial portion of our cash flows to payments of our indebtedness, which would reduce the availability of our cash flow to fund working capital, capital expenditures, expansion efforts, and other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;
- place us at a competitive disadvantage compared to our competitors that have less debt; and
- limit, among other things, our ability to borrow additional funds for working capital, capital expenditures, or general corporate purposes.

Our inability to comply with covenants in place or our inability to make the required principal and interest payments may cause an event of default, which could have a substantial adverse impact to our business, financial condition, and results of operations. There is no assurance that refinancings or asset dispositions could be effected on a timely basis or on satisfactory terms, if at all, particularly if credit market conditions deteriorate. Furthermore, there can be no assurance that refinancings or asset dispositions would be permitted by the terms of our credit agreements or debt instruments. Our existing credit agreements contain, and any future debt agreements we may enter into may contain, certain financial tests and other covenants that limit our ability to incur indebtedness, acquire other businesses, and impose various other restrictions. Our ability to comply with financial tests may be adversely affected by changes in economic or business conditions beyond our control, and these covenants may limit our ability to take advantage of potential business opportunities as they arise. We cannot be certain that we will be able to comply with the financial tests and other covenants, or, if we fail to do so, that we will be able to obtain waivers or amended terms from our lenders. An uncured default with respect to one or more of the covenants could result in the amounts outstanding being declared immediately due and payable, which may also trigger an obligation to redeem our outstanding debt securities and repay all other outstanding indebtedness. Any such acceleration of our indebtedness would have a material adverse effect on our business, financial condition, and results of operations.

Prolonged low energy prices and other unfavorable changes in U.S., global, or regional economic and market conditions could adversely affect our business.

We could be adversely impacted by prolonged negative changes in economic conditions affecting either our suppliers or customers as well as the capital markets. Negative changes in government spending may result in delayed or permanent deferrals of existing or potential projects. No assurances can be given that we will be able to successfully mitigate various prolonged uncertainties including materials cost variability, delayed or reduced customer orders and payments, and access to available capital resources outside of operations.

In addition, current volatile market conditions and low energy prices may continue for an extended period, which could continue to negatively affect our business prospects. Historically, oil and natural gas prices have been volatile and are subject to fluctuations in response to changes in supply and demand, market uncertainty, and a variety of additional factors that are beyond our control. Sustained declines, such as began to occur in 2015, in the price of oil and natural gas may continue to have a material adverse effect on our operations and financial condition.

Our ability to maintain or improve our profitability could be adversely impacted by cost pressures.

Our profitability is dependent upon the efficient use of our resources. Rising inflation, labor costs, labor disruptions, and other increases in costs in the geographies where we operate could have a significant adverse impact on our profitability and results of operations.

Management projections, estimates and judgments may not be indicative of our future performance.

Our management is required to use certain estimates in preparing our financial statements, including accounting estimates to determine reserves related to litigation, deferred tax assets and the fair market value of certain assets and liabilities, including our receivables held for sale portfolio. Certain asset and liability valuations are subject to management's judgment and actual results are influenced by factors outside our control.

We are required to establish a valuation allowance for deferred tax assets and record a charge to income and equity if we determine, based on available evidence at the time the determination is made, that it is more likely than not that some portion or all of the deferred tax assets will not be realized. This evaluation process involves significant management judgment about assumptions that are subject to change from period to period. The use of different estimates can result in changes in the amounts of deferred tax items recognized, which can result in equity and earnings volatility because such changes are reported in current period earnings. See Note 14 Income Taxes, in the accompanying consolidated financial statements for additional discussion of our deferred taxes.

Our business operates in highly competitive industries and a failure to react to changing market conditions could adversely impact our business.

We face strong competition in each of the markets in which we participate. A slow response to competitor pricing actions and new competitor entries into our product lines could negatively impact our overall pricing. Efforts to improve pricing could negatively impact our sales volume in all product categories. We may be required to invest more heavily to maintain and expand our product offerings. There can be no assurance that new product offerings will be widely accepted in the markets we serve. Significant negative developments in any of these areas could adversely affect our financial results and condition.

If we are unable to protect our intellectual property and prevent its improper use by third parties, our ability to compete may be harmed.

We own a number of patents and trademarks under the intellectual property laws of the United States, Canada, Europe, and other countries where product sales are possible. However, we have not perfected patent and trademark protection of our proprietary intellectual property for all products in all countries. The decision not to obtain patent and trademark protection in other countries may result in other companies copying and marketing products that are based upon our proprietary intellectual property. This could impede growth into new markets where we do not have such protections and result in a greater supply of similar products in such markets, which in turn could result in a loss of pricing power and reduced revenue.

Our success is in part dependent on the accuracy and proper utilization of our management information and communications systems.

We are currently working through an enterprise resource program ("ERP") system transition and certain divisions of our Company migrated into the new ERP system during 2016 while certain other divisions may be transitioned during 2017 and subsequent years. The system implementation is intended to enable us to better meet the information requirements of our users, increase our integration efficiencies, and identify additional synergies in the future. The implementation of our ERP system is complex because of the wide range of processes and systems to be integrated across our business. Project delays, business interruptions, or loss of expected benefits could have a material adverse effect on our business, financial condition, or results of operations. Any disruptions, delays, or deficiencies in the design, operation, or implementation of our various systems, or in the performance of our systems, particularly any disruptions, delays, or deficiencies that impact our operations, could adversely affect our ability to effectively run and manage our business, including our ability to receive, process, ship, and bill for orders in a timely manner or our ability to properly manage our inventory or accurately present our inventory availability or pricing.

We are subject to cybersecurity risks and may incur increasing costs in an effort to minimize those risks.

Our business employs systems and websites that allow for the storage and transmission of proprietary or confidential information regarding our customers, employees, job applicants, and other parties, including financial information, intellectual property, and personal identification information. Security breaches and other disruptions could compromise our information, expose us to liability, and harm our reputation and business. The

steps we take to deter and mitigate these risks may not be successful. We may not have the resources or technical sophistication to anticipate or prevent current or rapidly evolving types of cyber-attacks. Data and security breaches can also occur as a result of non-technical issues, including an intentional or inadvertent breach by our employees or by persons with whom we have commercial relationships. Any compromise or breach of our security could result in a violation of applicable privacy and other laws, legal and financial exposure, negative impacts on our customers' willingness to transact business with us, and a loss of confidence in our security measures, which could have an adverse effect on our results of operations and our reputation.

We are dependent upon key customers.

We could be adversely affected by changes in the business or financial condition of a customer or customers. A prolonged decrease in capital spending by our railroad customers could negatively impact our sales and profitability. As a result of the ongoing litigation and termination of the amended 2005 concrete tie supply agreement with Union Pacific Railroad ("UPRR"), our CXT Concrete Tie sales to, and new orders from UPRR have ceased which has adversely affected our results beginning in 2015.

Our agreement with our primary Birmingham, AL customer expires during 2017. It is our intention to successfully negotiate an extension to this agreement prior to its expiration. No assurances can be given that a significant downturn in the business or financial condition of a current customer, or customers, or potential litigation with a current customer, would not also impact our results of operations and/or financial condition.

An adverse outcome in any pending or future litigation or pending or future warranty claims against the Company or its subsidiaries or our determination that a customer has a substantial product warranty claim could negatively impact our financial results and/or our financial condition.

We are party to various legal proceedings. In addition, from time to time our customers assert claims against us relating to the warranties which apply to products we sell. There is the potential that a result materially adverse to us or our subsidiaries in pending or future legal proceedings or pending or future product warranty claims could materially exceed any accruals we have established and adversely affect our financial results and/or financial condition. In addition, we could suffer a significant loss of business from a customer who is dissatisfied with the resolution of a warranty claim. For example, UPRR terminated our amended 2005 concrete tie supply agreement over allegedly defective ties and reduced new orders for other products which negatively affected our results beginning in 2015.

In January 2015, UPRR filed a lawsuit against the Company asserting that we were in material breach of our amended 2005 concrete tie supply agreement with UPRR due to claimed failures to provide warranty ties to replace alleged defective concrete ties. UPRR seeks various types of relief including incidental, consequential, and other damages in amounts to be determined at trial under various legal theories. See Part II, Item 8, Financial Statements and Supplementary Data, Note 19 Commitments and Contingent Liabilities, for additional information regarding UPRR's lawsuit. We continue to work with UPRR in an attempt to reach a resolution on this matter. However, such discussions may not be successful, and the results of litigation and any settlement or judgment amounts resulting from this matter may not be within the range of our estimated accrual. Consequently, while we believe the claims in the UPRR lawsuit are without merit, and we intend to vigorously defend ourselves and have asserted a counterclaim for damages in the UPRR lawsuit, an adverse outcome could result in a substantial judgment against us that could have a material adverse effect on our financial condition, results of operations, liquidity, and capital resources. No assurances can be given that prior to any settlement or judgment, we will not take additional material charges because our warranty reserve accrual for UPRR is based upon our current estimate of the number of defective concrete ties that need to be replaced and facts could emerge which would cause us to materially increase this estimate.

A portion of our sales are derived from our international operations, which expose us to certain risks inherent in doing business on an international level.

Doing business outside the United States subjects the Company to various risks, including changing economic climate and political conditions, work stoppages, exchange controls, currency fluctuations, armed conflicts, and unexpected changes in United States and foreign laws relating to tariffs, trade restrictions, transportation regulations, foreign investments, and taxation. Increasing sales to foreign countries exposes the

Company to increased risk of loss from foreign currency fluctuations and exchange controls as well as longer accounts receivable payment cycles. We have little control over most of these risks and may be unable to anticipate changes in international economic and political conditions and, therefore, unable to alter our business practices in time to avoid the adverse effect of any of these possible changes.

Changes in exchange rates for foreign currencies may reduce international demand for our products or increase our labor or supply costs in non-U.S. markets. Fluctuations in the relative values of the United States dollar, Canadian dollar, British pound, and Euro will require adjustments in reported earnings and operations to reflect exchange rate translation in our Canadian and European sales and operations. If the United States dollar strengthens in value as compared to the value of the Canadian dollar, British pound, or Euro, our reported earnings in dollars from sales in those currencies will be unfavorable. Conversely, a favorable result will be reported if the United States dollar weakens in value as compared to the value of the Canadian dollar, British pound, or Euro.

Economic conditions and regulatory changes caused by the United Kingdom's likely exit from the European Union could adversely affect our business.

In June 2016, the United Kingdom (the "U.K.") held a referendum in which voters approved an exit from the European Union ("E.U."), commonly referred to as "Brexit". It is expected that the U.K. government will initiate a process to withdraw from the E.U. and begin negotiating the terms of its separation. The announcement of Brexit has resulted in significant volatility in the global stock market and currency exchange rate fluctuations that resulted in the strengthening of the U.S. dollar relative to the U.K. pound. The announcement of Brexit and likely withdrawal of the U.K. from the E.U. may also create global economic uncertainty. The majority of our U.K. operations are heavily concentrated within the U.K. borders; however, this could adversely affect the future growth of our U.K. operations into other European locations. Our U.K. operations represented approximately 10% of our total revenue for the twelve-month periods ended December 31, 2016 and 2015.

Material modification to tax legislation, NAFTA and certain other international trade agreements could affect our business, financial condition and results of operations.

The current Presidential administration has made comments suggesting it was not supportive of existing tax legislation and certain international trade agreements, including the North American Free Trade Agreement (NAFTA). At this time, it remains unclear what the current administration and Congress would or would not do with respect to the existing tax legislation and these international trade agreements. While the Company is a net exporter out of the United States, potential comprehensive U.S. tax reform or material modifications to NAFTA, or certain other international trade agreements, may adversely impact our business, financial condition, and results of operations.

Violations of foreign governmental regulations, including the U.S. Foreign Corrupt Practices Act and similar worldwide anti-corruption laws, could result in fines, penalties, and criminal sanctions against the Company, its officers, or both and could adversely affect our business.

Our foreign operations are subject to governmental regulations in the countries in which we operate as well as U.S. laws. These include regulations relating to currency conversion, repatriation of earnings, taxation of our earnings and the earnings of our personnel, and the increasing requirement in some countries to make greater use of local employees and suppliers, including, in some jurisdictions, mandates that provide for greater local participation in the ownership and control of certain local business assets.

The U.S. Foreign Corrupt Practices Act and similar other worldwide anti-corruption laws, such as the U.K. Bribery Act, prohibit improper payments for the purpose of obtaining or retaining business. Although we have established an internal control structure, corporate policies, compliance, and training processes to reduce the risk of violation, we cannot ensure that these procedures protect us from violations of such policies by our employees or agents. Failure to comply with applicable laws or regulations could subject us to fines, penalties, and suspension or debarment from contracting. Events of non-compliance could harm our reputation, reduce our revenues and profits, and subject us to criminal and civil enforcement actions. Violations of such laws or allegations of violation could disrupt our business and result in material adverse results to our operating results or future profitability.

Certain divisions of our business depend on a small number of suppliers. The loss of any such supplier could have a material adverse effect on our business, financial condition, and result of operations.

In our rail products businesses, we rely on a limited number of suppliers for key products that we sell to our customers. In addition, our piling business is predominantly dependent upon one supplier for sheet piling while our protective coatings business is predominately dependent on two suppliers of epoxy coating. A significant downturn in the business of one or more of these suppliers, a disruption in their manufacturing operations, an unwillingness to continue to sell to us, or a disruption in the availability of existing and new piling and rail products may adversely impact our financial results.

Fluctuations in the price, quality, and availability of the primary raw materials used in our business could have a material adverse effect on our operations and profitability.

Most of our businesses utilize steel as a significant product component. The steel industry is cyclical and prices and availability are subject to these cycles as well as to international market forces. We also use significant amounts of cement and aggregate in our concrete railroad ties and our precast concrete products business. No assurances can be given that our financial results would not be adversely affected if prices or availability of these materials were to change in a significantly unfavorable manner.

Labor disputes may have a material adverse effect on our operations and profitability.

Four of our manufacturing facilities are staffed by employees represented by labor unions. Approximately 146 employees employed at these facilities are currently working under three separate collective bargaining agreements. Disputes with regard to the terms of these agreements or our potential inability to renegotiate acceptable contracts with these unions could result in, among other things, strikes, work stoppages, slowdowns, or lockouts, which could cause a disruption of our operations and have a material adverse effect on our results of operations, financial condition, and liquidity.

Actions of activist shareholders could be disruptive and potentially costly and the possibility that activist shareholders may seek changes that conflict with our strategic direction could cause uncertainty about the strategic direction of our business.

In February 2016, the Company entered into an agreement with an activist investor, Legion Partners Asset Management, LLC and various of its affiliates (collectively, "Legion Partners") that had filed a Schedule 13D with the SEC with respect to the Company. Pursuant to that agreement, the Company agreed to appoint a representative of Legion Partners to the Company's Board of Directors and Legion Partners agreed to various stand-still provisions and to vote for the Company's director nominees at the Company's 2016 Annual Meeting of Shareholders. These provisions were extended through 2017 with the nomination of the Legion Partners representative to stand for re-election at the 2017 Annual Meeting of Shareholders.

Activist investors may attempt to effect changes in the Company's strategic direction and how the Company is governed, or to acquire control over the Company. Some investors seek to increase short-term shareholder value by advocating corporate actions such as financial restructuring, increased borrowing, special dividends, stock repurchases, or even sales of assets or the entire company. While the Company welcomes varying opinions from all shareholders, activist campaigns that contest or conflict with our strategic direction could have an adverse effect on the Company's results of operations and financial condition as responding to proxy contests and other actions by activist shareholders can disrupt our operations, be costly and time-consuming, and divert the attention of the Company's board and senior management from the pursuit of business strategies. In addition, perceived uncertainties as to our future direction as a result of changes to the composition of our Board may lead to the perception of a change in the direction of the business, instability or lack of continuity, which may be exploited by our competitors, may cause concern to our current or potential customers, may result in the loss of potential business opportunities and may make it more difficult to attract and retain qualified personnel and business partners. These types of actions could cause significant fluctuations in our stock price based on temporary or speculative market perceptions or other factors that do not necessarily reflect the underlying fundamentals and prospects of our business.

Our success is highly dependent on the continued service and availability of qualified personnel.

Much of our future success depends on the continued availability and service of key personnel, including our Chief Executive Officer, the executive team, and other highly skilled employees. Changes in demographics, training requirements, and the availability of qualified personnel could negatively affect our ability to compete and lead to a reduction in our profitability.

We may not foresee or be able to control certain events that could adversely affect our business.

Unexpected events including fires or explosions at our facilities, natural disasters, armed conflicts, unplanned outages, equipment failures, failure to meet product specifications, or a disruption in certain of our operations, may cause our operating costs to increase or otherwise impact our financial performance.

Shifting federal, state, local, and foreign regulatory policies impose risks to our operations.

We are subject to regulation from federal, state, local, and foreign regulatory agencies. We are required to comply with numerous laws and regulations and to obtain numerous authorizations, permits, approvals, and certificates from governmental agencies. Compliance with emerging regulatory initiatives, delays, discontinuations, or reversals of existing regulatory policies in the markets in which we operate could have an adverse effect on our business, results of operations, cash flows, and financial condition.

A substantial portion of our operations are heavily dependent on governmental funding of infrastructure projects. Many of these projects have "Buy America" or "Buy American" provisions. Significant changes in the level of government funding of these projects could have a favorable or unfavorable impact on our operating results. Additionally, government actions concerning "Buy America" provisions, taxation, tariffs, the environment, or other matters could impact our operating results.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

The location and general description of the principal properties which are owned or leased by L.B. Foster Company, together with the segment of the Company's business using such properties, are set forth in the following table:

| Location | Function | Acres | Business Segment | Lease Expiration |
|---|--|-------|-------------------------|---------------------|
| Bedford, PA | Bridge component fabricating plant | 16 | Construction | Owned |
| Birmingham, AL | Protective coatings facility | 32 | Tubular and Energy | 2017 |
| Burnaby, British Columbia, Canada | Friction management products plant | N/A | Rail | 2021 |
| Channelview, TX | Threading, test, and inspection facility | 73 | Tubular and Energy | Owned |
| Columbia City, IN | Rail processing facility and yard storage | 22 | Rail | Owned |
| Hillsboro, TX | Precast concrete facility | 9 | Construction | Owned |
| Kimball, NE | Threading, test, and inspection facility | 145 | Tubular and Energy | Owned |
| Leming, TX | Threading, test, and inspection facility | 63 | Tubular and Energy | Owned |
| Magnolia, TX | Threading facility and joint venture manufacturing facility | 35 | Tubular and Energy | Owned |
| Morgantown, WV | Test, and inspection facility | N/A | Tubular and Energy | 2018 |
| Niles, OH | Rail fabrication, friction management products, and yard storage | 35 | Rail | Owned |
| Petersburg, VA | Piling storage facility | 35 | Construction | Owned |
| Pueblo, CO | Rail joint manufacturing | 9 | Rail | Owned |
| Saint-Jean-sur-Richelieu, Quebec, Canada | Rail anchors and track spikes manufacturing plant | 17 | Rail | Owned |
| Sheffield, United Kingdom | Track component and friction management products facility | N/A | Rail | 2019 |
| Spokane, WA | CXT concrete tie plant | 13 | Rail | 2018 |
| Spokane, WA | Precast concrete facility | 5 | Construction | 2018 |
| Waverly, WV | Precast concrete facility | 85 | Construction | Owned |
| Willis, TX | Protective coatings facility | 16 | Tubular and Energy | Owned |
| Willis, TX | Measurement services facility | 68 | Tubular and Energy | Owned |

Included in the table above are certain facilities leased by the Company for which there is no acreage included in the lease. For these properties a "N/A" has been included in the "Acres" column.

Including the properties listed above, the Company has a total of 26 sales offices, including its headquarters in Pittsburgh, PA and 32 warehouses, plants, and yard facilities located throughout the United States, Canada, and Europe. The Company's facilities are in good condition and suitable for the Company's business as currently conducted and as currently planned to be conducted.

ITEM 3. LEGAL PROCEEDINGS

Information regarding the Company's legal proceedings and other commitments and contingencies is set forth in Part II, Item 8, Financial Statements and Supplementary Data, Note 19 Commitments and Contingent Liabilities, to the Consolidated Financial Statements included herein, which is incorporated by reference into this Item 3.

ITEM 4. MINE SAFETY DISCLOSURES

This item is not applicable to the Company.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Stock Market Information

(Dollars in thousands, except share data unless otherwise noted)

The Company had 320 common shareholders of record on February 17, 2017. Common stock prices are quoted daily through the NASDAQ Global Select Market quotation service (Symbol: FSTR). The following table sets forth the range of high and low sales prices per share of our common stock for the periods indicated:

| | | 2016 | | 2015 | | | |
|---------|---------|---------|-----------|---------|---------|-----------|--|
| Quarter | High | Low | Dividends | High | Low | Dividends | |
| First | \$18.53 | \$ 8.80 | \$0.04 | \$52.00 | \$37.00 | \$0.04 | |
| Second | 20.77 | 10.12 | 0.04 | 47.97 | 33.96 | 0.04 | |
| Third | 12.50 | 9.25 | 0.04 | 36.07 | 12.10 | 0.04 | |
| Fourth | 15.65 | 9.25 | | 16.66 | 10.10 | 0.04 | |

Dividends

During the fourth quarter 2016, the Board of Directors agreed to suspend the Company's quarterly dividend.

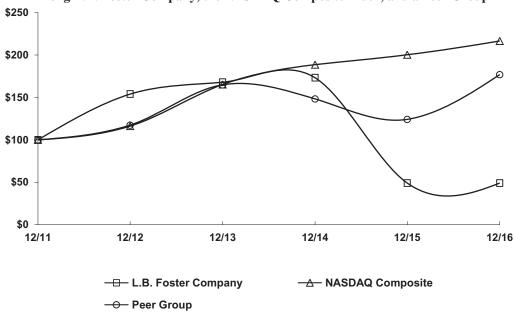
The Company's November 7, 2016 credit facility permits it to pay dividends and distributions and make redemptions with respect to its stock providing no event of default or potential default (as defined in the facility agreement) has occurred prior to or after giving effect to the dividend, distribution, or redemption. Dividends, distributions, and redemptions are capped at \$1,700 per year when funds are drawn on the facility.

Performance Graph

The Company's peer group consists of Alamo Group, Inc., AM Castle & Co., American Railcar Industries, Inc., CIRCOR International, Inc., Columbus McKinnon Corporation, Gibraltar Industries, Inc., Houston Wire & Cable Company, Insteel Industries Inc., Lindsay Corporation, Lydall Inc., MYR Group, Inc., NN Inc., Northwest Pipe Co., Olympic Steel Inc., Orion Marine Group, Inc., Quanex Building Products Corporation, Raven Industries Inc., and Sterling Construction Co. Inc.

The following tables compare total shareholder returns for the Company over the last five years to the NASDAQ Composite Index and the peer groups assuming a \$100 investment made on December 31, 2011. Each of the three measures of cumulative total return assumes reinvestment of dividends. The stock performance shown on the graph below is not necessarily indicative of future price performance.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among L.B. Foster Company, the NASDAQ Composite Index, and a Peer Group



^{* \$100} invested on 12/31/11 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.

| | 12/11 | 12/12 | 12/13 | 12/14 | 12/15 | 12/16 |
|---------------------|----------|----------|----------|----------|---------|---------|
| L.B. Foster Company | \$100.00 | \$154.04 | \$168.15 | \$173.16 | \$49.07 | \$49.30 |
| NASDAQ Composite | 100.00 | 116.41 | 165.47 | 188.69 | 200.32 | 216.54 |
| 2016 Peer Group | 100.00 | 117.68 | 165.18 | 148.33 | 124.45 | 176.97 |

Securities Authorized for Issuance Under Equity Compensation Plans

The following table sets forth information at December 31, 2016 with respect to compensation plans under which equity securities of the Company are authorized for issuance.

| Plan Category | Number of securities to be issued upon exercise of outstanding options, warrants, and rights (a) | Weighted-average exercise price of outstanding options, warrants, and rights (b) | Number of securities remaining available for future issuance under equity compensation plans (excluding securities to be issued upon exercise of outstanding options, warrants, or rights) (c) |
|--|---|--|--|
| Equity compensation plans approved by shareholders | 473,475 (1) | \$ (2) | 201,972 (3) |
| Equity compensation plans not approved by shareholders | = | _= | |
| Total | 473,475 (1) | \$(2) | <u>201,972</u> (3) |

- (1) The number of performance share units included in this table reflects an assumed payout at maximum performance achievement. The performance share units were granted under the 2006 Omnibus Incentive Plan, and were unvested and unearned at December 31, 2016.
- (2) At December 31, 2016, there were no outstanding awards with an exercise price per share. This column does not reflect outstanding performance share units.
- (3) Does not include the 473,475 performance share units included in column (a).

Under the 2006 Omnibus Incentive Plan, since May 24, 2006, non-employee directors have been automatically awarded shares of the Company's common stock as determined by the Board of Directors at each annual shareholder meeting at which such non-employee director is elected or re-elected. During 2016, pursuant to the 2006 Omnibus Incentive Plan, the Company issued approximately 46,000 fully-vested shares of the Company's common stock for the annual equity award. During 2016, the Company issued approximately 14,000 shares to certain non-employee directors who elected the option to receive fully-vested shares of the Company's common stock in lieu of director compensation. Through December 31, 2016, there were 184,240 fully vested shares issued under the 2006 Omnibus Incentive Plan to non-employee directors.

The Company grants eligible employees restricted stock and performance unit awards under the 2006 Incentive Omnibus Plan. The forfeitable restricted stock awards granted prior to March 2015 generally time-vest after a four-year period, and those granted in March 2015 generally time-vest ratably over a three-year period, unless indicated otherwise in the underlying restricted stock award agreement. Performance unit awards are offered annually under separate three-year long-term incentive plans. Performance units are subject to forfeiture and will be converted into common stock of the Company based upon the Company's performance relative to performance measures and conversion multiples as defined in the underlying plan.

With respect to awards made prior to December 31, 2016, the Company will withhold or employees may tender shares of restricted stock when issued to pay for withholding taxes. During 2016, 2015, and 2014, the Company withheld 20,186, 25,340, and 21,676 shares, respectively, for this purpose. The values of the shares withheld were \$275, \$1,114, and \$985 in 2016, 2015, and 2014, respectively. Awards made since January 1, 2017 provide that the Company will withholds shares of restricted stock to satisfy tax withholding obligations.

Issuer Purchases of Equity Securities

The Company's purchases of equity securities for the three-month period ended December 31, 2016 were as follows:

| | Total number of shares purchased (1) | Average price paid per share | Total number of shares purchased as part of publicly announced plans or programs (2) | Approximate dollar value of shares that may yet be purchased under the plans or programs |
|--------------------------------------|--|---------------------------------------|---|--|
| October 1, 2016 — October 31, 2016 | _ | \$ | _ | \$29,933 |
| November 1, 2016 — November 30, 2016 | _ | _ | _ | 29,933 |
| December 1, 2016 — December 31, 2016 | _ | | = | 29,933 |
| Total | _ | <u>\$—</u> | = | \$29,933 |

- (1) Reflects shares withheld by the Company to pay taxes upon vesting of restricted stock. These shares do not impact the remaining authorization to repurchase shares under approved plans or programs. No such shares were withheld during the three month period ending December 31, 2016.
- (2) On December 9, 2015, the Board of Directors authorized the repurchase of up to \$30,000 of the Company's common shares until December 31, 2017. This authorization became effective January 1, 2016. The \$30,000 repurchase authorization is restricted under the terms of the Second Amendment to the Second Amended and Restated Credit Agreement dated March 13, 2015, and as amended by the Second Amendment dated November 7, 2016 ("Second Amendment"). Dividends, distributions, and redemptions under the Second Amendment are capped at a maximum annual amount of \$1,700 throughout the life of the repurchase authorization.

ITEM 6. SELECTED FINANCIAL DATA

(Dollars in thousands, except per share data)

The following selected financial data has been derived from our audited financial statements. The financial data presented below should be read in conjunction with the information contained in "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Consolidated Financial Statements of the Company and the Notes thereto included elsewhere in this Annual Report on Form 10-K.

| | Year Ended December 31, | | | | | | |
|--|-------------------------|--------------------|-----------|-----------|-----------|--|--|
| Income Statement Data | 2016 (1) | 2015 (2) | 2014 (3) | 2013 (4) | 2012 (5) | | |
| Net sales | \$ 483,514 | \$624,523 | \$607,192 | \$597,963 | \$588,541 | | |
| Operating (loss) profit (a) | \$ (5,195) | \$ 28,760 | \$ 37,082 | \$ 41,571 | \$ 22,657 | | |
| (Loss) income from continuing operations, net of tax | \$(141,660) | \$ (44,445) | \$ 25,656 | \$ 29,290 | \$ 14,764 | | |
| Income from discontinued operations, net of tax | | | | | 1,424 | | |
| Net (loss) income | <u>\$(141,660</u>) | <u>\$ (44,445)</u> | \$ 25,656 | \$ 29,290 | \$ 16,188 | | |
| Basic (loss) earnings per common share: | | | | | | | |
| Continuing operations | \$ (13.79) | \$ (4.33) | \$ 2.51 | \$ 2.88 | \$ 1.46 | | |
| Discontinued operations | | | | | 0.14 | | |
| Basic (loss) earnings per common share | <u>\$ (13.79)</u> | \$ (4.33) | \$ 2.51 | \$ 2.88 | \$ 1.60 | | |
| Diluted (loss) earnings per common share: | | | | | | | |
| Continuing operations | \$ (13.79) | \$ (4.33) | \$ 2.48 | \$ 2.85 | \$ 1.44 | | |
| Discontinued operations | | | | | 0.14 | | |
| Diluted (loss) earnings per common share | \$ (13.79) | \$ (4.33) | \$ 2.48 | \$ 2.85 | \$ 1.58 | | |
| Dividends paid per common share | \$ 0.12 | \$ 0.16 | \$ 0.13 | \$ 0.12 | \$ 0.10 | | |

- (a) Operating (loss) profit represents the gross profit less selling and administrative expenses and amortization expense.
- (1) 2016 includes long-lived tangible and intangible, including goodwill, asset impairments of \$135,884. More information about the impairments can be found in Part II, Item 8, Financial Statements and Supplementary Data, Note 4 Goodwill and Other Intangible Assets, and Note 7 Property, Plant, and Equipment.
- (2) 2015 includes the results of the acquisitions of TEW Plus, Ltd. ("Tew Plus") (November 23), IOS Holdings, Inc ("IOS") (March 13), and TEW Holdings, Ltd. ("Tew") (January 13). The results also include an \$80,337 impairment of goodwill related to the IOS and Chemtec reporting units. More information about the impairment can be found in Part II, Item 8, Financial Statements and Supplementary Data, Note 4 Goodwill and Other Intangible Assets.
- (3) 2014 includes CXT Concrete Tie UPRR warranty charges of \$9,374 within the Rail Products and Services segment. The 2014 results also include the acquisitions of Carr Concrete (July 7), FWO (October 29), and Chemtec (December 30).
- (4) 2013 includes the acquisition of Ball Winch, (November 7).
- (5) 2012 includes CXT Concrete Tie UPRR warranty charge of \$22,000 within Rail Products and Services segment and a pre-tax gain of \$3,193, from the dispositions of the SSD and Precise divisions, in income from discontinued operations, net of tax.

| | December 31, | | | | | | | |
|----------------------|--------------|-----------|-----------|-----------|-----------|--|--|--|
| Balance Sheet Data | 2016 | 2015 | 2014 | 2013 | 2012 | | | |
| Total assets | \$393,023 | \$566,660 | \$491,717 | \$413,193 | \$401,537 | | | |
| Working capital | 117,273 | 122,828 | 135,488 | 171,603 | 179,838 | | | |
| Long-term debt | 149,179 | 167,419 | 25,752 | 25 | 27 | | | |
| Stockholders' equity | 133,251 | 282,832 | 335,888 | 316,397 | 287,575 | | | |

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

(Dollars in thousands, except share data unless otherwise noted)

Executive Level Overview

2016 Developments and 2017 Outlook

During 2016, we:

- Incurred a net loss of \$141,660;
- Generated adjusted EBITDA (earnings before interest, taxes, depreciation, amortization, and impairment charges) of \$18,530; (a)
- Managed working capital levels, resulting in \$18,405 of net cash provided by operating activities;
- Reduced borrowings by \$9,184;
- Restructured our workforce and operations by eliminating approximately \$12,000 in annualized expenses;
- Successfully completed a \$3,000 upgrade at our Birmingham coating facility allowing us to enhance our service capabilities;
- Implemented our new ERP system at two of our rail divisions;
- Reduced 2016 capital expenditures to \$7,664 from \$14,913 in 2015;
- Amended our credit agreement from a maximum capacity of \$335,000 to \$225,000, which includes a \$30,000 term loan; and
- Accrued deferred income and withholding taxes of \$7,932 on unremitted foreign earnings and recorded a valuation allowance of \$29,719 against deferred tax assets.
- (a) The following table displays a reconciliation of this non-GAAP measure for the three-year periods ended December 31, 2016, 2015 and 2014. EBITDA adjusted for the current and prior year asset impairments are financial metrics utilized by management to evaluate the Company's performance on a comparable basis after excluding the non-cash impact of the 2016 and 2015 impairments and, accordingly, management believes that disclosure of this non-GAAP measure is useful to investors as an additional way to evaluate the Company's performance.

Twolvo Months Ended

| | December 31, | | | |
|--------------------------------|--------------|-----------------|----------|--|
| | 2016 | 2015 | 2014 | |
| Adjusted EBITDA Reconciliation | | | | |
| Net (loss) income | \$(141,660) | \$(44,445) | \$25,656 | |
| Interest expense, net | 6,323 | 4,172 | (18) | |
| Income tax (benefit) expense | (5,509) | (6,132) | 13,404 | |
| Depreciation | 13,917 | 14,429 | 7,882 | |
| Amortization | 9,575 | 12,245 | 4,695 | |
| Total EBITDA | (117,354) | <u>(19,731)</u> | 51,619 | |
| Asset impairments | 135,884 | 80,337 | | |
| Adjusted EBITDA | \$ 18,530 | \$ 60,606 | \$51,619 | |

Throughout 2016, our markets indicated longer recovery horizons than we previously projected, which led to various of our businesses underperforming against projections. Our Rail Products and Services segment was negatively impacted by reduced spending in the North American freight rail market. Weak commodities markets translated into declining commodity carloads for rail carriers and created pricing pressure. Rail carloads were down throughout 2016 by the continuing energy industry shift away from coal to natural gas and declining rail shipments of crude oil and most other metals, ores, and agriculture products. Our rail distribution business has been particularly impacted as this division serves Class II railroads and the North American industrial rail market, which have experienced reduced project activity and pricing declines. Spending in 2017 by the large freight rail operators in North America is expected to further decline according to their public announcements. Bright spots exist in intermodal freight and shipments of passenger vehicles. The European market was also weak in 2016 as a result of reduced spending by our primary customer in the U.K., however, the outlook in the U.K. is more favorable for 2017. We have a broader set of automation solutions to offer customers with respect to passenger transit systems with the integration of the Tew business acquisitions into the Company.

Freight rail operators appear to be prioritizing spending against safety improvement, operating efficiency, and other cost reduction activities. The Company continues to target products and solutions to help improve safety and operating efficiency as well as introduce services that contribute to extending the useful life of certain rail equipment and lowering maintenance costs for operators. Freight rail operators are expected to benefit from the need for intermodal networks to efficiently ship goods.

Funding for transit rail projects in North America remained relatively solid throughout 2016. While our revenues from this market are always affected by swings in large projects from one year to the next, we continue to believe the transit market will grow over the long run, although year to year sequential growth may not be consistent. Management believes that the global transit market represents an attractive opportunity for future growth. By focusing on products that can improve safety and efficiency, as well as passenger comfort, we are attempting to partner with key end users and original equipment manufacturers ("OEMs") to serve this market. In addition, we have a broader set of automation solutions to offer passenger transit systems. Our team of engineers continues its focus on assisting transit system operations improve infrastructure and lower cost.

While certain key steel price indexes have shown recent increases, pricing in the markets we serve has been slow to recover. Management enacted multiple strategies in an effort to maximize profit margins throughout the prolonged downturn in the North American freight rail market and in light of the loss of sales to the UPRR (from approximately \$15,000 to \$2,600). We believe our current cost structure in place at the beginning of 2017 is appropriate to achieve our 2017 projections. Should business activity be weaker than projected, we are prepared to make further adjustments.

The energy markets where our Tubular and Energy Services segment is focused faced difficult markets in 2016. The majority of our business is tied to investment in midstream pipeline infrastructure. As the midstream operators adjusted their capital spending plans, our orders declined, thereby reducing a significant amount of our backlog. While not as volatile as 2015, the midstream market conditions were challenging in 2016 as end users adjusted to prolonged lower oil prices and reacted to a changing climate around liquidity needs. We have exposure to the upstream drilling market and capital spending reductions by upstream operators caused by energy market weakness led us to take restructuring actions at both our upstream test and inspection services business and our precision measurement systems businesses.

It is our continued belief that there are widespread needs across the US for pipeline infrastructure in the long term, and new demand will be driven by already developed wells, future export potential, and transition from coal to natural gas plants. As a result of reduced capital spending across the energy industry and stable oil prices, U.S. crude oil production is expected to increase in 2017. With the North American rig counts recently increasing, our upstream test and inspection business ended the year with increasing sales and inquiry activity.

Within our Construction Products segment, heavy civil construction projects improved throughout 2016 and bridge spending remains strong. We entered 2017 with an improved backlog across all businesses within the segment. The Company did not perform well in other more commoditized piling products targeted at (or utilized in) heavy civil projects that became very price competitive due to declining steel prices. Throughout the year, lower scrap input prices and very low factory utilization rates kept steel prices very competitive. As a result, the Company did not participate in some of the typical projects we serve with pipe pile and H-pile, resulting in lower sales volumes and pricing.

Factory utilization in the steel industry is expected to remain at depressed levels into 2017. Although commodity pricing has shown recent increases, there remains excess global capacity to provide supply for projects at very competitive prices. This industry is also being affected by the low oil and gas exploration and development as well as other industrial markets where the commodity cycle has led to pressure on costs and lower capital spending.

The precast concrete products business was a bright spot in 2016. The introduction of new products provided support for growth, particularly in the Southwest region of the U.S. We anticipate this market to grow at a slow pace, but we enter 2017 with increased backlog and improved order entry.

Management intends to stay focused on cost reduction actions and will continue to streamline operations and plant efficiency while prioritizing free cash flow generation. We incurred \$1,921 of severance expense and other one-time charges in 2016 as we aligned our work force with current demand levels. With the majority of our restructuring activities completed in 2016, we are positioned to benefit as the markets we serve recover. Our long term objective is to continue the modernization of the entire Company with the ongoing implementation of our new ERP system from which we can grow and leverage best in class business processes.

UPRR Product Warranty Claim

On January 23, 2015, UPRR filed a Complaint and Demand for Jury Trial in the District Court for Douglas County, NE against the Company and its subsidiary, CXT, asserting, among other matters, that the Company breached its express warranty, breached an implied covenant of good faith and fair dealing, and anticipatorily repudiated its warranty obligations, and that UPRR's exclusive and limited remedy provisions in the supply agreement have failed of their essential purpose which entitles UPRR to recover all incidental and consequential damages. The Complaint seeks to cancel all duties of UPRR under the contract, to adjudge the Company as having no remaining rights under the contracts, and to recover damages in an amount to be determined at trial for the value of unfulfilled warranty replacement ties and ties likely to become warranty eligible, for costs of cover for replacement ties, and for various incidental and consequential damages. The amended 2005 supply agreement provides that UPRR's exclusive remedy is to receive a replacement tie that meets the contract specifications for each tie that failed to meet the contract specifications or otherwise contained a material defect provided that the Company receives written notice of such failure or defect within 15 years after that tie was produced. The amended 2005 supply agreement provides that the Company's warranty does not apply to ties that (a) have been repaired or altered without the Company's written consent in such a way as to affect the stability or reliability thereof, (b) have been subject to misuse, negligence, or accident, or (c) have been improperly maintained or used contrary to the specifications for which such ties were produced. The amended 2005 supply agreement also continues to provide that the Company's warranty is in lieu of all other express or implied warranties and that neither party shall be subject to or liable for any incidental or consequential damages to the other party. The dispute is largely based on (1) claims submitted that the Company believes are for ties claimed for warranty replacement that are inaccurately rated under concrete tie rating guidelines and procedures agreed to in 2012 and incorporated by amendment to the 2005 supply agreement and are not the responsibility of the Company and claims that do not meet the criteria of a warranty replacement and (2) UPRR's assertion, which the Company vigorously disputes, that UPRR in future years will be entitled to warranty replacement ties for virtually all of the Grand Island ties. Many thousands of Grand Island ties have been performing in track for over ten years. In addition, a significant amount of Grand Island ties were rated by both parties in the excellent category of the rating system.

By Second Amended Scheduling Order dated February 22, 2017, a March 30, 2018 deadline for the completion of fact discovery has been established with trial to proceed at some future date after June 1, 2018. Through the date of this filing, the parties continued to conduct discovery. The Company intends to continue to engage in discussions in an effort to resolve the UPRR matter. However, we cannot predict that such discussions will be successful, or that the results of the litigation with UPRR, or any settlement or judgment amounts, will reasonably approximate our estimated accruals for loss contingencies. Future potential costs pertaining to UPRR's claims and the outcome of the UPRR litigation could result in a material adverse effect on our results of operations, financial condition, and cash flows.

Year-to-date Results Comparison

The segment gross profit measures presented within the MD&A tables constitute non-GAAP financial measures disclosed by management to provide investors and other users information to evaluate the performance of the Company's segments on a more comparable basis to market trends and peers. The exclusion of significant cost allocations to the reportable segments:

- Allows users to understand the operational performance of our reportable segments;
- Provides greater comparability to other registrants with similar businesses and avoids possible noncomparability at the reportable segment pre-tax profit level resulting from our specific corporate cost allocations; and
- Facilitates a clearer, market-based perspective on the strength or weakness of our reportable segments in their markets to better aid in investment decisions.

In addition, these non-GAAP financial measures have historically been key metrics utilized by segment managers to monitor selling prices and quantities as well as production and service costs to better evaluate key profitability drivers and trends that may develop due to industry and competitive conditions.

| Twelve months ended December 31, 2016 | Rail Products and Services | Construction Products | Tubular and Energy Services | Total |
|---------------------------------------|-------------------------------|--------------------------|--------------------------------|-------------|
| Reportable Segment Profit (Loss) | \$(26,228) | \$ 8,189 | \$(116,126) | \$(134,165) |
| Segment and Allocated Selling & | | | | |
| Administrative | 40,696 | 18,739 | 17,978 | 77,413 |
| Amortization Expense | 3,881 | 151 | 5,543 | 9,575 |
| Asset Impairments | 32,725 | | 103,159 | 135,884 |
| Non-GAAP Segment Gross Profit | \$ 51,074 | <u>\$27,079</u> | <u>\$ 10,554</u> | \$ 88,707 |
| Twelve months ended December 31, 2015 | Rail Products and Services | Construction Products | Tubular and Energy Services | Total |
| Reportable Segment Profit (Loss) | \$ 27,037 | \$12,958 | \$ (81,344) | \$ (41,349) |
| Segment and Allocated Selling & | | | | |
| Administrative | 44,204 | 20,969 | 15,520 | 80,693 |
| Amortization Expense | 4,035 | 242 | 7,968 | 12,245 |
| Asset Impairments | | | 80,337 | 80,337 |
| Non-GAAP Segment Gross Profit | \$ 75,276 | <u>\$34,169</u> | \$ 22,481 | \$ 131,926 |
| Twelve months ended December 31, 2014 | Rail Products and Services | Construction Products | Tubular and Energy Services | Total |
| Reportable Segment Profit | \$ 30,093 | \$13,106 | \$ 5,350 | \$ 48,549 |
| Segment and Allocated Selling & | | | | |
| Administrative | 44,643 | 18,844 | 4,621 | 68,108 |
| Amortization Expense | 2,499 | 441 | 1,751 | 4,691 |
| Asset Impairments | | | | |
| Non-GAAP Segment Gross Profit | <u>\$ 77,235</u> | \$32,391 | <u>\$ 11,722</u> | \$ 121,348 |

Results of Operations

| | Twelve Months Ended December 31, | | | Percent of Total Net Sales Twelve Months Ended December 31, | | | Percent Increase/(Decrease) | |
|--|-------------------------------------|-------------|----------------------|---|--------|---------|--------------------------------|------------------|
| | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 | 2016 vs. 2015 | 2015 vs. 2014 |
| Net Sales: | | | | | | | | |
| Rail Products and Services | \$ 230 127 | \$328 082 | \$374.615 | 40.5% | 52.7% | 61 7% | (27.3)% | (12.2)% |
| Construction Products | 145,602 | 176,394 | 178,847 | 30.1 | 28.2 | 29.5 | (17.5) | (1.4) |
| Tubular and Energy Services | 98,785 | 119,147 | 53,730 | 20.4 | 19.1 | 8.8 | (17.1) | 121.8 |
| Total net sales | | | | | 100.0% | | | 2.9% |
| Total lict sales | Ψ 103,311 | ==== | \$007,172 | 100.0% | 100.0% | 100.070 | (22.0)70 | 2.770 |
| | Twelve Months Ended December 31, | | | Non-GAAP / Reported Gross Profit Percentage Twelve Months Ended December 31, | | | Percent Increase/(Decrease) | |
| | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 | 2016 vs. 2015 | 2015 vs. 2014 |
| Gross Profit: | | | | | | | | |
| Non-GAAP Rail Products and Services | \$ 51.074 | \$ 75,276 | \$ 77.235 | 21.4% | 22.9% | 20.6% | (32.2)% | (2.5)% |
| Non-GAAP Construction Products | 27,079 | 34,169 | 32,391 | 18.6 | 19.4 | 18.1 | (20.7) | 5.5 |
| Non-GAAP Tubular and Energy Services | 10,554 | 22,481 | 11,722 | 10.7 | 18.9 | 21.8 | (53.1) | 91.8 |
| Non-GAAP Segment gross profit | 88,707 | 131,926 | 121,348 | | | | | |
| LIFO income | 2,643 | 2,468 | 738 | 0.5 | 0.4 | 0.1 | 7.1 | ** |
| Other | (994) | | | (0.2) | (0.1) | (0.1) | 34.1 | 49.7 |
| Total gross profit | \$ 90,356 | \$133,653 | \$121,591 | 18.7% | 21.4% | 20.0% | (32.4)% | 9.9% |
| | Twelve Months Ended December 31, | | | Percent of Total Net Sales Twelve Months Ended December 31, | | | Percent Increase/(Decrease) | |
| | 2016 | 2015 | 2014 | 2016 | 2015 | 2014 | 2016 vs. 2015 | 2015 vs. 2014 |
| Expenses: | | | | | | | | |
| Selling and administrative expenses | \$ 85,976 | \$ 92,648 | \$ 79,814 | 17.8% | 14.8% | 13.1% | (7.2)% | 16.1% |
| Amortization expense | 9,575 | 12,245 | 4,695 | 2.0 | 2.0 | 0.8 | (21.8) | 160.8 |
| Asset impairments | 135,884 | 80,337 | _ | 28.1 | 12.9 | _ | 69.1 | _ |
| Interest expense | 6,551 | 4,378 | 512 | 1.4 | 0.7 | 0.1 | 49.6 | ** |
| Interest income | (228) | (206) | (530) | _ | _ | (0.1) | 10.7 | (61.1) |
| Equity in loss (income) of nonconsolidated | 4.000 | 440 | (4.000) | 0.0 | 0.4 | (0.0) | 242.2 | (100.0) |
| investments | 1,290 | | (1,282) | 0.3 | 0.1 | (0.2) | 212.3 | (132.2) |
| Other income | (1,523) | | | (0.3) | (0.9) | (0.1) | (72.7) | ** |
| Total expenses | \$ 237,525 | \$184,230 | \$ 82,531 | 49.1% | 29.5% | 13.6% | 28.9% | 123.2% |
| (Loss) income before income taxes | \$(147,169) | \$ (50,577) | \$ 39,060 | (30.4) | (8.1) | 6.4 | 191.0 | (229.5) |
| Income tax (benefit) expense | (5,509) | (6,132) | 13,404 | (1.1) | (1.0) | 2.2 | ** | (145.7) |
| Net (loss) income | \$(141,660) | \$ (44,445) | \$ 25,656 | (29.3)% | (7.1)% | 6 4.2% | 218.7% | (273.2)% |

^{**} Results of calculation are not considered meaningful for presentation purposes.

Fiscal 2016 Compared to Fiscal 2015 — Company Analysis

Net sales of \$483,514 for the year ended December 31, 2016 decreased by \$141,009 or 22.6% compared to the prior year period. All segments reported overall year over year declines of 27.3%, 17.5% and 17.1% for Rail Products and Services, Construction Products and Tubular and Energy Services, respectively.

Gross profit margin for 2016 was 18.7%, or 271 basis points lower than the prior year. The current year margin was significantly impacted by the prolonged weakness in the oil and gas market and reduced activity in the rail market. Included in the 2016 gross profit was \$2,643 related to the LIFO income compared to \$2,468 in the prior year.

Selling and administrative expenses decreased by \$6,672, or 7.2%, over the prior year period. The decrease was primarily attributable to cost reduction initiatives related to personnel and travel costs of \$2,982, incentive compensation reductions of \$3,777, prior year acquisition and integration costs of \$1,212 and other strategic spending reductions of \$4,024, which were partially offset by increased litigation related costs for the UPRR matter of \$2,671, the fourth quarter employment claim settlement expense of \$900, and other miscellaneous items including ERP costs totaling \$1,799.

The Company recorded non-cash asset impairments of \$135,884 during the year ended December 31, 2016. During the second quarter of 2016, the Company identified various indicators that suggested that there was a more likely than not probability that the carrying values of certain assets and reporting units were less than their respective fair values. The impairment indicators included a rapid deterioration in actual performance against forecasts, downward revisions in projected financial results, declines in the Company's market capitalization, and reductions in new order activity.

Asset groups that had indicators of impairment were analyzed to determine if the carrying values were recoverable. Based upon the recoverability assessment, the Company determined that certain intangible assets and property, plant, and equipment within the test and inspection services division and certain intangible assets within the Chemtec division were impaired. The impairment assessment was finalized during the three-month period ended September 30, 2016 resulting in a \$59,786 definite-lived intangible asset impairment and a \$14,956 property, plant, and equipment impairment that were recorded within the Tubular and Energy Services segment. The remaining asset groups tested for recoverability were substantially in excess of their respective carrying values.

The Company performed an interim goodwill impairment review as of June 1, 2016 as a result of the adverse effect on certain reporting units of reduced capital spending and cost reduction priorities that oil and gas developers and railroad customers have enacted as well as the indicators previously noted. The forecasts for the Chemtec, protective coatings, and Rail Technologies reporting units did not indicate a timely recovery to support the carrying values of the reporting units. Upon finalization of the interim impairment assessment during the three-month period ended September 30, 2016, the Company recognized a goodwill impairment of \$61,142, which represented the full impairment of goodwill related to the Chemtec and protective coatings reporting units and approximately 68% of the Rail Technologies goodwill value. The estimated fair values of the remaining reporting units were substantially in excess of the carrying value of those reporting units.

Other income during the prior year was favorably impacted by the sale of assets at our Tucson, AZ facility resulting in a gain of \$2,279, realized and unrealized foreign exchange gains totaling \$1,616, and other less significant income items.

The Company's effective income tax rate for 2016 was 3.7%, compared to 12.1% in the prior year period. The Company accrued deferred U.S. income taxes and foreign withholding taxes of \$7,932 in the current year, related to accumulated foreign earnings that management no longer intends to permanently reinvest outside of the United States. The Company also recorded a valuation allowance of \$29,719 against deferred tax assets in the current year.

Net loss for the year ended December 31, 2016 was \$141,660, or \$13.79 per diluted share, compared to the net loss for the 2015 period of \$44,445, or \$4.33 per diluted share.

Fiscal 2015 Compared to Fiscal 2014 – Company Analysis

Net sales of \$624,523 for the year ended December 31, 2015 increased by \$17,331 or 2.9% compared to the 2014 period. Included within the 2015 sales are acquisition-related revenues of \$93,411, which generated 20.9% margins. The sales increase was attributable to increases of 121.8% in Tubular and Energy Services, which were partially offset by decreases of 12.2% and 1.4% in Rail Products and Services and Construction Products segment sales, respectively.

Gross profit margin for 2015 was 21.4%, or 138 basis points higher than the prior year. The Rail Products and Services segment recognized warranty-related charges of \$1,092 and \$9,374 in 2015 and 2014, respectively. Included in the 2015 gross profit was \$2,468 related to the LIFO income compared to \$738 in the prior year. The favorable change in LIFO income primarily resulted from decreasing prices across our segments, as inventory levels in the aggregate were down slightly.

Selling and administrative expenses in 2015 increased by \$12,834, or 16.1%, over the 2014 period. The cost increases for 2015 were attributable to costs from acquired businesses. Significant components of the acquired costs are personnel-related costs and to a much lesser extent insurance and travel costs.

During the third quarter of 2015, the Company recorded a non-cash goodwill impairment charge of \$80,337 related to the IOS and Chemtec reporting units within the Tubular and Energy Services segment. The charge was primarily due to the impact of the depressed energy markets on both reporting units as well as the reduction in the active U.S. land oil rig count which specifically impacted the IOS reporting unit. These businesses were being adversely affected by reduced capital spending and cost reduction priorities that oil and gas developers and pipeline companies implemented. These factors led to a reduction in demand causing the near term financial projections of the IOS and Chemtec reporting units to deteriorate. The Company performed an interim test for impairment of goodwill, and the long-term forecast did not indicate a timely recovery to support the carrying values of the goodwill, as further described in Part II, Item 8, Financial Statements and Supplementary Data, Note 4 Goodwill and Other Intangible Assets, of this Annual Report on Form 10-K.

Other income during 2015 was favorably impacted by the sale of assets at our Tucson, AZ facility resulting in a gain of \$2,279, realized and unrealized foreign exchange gains totaling \$1,616, and other less significant income items.

The Company's effective income tax rate for 2015 was 12.1%, compared to 34.3% in the prior year period. The Company's effective income tax rate for 2015 differed from the federal statutory rate of 35% primarily due to the discrete impact of the \$80,337 goodwill impairment in the third quarter. The impairment related to both tax deductible and nondeductible goodwill, and resulted in an income tax benefit of \$16,450 during 2015.

Net loss for the year ended December 31, 2015 was \$44,445, or \$4.33 per diluted share, which compares to net income for the 2014 period of \$25,656, or \$2.48 per diluted share. Excluding the 2015 impairment charge of \$63,887, net of income tax benefit, net income would have been \$19,442 or \$1.88 per diluted share. This non-GAAP net income measure is inclusive of approximately 75,000 shares that were anti-dilutive on a GAAP basis.

Results of Operations — Segment Analysis

Rail Products and Services

| | | ve Months E December 31 | | Decrease | (Decrease) Increase | Percent Decrease | (Decrease) Increase |
|----------------------------------|------------|----------------------------|-----------------|---------------|---|---------------------|------------------------|
| | 2016 | 2015 | 2014 | 2016 vs. 2015 | 2015 vs. 2014 | 2016 vs. 2015 | 2015 vs. 2014 |
| Net Sales | \$239,127 | \$328,982 | \$374,615 | \$(89,855) | \$(45,633) | (27.3)% | (12.2)% === |
| Segment (Loss) Profit | \$(26,228) | \$ 27,037 | \$ 30,093 | \$(53,265) | \$ (3,056) | (197.0)% | (10.2)% |
| Non-GAAP Gross Profit | \$ 51,074 | \$ 75,276 | \$ 77,235 | \$(24,202) | \$ (1,959) =================================== | (32.2)% | (2.5)% |
| Non-GAAP Gross Profit Percentage | 21.4% | 6 <u>22.9</u> 9 | % <u>20.6</u> % | (1.5)% | 2.3% | (6.6)% | 11.2% |

Fiscal 2016 Compared to Fiscal 2015

Rail Products and Services segment sales decreased \$89,855, or 27.3%, compared to the prior year period. For 2016, our rail distribution business accounted for approximately 47.9% of the decrease. This division serves Class II freight, rail and transit railroads and the North American industrial rail market, which have experienced price and project declines. All rail divisions experienced reductions in sales over the prior year period attributable to continued weakness in the North American freight rail market in both commodity carloads as well as intermodal rail traffic. Additionally, due to the ongoing litigation with UPRR, our rail divisions experienced a decline in sales to UPRR of approximately \$12,600.

The Rail Products and Services segment loss for 2016 was \$26,244, and a margin of (11.0%) compared to segment profit of \$27,037, and a margin of 8.2% for 2015. The reduction was primarily attributable to the \$32,725 goodwill impairment related to the Rail Technologies reporting unit along with reductions in gross profit due to the lower sales volumes. The non-GAAP gross profit decreased by \$24,202, or 32.2%, and the corresponding margin decreased by 150 basis points principally attributable to declines in Rail Technologies and precast concrete tie margins, which was negatively impacted by reduced volumes and the related deleveraging of the businesses. Our transit products business also was negatively impacted by a \$1,224 pretax warranty charge related to a transit products project.

During 2016, the Rail Products and Services segment had a reduction in new orders of 23.9% compared to the prior year. The rail distribution and precast concrete tie businesses represented 31.4% of the current year decline and all other rail divisions experienced double digit declines relative to the prior year due to reductions in rail capital spending.

Fiscal 2015 Compared to Fiscal 2014

Rail Products and Services segment sales decreased \$45,633, or 12.2%, compared to the 2014 period. Included within the 2015 sales were revenues from acquired businesses of \$16,715. During fiscal 2015, excluding an increase within the Transit Products business, all rail divisions experienced reductions in sales over the prior year period. The sales decline was attributable to the loss of sales to UPRR, lower volumes from Rail Distribution and various track component businesses, international declines in the Rail Technologies division, and, to a lesser extent, reductions in the price of steel.

During the year ended December 31, 2015, the Rail Products and Services segment had a reduction in new orders of 16.5% compared to the prior year period. Contributing to the decline was the loss of business with UPRR, which represented 55.2% of the reduction in new orders, as well as overall reductions in freight rail spending.

The Rail Products and Services segment increased its 2015 gross profit margin of 8.2% by 18 basis points over 2014 of 8.0%. The Rail Products and Services segment increased its 2015 non-GAAP gross profit margin by 226 basis points compared to fiscal 2014. Non-GAAP gross profit was impacted by warranty-related charges of \$1,092, and \$9,374 in 2015 and 2014, respectively. Excluding the impact of the charges in 2015 and 2014, the non-GAAP gross profit margin was 23.2%, or 9 basis points higher than the prior year.

Construction Products

| | | ve Months E December 31 | | Decrease | (Decrease) Increase | Percent Decrease | Percent (Decrease) Increase |
|----------------------------------|------------------|----------------------------|--------------------|-------------------|------------------------|---------------------|-----------------------------------|
| | 2016 | 2015 | 2014 | 2016 vs. 2015 | 2015 vs. 2014 | 2016 vs. 2015 | 2015 vs. 2014 |
| Net Sales | <u>\$145,602</u> | <u>\$176,394</u> | <u>\$178,847</u> | <u>\$(30,792)</u> | <u>\$(2,453)</u> | <u>(17.5)</u> % | <u>(1.4</u>)% |
| Segment Profit | \$ 8,189 | <u>\$ 12,958</u> | <u>\$ 13,106</u> | \$ (4,769) | <u>\$ (148)</u> | <u>(36.8</u>)% | <u>(1.1</u>)% |
| Non-GAAP Gross Profit | <u>\$ 27,079</u> | \$ 34,169 | <u>\$ 32,391</u> | <u>\$ (7,090)</u> | \$ 1,778 | <u>(20.7)</u> % | <u>5.5</u> % |
| Non-GAAP Gross Profit Percentage | 18.69 | %19.4% | %18.1 ₉ | % <u>(0.8)</u> % | 1.3% | _(4.1)% | 7.2% |

Fiscal 2016 Compared to Fiscal 2015

Construction Products segment sales decreased \$30,792, or 17.5%, compared to the prior year period. The piling division represented \$24,319 of the reduction and fabricated bridge sales represented \$8,943, which were both attributable to fewer large project opportunities in the market as compared to the prior year period as well as increased competition leading to fewer project wins. Throughout the year, lower scrap input prices and very low factory utilization rates kept steel prices very competitive. As a result, the Company did not participate in some of the typical projects we serve with pipe pile and H-pile, resulting in lower sales volumes and pricing. Partially offsetting these declines were increased precast concrete product sales.

The Construction Products segment profit of \$8,189 declined by \$4,769 compared to the prior year as a result of reduced gross profit attributable to lower sales volumes. The non-GAAP gross profit decreased by \$7,090, or 20.7%, due to reductions in piling products and fabricated bridge gross profit as a result of the decline in volumes.

For 2016, the Construction Products segment had a 10.1% increase in new orders compared to the prior year period. The increase relates to significant project wins within the fabricated bridge business, and to a lesser extent, precast concrete products.

Fiscal 2015 Compared to Fiscal 2014

Construction Products segment sales decreased \$2,453, or 1.4%, compared to the 2014 period. The decline was primarily related to a 14.7% reduction in sales of piling products, which was partially offset by a 43.0% increase in sales of precast construction products. The precast construction products business is experiencing very strong building sales to state governments, which helped the Construction Products segment offset the increased competition and steel pricing pressures impacting the Piling Products business.

New orders booked during 2015 were down 19.0% over the prior year period. The decline related primarily to the Piling Products business where heavy competition has led to a reduction in market share for pipe piling and H-piling.

As compared to the 2015 gross profit margin increase of two basis points over 2014, the 2015 non-GAAP gross profit percentage increased by 126 basis points due to non-GAAP gross margin improvements in piling and fabricated bridge products divisions. The improvement was primarily driven by the sales mix caused by an increase in sheet piling sales within the Piling Products business.

Tubular and Energy Services

| | | e Months En | ded | Decrease | Increase (Decrease) | Percent Decrease | Percent Increase (Decrease) |
|----------------------------------|--------------------|--------------------|-----------------|-------------------|------------------------|---------------------|-----------------------------------|
| | 2016 | 2015 | 2014 | 2016 vs. 2015 | 2015 vs. 2014 | 2016 vs. 2015 | 2015 vs. 2014 |
| Net Sales | \$ 98,785 | <u>\$119,147</u> | <u>\$53,730</u> | <u>\$(20,362)</u> | \$ 65,417 | <u>(17.1)</u> % | <u>121.8</u> % |
| Segment (Loss) Profit | <u>\$(116,126)</u> | <u>\$ (81,344)</u> | \$ 5,350 | <u>\$(34,782)</u> | <u>\$(86,694)</u> | <u>(42.8)</u> % | <u>(1,620.4</u>)% |
| Non-GAAP Gross Profit | \$ 10,554 | \$ 22,481 | <u>\$11,722</u> | <u>\$(11,927)</u> | <u>\$ 10,759</u> | <u>(53.1)</u> % | 91.8% |
| Non-GAAP Gross Profit Percentage | 10.7% | 18.9% | 21.8% | (8.2)% | (2.9)% | <u>(43.4)</u> % | (13.3)% |

Fiscal 2016 Compared to Fiscal 2015

Tubular and Energy Services segment sales decreased \$20,362, or 17.1%, compared to the prior year period. The decrease related primarily to \$15,141 from test and inspection services and \$10,488 from protective coatings partially offset by an increase of \$6,782 related to precision measurement products.

Tubular and Energy Services segment loss increased 42.8% to \$116,126 in 2016 compared to a loss of \$81,344 in 2015. The margin for this segment also decreased 492 basis points to (117.5%) compared to

(68.3%) in the prior year period. The losses were largely attributable to impairments of \$103,176 and \$80,337 for 2016 and 2015, respectively. The non-GAAP gross profit declined by \$11,927, or 53.1%, which was negatively impacted by our test and inspection and protective coatings businesses. Despite improved volumes during the 2016 fourth quarter, our test and inspection services business was negatively impacted by the weakness in the upstream oil and gas market, where demand levels remained low, leading to heightened competition and reductions in service prices. Similarly, protective coatings sales declined significantly beginning in the third quarter 2016, which led to a temporary idling of the Birmingham facility. The facility has restarted operations in early October 2016. Non-GAAP gross profit was also negatively impacted by precision measurement system sales which produced lower margins due to competitive pressures as a result of the depressed midstream oil and gas market.

The Tubular and Energy Services segment had a reduction in new orders of 36.7% compared to the prior year period. Orders were down due to a reduction in midstream oil and gas new project lettings, with our protective coatings division reporting a 56.7% decline.

Fiscal 2015 Compared to Fiscal 2014

Tubular and Energy Services segment sales increased \$65,417, or 121.8%, compared to the 2014 period. The increase relates to revenues from acquired businesses of \$71,954, which were partially offset by reductions of \$6,537 in protective coatings and threaded product sales. Our Tubular and Energy Services gross margins decreased to (68.3%) in 2015 compared to 10.0% in 2014 and the related 294 basis point decline in non-GAAP gross margins was largely due to acquired businesses and the related impact on sales mix. In addition to the new product mix, the divisions serving the upstream energy market are competing in the depressed oil and gas market which is experiencing less demand leading to a more challenging pricing environment.

The Tubular and Energy Services segment generated an increase in new orders of 160.7% compared to the 2014 period principally due to orders from the acquisitions of Chemtec and IOS.

Liquidity and Capital Resources

Total debt at December 31, 2016 and 2015 was \$159,565 and \$168,754, respectively, and was primarily comprised of borrowings on the revolving credit facility and the 2016 term loan.

Our need for liquidity relates primarily to working capital requirements for operating activities, debt service payments, capital expenditures, and JV capital obligations.

The change in cash and cash equivalents for the three-year periods ended December 31 are as follows:

| | 2016 | 2015 | 2014 |
|--|------------|-------------|-------------------|
| Net cash provided by operating activities | \$ 18,405 | \$ 56,172 | \$ 66,739 |
| Net cash used by investing activities | (7,930) | (205,575) | (97,751) |
| Net cash (used) provided by financing activities | (12,519) | 134,289 | 22,055 |
| Effect of exchange rate changes on cash and cash equivalents | (905) | (3,598) | (3,642) |
| Net decrease in cash and cash equivalents | \$ (2,949) | \$ (18,712) | <u>\$(12,599)</u> |

Cash Flows from Operating Activities

During the year ended December 31, 2016, net cash provided by operating activities was \$18,405 compared to \$56,172 during the prior year period. For the twelve months ended December 31, 2016, income and adjustments to income from operating activities provided \$24,261 compared to \$47,061 in 2015. Working capital and other assets and liabilities used \$5,856 in the current period compared to providing \$9,111 during 2015.

The Company's calculation of days sales outstanding at December 31, 2016 was 53 days compared to 56 days at December 31, 2015. We believe our receivables portfolio is strong.

During the 2015 period, net cash provided by operating activities provided \$56,172, a decrease of \$10,567, compared to the 2014 period. For the year ended December 31, 2015, income and adjustments to income from operating activities provided \$47,061 compared to \$37,359 in 2014. Working capital and other assets and liabilities provided \$9,111 in 2015 compared to providing \$29,380 in 2014. The reduction in cash flows from operations was largely impacted by working capital movement.

Cash Flows from Investing Activities

Capital expenditures for the year ended December 31, 2016 were \$7,664, a decrease of \$7,249, compared to 2015 of \$14,913. The current year expenditures related primarily to the Birmingham, AL inside diameter coating line upgrade and application development of the Company's new enterprise resource planning system. The Company received proceeds of \$969 related to the sale of assets and loaned \$1,235 to its LB Pipe JV. Expenditures for the year ended December 31, 2015 related primarily to upgrades to the outside diameter coating line of the Birmingham, AL coating facility as well as general plant and yard improvements across each segment.

During 2015, the Company acquired Tew Plus, Ltd. ("Tew Plus"), Tew Holdings, Ltd. ("Tew") and IOS. The total purchase price of these acquisitions, net of cash acquired, was \$196,001 as of December 31, 2015. Investing activities during 2015 included capital expenditures of \$14,913. The 2015 expenditures related primarily to the Birmingham, AL protective coatings facility upgrades, application development of a new enterprise resource planning system, and general plant and yard improvements across each segment. Other investing activities related to cash proceeds of \$5,339 from the sale of assets. The sale of the Tucson, AZ concrete tie facility contributed \$2,750 of the total proceeds.

The primary investing activity in 2014 related to a cash use of \$80,302 for the acquisitions of Chemtec, Carr Concrete, and FWO as well a \$495 working capital distribution related to the 2013 acquisition of Ball Winch. Capital expenditures of \$17,056 related to improvements to our machinery and equipment across each segment, strategic land acquisitions to increase production capacity, leasehold improvements, and plant upgrades at our Birmingham, AL facility.

Cash Flows from Financing Activities

During the year ended December 31, 2016, the Company reduced outstanding debt by approximately \$9,184, primarily from operational cash flows. The Company also paid \$1,407 in financing fees related to our 2016 credit agreement amendments. During the 2015 period, the Company had an increase in outstanding debt of approximately \$142,326, primarily related to drawings against the revolving credit facility to fund domestic acquisition activity.

The Company withheld 20,186 shares for approximately \$275 for the twelve-month period ended December 31, 2016 compared to withholding 25,340 shares for approximately \$1,114 in the 2015 period. The shares were withheld from employees to pay their withholding taxes in connection with the vesting of restricted stock awards. Cash outflows related to dividends were \$1,244 and \$1,656 for the periods ended December 31, 2016 and 2015, respectively. Lastly, for the years ended December 31, 2016 and 2015, the Company purchased 5,000 and 80,512 shares of common stock for \$67 and \$1,587, respectively, under our existing share repurchase authorization.

The primary financing activity during 2014 related to the receipt of proceeds from our revolving credit facility of \$24,200. Additionally, we paid dividends of \$0.04 per share during the fourth quarter of 2014 and \$0.03 per share during each of the prior three quarters of 2014. The Company withheld 21,676 shares to pay employee withholding taxes in connection with the vesting of restricted stock awards for approximately \$985.

Financial Condition

On November 7, 2016, the Company, its domestic subsidiaries, and certain of its Canadian subsidiaries entered into the Second Amendment (the "Second Amendment") to the Second Amended and Restated Credit Agreement dated March 13, 2015 and as amended by the First Amendment dated June 29, 2016 (the "Amended and Restated Credit Agreement"), with PNC Bank, N.A., Bank of America, N.A., Wells Fargo Bank, N.A., Citizens Bank of Pennsylvania, and Branch Banking and Trust Company. This Second Amendment modified the Amended and Restated Credit Agreement which had a maximum revolving credit line of \$275,000. The Second Amendment reduced the permitted revolving credit borrowings to \$195,000 and provides for additional term loan borrowing of \$30,000. The term loan is subject to quarterly straight line amortization until fully paid off upon the final payment on January 1, 2020. Furthermore, certain matters, including excess cash flow, asset sales, and equity issuances, trigger mandatory prepayments to the Term Loan. Term Loan borrowings will not be available to draw upon once they have been repaid. Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Second Amendment or Amended and Restated Credit Agreement, as applicable.

The Second Amendment further provides for modifications to the financial covenants as defined in the Amended and Restated Credit Agreement. The Second Amendment calls for the elimination of the Maximum Leverage Ratio covenant through the quarter ended June 30, 2018. After that period, the Maximum Gross Leverage Ratio covenant will be reinstated to require a maximum ratio of 4.25 Consolidated Indebtedness to 1.00 Gross Leverage for the quarter ended September 30, 2018, and 3.75 to 1.00 for all periods thereafter until the maturity date of the credit facility. The Second Amendment also includes a Minimum Last Twelve Months EBITDA (as defined by the Amendment) covenant ("Minimum EBITDA"). For the quarter ending December 31, 2016 through the quarter ending June 30, 2017, the Minimum EBITDA must be at least \$18,500. During 2016, the EBITDA calculation as defined by the Amended and Restated Credit Agreement was \$23,561. For each quarter thereafter, through the quarter ended June 30, 2018, the Minimum EBITDA requirement will increase by various increments. At June 30, 2018, the Minimum EBITDA requirement will be \$31,000. After the quarter ended June 30, 2018, the Minimum EBITDA covenant will be eliminated through the maturity of the credit agreement. The Second Amendment also includes a Minimum Fixed Charge Coverage Ratio covenant. The covenant represents the ratio of the Company's fixed charges to the last twelve months of EBITDA, and is required to be a minimum of 1.00 to 1.00 through the quarter ended December 31, 2017 and 1.25 to 1.00 for each quarter thereafter through the maturity of the credit facility. The final financial covenant included in the Second Amendment is a Minimum Liquidity covenant which calls for a minimum of \$25,000 in undrawn availability on the revolving credit loan at all times through the quarter ended June 30, 2018.

The Second Amendment includes several changes to certain non-financial covenants as defined in the Credit Agreement. Through the maturity date of the loan, the Company is now prohibited from making any future acquisitions. The limitation on permitted annual distributions of dividends or redemptions of the Company's stock has been decreased from \$4,000 to \$1,700. The aggregate limitation on loans to and investments in non-loan parties was decreased from \$10,000 to \$5,000. Furthermore, the limitation on asset sales has been decreased from \$25,000 annually with a carryover of up to \$15,000 from the prior year to \$25,000 in the aggregate through the maturity date of the credit facility.

The Second Amendment provides for the elimination of the three lowest tiers of the pricing grid that had previously been defined in the First Amendment. Upon execution of the Second Amendment through the quarter ended March 31, 2018, the Company will be locked into the highest tier of the pricing grid which provides for pricing of the prime rate plus 225 basis points on base rate loans and the applicable LIBOR rate plus 325 basis points on euro rate loans. For each quarter after March 31, 2018 and through the maturity date of the credit facility, the Company's position on the pricing grid will be governed by a Minimum Net Leverage ratio which is the ratio of Consolidated Indebtedness less cash on hand in excess of \$15,000 to EBITDA. If, after March 31, 2018 the Minimum Net Leverage ratio positions the Company on the lowest tier of the pricing grid, pricing will be the prime rate plus 150 basis points on base rate loans or the applicable LIBOR rate plus 250 basis points on euro rate loans.

The Company generated \$18,405 from cash flows from operations during 2016 that was utilized to fund capital expenditures and make payments against our revolving credit facility. At December 31, 2016, we had \$30,363 in cash and cash equivalents and \$67,502 of availability under the Second Amendment to the Second Amended and Restated Credit Agreement while carrying \$159,565 in total debt. We believe this liquidity will provide adequate flexibility to operate the business in a prudent manner, continue to service our revolving debt facility, and weather a continued downturn in our markets.

Our cash balances are held in various locations throughout the world, with substantially all of those amounts held outside the U.S. Under current law, the foreign cash would be subject to U.S. federal income taxes less applicable foreign tax credits upon repatriation.

During 2015, the Company utilized non-domestic funds totaling \$28,597 for the acquisitions of Tew and Tew Plus.

At December 31, 2016, the Company was in compliance with the covenants in the Second Amendment.

To reduce the impact of interest rate changes on outstanding variable-rate debt, the Company entered into forward starting LIBOR-based interest rate swaps with notional values totaling \$50,000. The swaps became effective in February 2017 and effectively converted a portion of the debt from variable to fixed-rate borrowings during the term of the swap contracts.

Tabular Disclosure of Contractual Obligations

A summary of the Company's required payments under financial instruments and other commitments at December 31, 2016 are presented in the following table:

| | Total | Less than 1 year | 1-3 years | 4-5 years | More than 5 years |
|---|------------------|-------------------|-----------------|------------------|---|
| Contractual Cash Obligations | | | | | |
| Revolving credit facility (1) | \$127,073 | \$ — | \$ — | \$127,073 | \$ — |
| Term Loan (1) | 30,000 | 9,231 | 18,462 | 2,307 | _ |
| Interest | 21,977 | 7,454 | 13,340 | 1,183 | _ |
| Other debt | 2,492 | 1,159 | 1,093 | 240 | _ |
| Pension plan contributions | 243 | 243 | _ | _ | _ |
| Operating leases | 19,117 | 4,292 | 4,992 | 3,295 | 6,538 |
| Purchase obligations not reflected in the financial | | | | | |
| statements | 32,813 | 32,813 | | | |
| Total contractual cash obligations | <u>\$233,715</u> | <u>\$55,192</u> | <u>\$37,887</u> | <u>\$134,098</u> | \$6,538 |
| Other Financial Commitments | | | | | |
| Standby letters of credit | \$ 425 | \$ 425 | <u>\$</u> | <u>\$</u> | <u>\$ </u> |

(1) Repayments of outstanding loan balances are disclosed in Note 10 Long-Term Debt and Related Matters, of the "Notes to Consolidated Financial Statements" included in Part II, Item 8, Financial Statements and Supplementary Data of this report.

Other long-term liabilities include items such as deferred income taxes which are not contractual obligations by nature. The Company cannot estimate the settlement years for these items and has excluded them from the above table.

Management believes its internal and external sources of funds are adequate to meet anticipated needs, including those disclosed above, for the foreseeable future.

Off-Balance Sheet Arrangements

The Company's off-balance sheet arrangements include the operating leases, purchase obligations, and standby letters of credit disclosed within the contractual obligations table above in the "Liquidity and Capital Resources" section. These arrangements provide the Company with increased flexibility relative to the utilization and investment of cash resources.

Backlog

Although backlog is not necessarily indicative of future operating results, the following table provides the backlog by business segment:

| | Backlog | | | |
|-----------------------------|----------------------|-------------------|-------------------|--|
| | December 31, 2016 | December 31, 2015 | December 31, 2014 | |
| Rail Products and Services | \$ 62,743 | \$ 85,199 | \$104,821 | |
| Construction Products | 71,954 | 45,371 | 65,843 | |
| Tubular and Energy Services | 12,759 | 34,137 | 13,686 | |
| Total Backlog | \$147,456 | \$164,707 | \$184,350 | |

While a considerable portion of our business is backlog driven, certain businesses, including the test and inspection services and the Rail Technologies business, are not driven by backlog and therefore have insignificant levels throughout the year.

Critical Accounting Policies and Estimates

The accompanying consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States. When more than one accounting principle, or the method of its application, is generally accepted, management selects the principle or method that is appropriate in the Company's specific circumstance. Application of these accounting principles requires management to make estimates that affect the reported amount of assets, liabilities, revenues, and expenses, and the related disclosure of contingent assets and liabilities. The following critical accounting policies relate to the Company's more significant judgments and estimates used in the preparation of its consolidated financial statements. There can be no assurance that actual results will not differ from those estimates. For a summary of our significant accounting policies, including those discussed below, see Part II, Item 8, Financial Statements and Supplementary Data, Note 1 to the Consolidated Financial Statements.

Revenue Recognition — The Company's revenues are comprised of product and service sales as well as products and services provided under long-term contracts. For product and service sales, the Company recognizes revenue when the following criteria have been satisfied: persuasive evidence of a sales arrangement exists; product delivery and transfer of title to the customer has occurred or services have been rendered; the price is fixed or determinable; and collectability is reasonably assured. Generally, product title passes to the customer upon shipment. In limited cases, title does not transfer and revenue is not recognized until the customer has received the products at its physical location. Revenue is recorded net of returns, allowances, customer discounts, and incentives. Sales taxes collected from customers and remitted to governmental authorities are accounted for on a net (excluded from revenues) basis. Shipping and handling costs are included in cost of goods sold.

Revenues for products under long-term contracts are recognized using the percentage-of-completion method. Sales and gross profit are recognized as work is performed based upon the proportion of actual costs incurred to estimated total project costs. Sales and gross profit are adjusted prospectively for revisions in estimated total project costs and contract values. For certain products, the percentage-of-completion is based upon actual labor costs as a percentage of estimated total labor costs. At the time a loss contract becomes known, the entire amount of the estimated loss is recognized in the Consolidated Statement of Operations.

Revenue recognition involves judgments, including assessments of expected returns, the likelihood of non-payment, and estimates of expected costs and profits on long-term contracts. In determining when to recognize revenue, we analyze various factors, including the specifics of the transaction, historical experience, creditworthiness of the customer, and current market and economic conditions. Changes in judgments on these factors could impact the timing and amount of revenue recognized with a resulting impact on the timing and amount of associated income.

Business Combinations, Goodwill, and Intangible Assets — We account for acquired businesses using the acquisition method of accounting, which requires that the assets acquired and liabilities assumed be recorded at the date of acquisition at their respective estimated fair values. The cost to acquire a business is allocated to the underlying net assets of the acquired business based on estimates of their respective fair values. The purchase price allocation process requires management to make significant estimates and assumptions, especially at the acquisition date with respect to intangible assets. Although we believe the assumptions and estimates we have made are reasonable, 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 we have acquired or may acquire in the future include but are not limited to: future expected cash flows from customer relationships, the acquired company's trade name and trademarks as well as assumptions about the period of time the acquired trade name and trademarks will continue to be used in the combined company's product portfolio, future expected cash flows from developed technology and discount rates. Unanticipated events and circumstances may occur which may affect the accuracy or validity of such assumptions, estimates, or actual results.

Intangible assets are amortized over the expected life of the asset. Any excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. The judgments made in determining the estimated fair values assigned to each class of assets acquired and liabilities assumed, as well as asset lives, can materially impact our results of operations. Fair values and useful lives are determined based on, among other

factors, the expected future period of benefit of the asset, the various characteristics of the asset, and projected cash flows. Because this process involves management making estimates with respect to future revenues and market conditions and because these estimates also form the basis for the determination of whether or not an impairment charge should be recorded, these estimates are considered to be critical accounting estimates.

Goodwill is required to be tested for impairment at least annually. The Company performs its annual impairment test as of October 1st or more frequently when indicators of impairment are present. The goodwill impairment test involves comparing the fair value of a reporting unit to its carrying value, including goodwill. If the carrying amount of the reporting unit exceeds its fair value, a second step is required to measure the goodwill impairment loss. This step compares the implied fair value of the reporting unit's goodwill to the carrying amount of that goodwill. If the carrying amount of the goodwill exceeds the implied fair value of the goodwill, an impairment loss equal to the excess is recorded as a component of operations. The Company uses a combination of a discounted cash flow model ("DCF model") and a market approach to determine the current fair values of the reporting units. A number of significant assumptions and estimates are involved in the application of the DCF model to forecast operating cash flows, including markets and market share, sales volume and pricing, costs to produce, and working capital changes. In times of adverse economic conditions in the global economy, the Company's long-term cash flow projections are subject to a greater degree of uncertainty than usual. If we had established different reporting units or utilized different valuation methodologies or assumptions, the impairment test results could differ, and we could be required to record impairment charges.

The Company considers historical experience and available information at the time the fair values of its reporting units are estimated. However, actual amounts realized may differ from those used to evaluate the impairment of goodwill. If actual results are not consistent with our assumptions and judgments used in estimating future cash flows and asset fair values, the Company may be exposed to impairment losses that could be material to our results of operations.

The Company recorded goodwill impairment charges of \$61,142 and \$80,337 during 2016 and 2015, respectively, related to reporting units within the Tubular and Energy Services and Rail Products and Services segment. There were no goodwill impairments recorded during the year ended December 31, 2014. Additional information concerning the impairments is set forth in Part II, Item 8, Financial Statements and Supplementary Data, Note 4 Goodwill and Other Intangible Assets, to the Consolidated Financial Statements included herein, which is incorporated by reference into this Item 7.

Intangible Assets, Long-Lived Assets, and Investments — The Company is required to test for asset impairment whenever events or changes in circumstances indicate that the carrying value of an asset might not be recoverable. Once a triggering event has occurred, the impairment test employed is based on whether the intent is to hold the asset for continued use or to hold the asset for sale. The applicable guidance for assets held for use requires that, if the sum of the future expected cash flows associated with an asset, undiscounted and without interest charges, is less than the carrying value, an asset impairment must be recognized in the financial statements. The amount of the impairment is the difference between the fair value of the asset and the carrying value of the asset. For assets held for sale, to the extent the carrying value is greater than the asset's fair value less costs to sell, an impairment loss is recognized for the difference. The accounting estimate related to asset impairments is highly susceptible to change from period to period because it requires management to make assumptions about the existence of impairment indicators and cash flows over future years. These assumptions impact the amount of an impairment, which would have an impact on the Consolidated Statements of Operations.

The fair value of the Company's equity investments is dependent on the performance of the investee companies as well as volatility inherent in the external markets for these investments. In assessing potential impairment of these investments, we consider these factors as well as the forecasted financial performance of the investees. If these forecasts are not met and indicate an other-than-temporary decline in value, impairment charges may be required.

The Company recorded definite-lived intangible asset impairments of \$59,786 and property, plant and equipment impairment of \$14,956 for the year ended December 31, 2016. The impairments related to the Tubular and Energy Services segment. There were no material impairments of intangible assets, long-lived assets, or investments for the years ended December 31, 2015 or 2014.

Product Warranty — The Company maintains a current warranty for the repair or replacement of defective products. For certain manufactured products, an accrual is made on a monthly basis as a percentage of cost of sales. For long-term construction projects, a product warranty accrual is established when the claim is known and quantifiable. The product warranty accrual is periodically adjusted based on the identification or resolution of known individual product warranty claims. The underlying assumptions used to calculate the product warranty accrual can change from period to period and are dependent upon estimates of the amount and cost of future product repairs or replacements.

At December 31, 2016 and 2015, the product warranty reserve was \$10,154 and \$8,755, respectively. During the years ended December 31, 2016, 2015, and 2014, the Company recorded product warranty expense of \$2,524, \$1,794, and \$10,957, respectively. For additional information regarding the Company's product warranty, refer to Part II, Item 8, Financial Statements and Supplementary Data, Note 19 to the Consolidated Financial Statements, "Commitments and Contingent Liabilities," included herein.

Contingencies and Litigation — The preparation of consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities as of the date of the consolidated financial statements, and also affect the amounts of revenues and expenses reported for each period.

In the ordinary course of business, various legal and regulatory claims and proceedings are pending or threatened against the Company. When a probable, estimable exposure exists, the Company accrues an estimate of the probable costs for the resolution of these matters. These estimates are based upon an analysis of potential results, assuming a combination of litigation and settlement strategies. During 2016, we recorded \$900 in legal expense related to the anticipated settlement of an employment dispute. There were no such charges for the years ended December 31, 2015 and 2014. Future results of operations could be materially affected by changes in our assumptions or the outcome of these proceedings.

The Company's operations are subject to national, state, foreign, and/or local laws and regulations that impose limitations and prohibitions on the discharge and emission of, and establish standards for the use, disposal, and management of, regulated materials and waste. These regulations impose liability for the costs of investigation, remediation, and damages resulting from present and past spills, disposals, or other releases of hazardous substances or materials. Liabilities are recorded when remediation efforts are probable and the costs can be reasonably estimated. Estimates are not reduced by potential claims for recovery. Claims for recovery are recognized as agreements are reached with third parties or as amounts are received. Established reserves are periodically reviewed and adjusted to reflect current remediation progress, prospective estimates of required activity, and other factors that may be relevant, including changes in technology or regulations.

Refer to Part II, Item 8, Financial Statements and Supplementary Data, Note 19 Commitments and Contingent Liabilities, to the Consolidated Financial Statements for additional information regarding the Company's commitments and contingent liabilities.

Income Taxes — The recognition of deferred tax assets requires management to make judgments regarding the future realization of these assets. As prescribed by Financial Accounting Standard's Board ("FASB") Accounting Standards Codification ("ASC") 740, "Income Taxes," valuation allowances must be provided for those deferred tax assets for which it is more likely than not (a likelihood of more than 50%) that some portion or all of the deferred tax assets will not be realized. This guidance requires management to evaluate positive and negative evidence regarding the recoverability of deferred tax assets. The determination of whether the positive evidence outweighs the negative evidence and quantification of the valuation allowance requires management to make estimates and judgments of future financial results.

The Company evaluates all tax positions taken on its federal, state, and foreign tax filings to determine if the position is more likely than not to be sustained upon examination. For positions that meet the more likely than not to be sustained criteria, the largest amount of benefit to be realized upon ultimate settlement is determined on a cumulative probability basis. A previously recognized tax position is derecognized when it is subsequently determined that a tax position no longer meets the more likely than not threshold to be sustained. The evaluation of the sustainability of a tax position and the expected tax benefit is based on judgment, historical experience, and various other assumptions. Actual results could differ from those estimates upon subsequent resolution of identified matters.

The Company's income tax rate is significantly affected by the tax rate on global operations. In addition to local country tax laws and regulations, this rate depends on the extent earnings are indefinitely reinvested outside the United States. Indefinite reinvestment is determined by management's judgment about and intentions concerning the future operations of the Company. At December 31, 2016, management does not intend to repatriate accumulated foreign earnings of \$34,841. Should we decide to repatriate these accumulated foreign earnings, the Company would have to accrue additional income and withholding taxes in the period in which it is determined that the earnings will no longer be indefinitely invested outside the United States.

Refer to Part II, Item 8, Financial Statements and Supplementary Data, Note 14 Income Taxes, included herein for additional information regarding the Company's deferred tax assets. The Company's ability to realize these tax benefits may affect the Company's reported income tax expense and net income.

New Accounting Pronouncements — See Part II, Item 8, Financial Statements and Supplementary Data, Note 1 Summary of Significant Accounting Policies, to the Consolidated Financial Statements for information regarding new accounting pronouncements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK (Dollars in thousands)

Interest Rate Risk

In the ordinary course of business, the Company is exposed to interest rate risks that may adversely affect funding costs associated with its variable-rate debt. For the year ended December 31, 2016, a 1% change in the interest rate for variable rate debt as of December 31, 2016 would increase or decrease interest expense by approximately \$1,571.

The Company does not purchase or hold any derivative financial instruments for trading purposes. At contract inception, the Company designates its derivative instruments as hedges. The Company recognizes all derivative instruments on the balance sheet at fair value. Fluctuations in the fair values of derivative instruments designated as cash flow hedges are recorded in accumulated other comprehensive income and reclassified into earnings within other income as the underlying hedged items affect earnings. To the extent that a change in a derivative does not perfectly offset the change in value of the interest rate being hedged, the ineffective portion is recognized in earnings immediately.

The Company has entered into three forward starting LIBOR-based interest rate swap agreements with notional values totaling \$50,000. At December 31, 2016 and 2015, the Company recorded a liability of \$334 and \$196 related to the swap agreements. The Company did not have any interest rate derivatives at December 31, 2014.

Foreign Currency Exchange Rate Risk

The Company is subject to exposures to changes in foreign currency exchange rates. The Company may manage its exposure to changes in foreign currency exchange rates on firm sale and purchase commitments by entering into foreign currency forward contracts. The Company's risk management objective is to reduce its exposure to the effects of changes in exchange rates on these transactions over the duration of the transactions. The Company did not engage in foreign currency hedging transactions during the three-year period ended December 31, 2016.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of L.B. Foster Company and Subsidiaries

We have audited the accompanying consolidated balance sheets of L.B. Foster Company and Subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2016. Our audits also included the financial statement schedule listed in the Index at Item 15(a) (2). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of L.B. Foster Company and Subsidiaries at December 31, 2016 and 2015, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), L.B. Foster Company and Subsidiaries' internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 8, 2017, expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Pittsburgh, Pennsylvania March 8, 2017

CONSOLIDATED BALANCE SHEETS DECEMBER 31,

(In thousands, except share data)

| | 2016 | 2015 |
|---|-----------|-----------|
| ASSETS | | |
| Current assets: | | |
| Cash and cash equivalents | \$ 30,363 | \$ 33,312 |
| Accounts receivable — net | 66,632 | 78,487 |
| Inventories — net | 83,243 | 96,396 |
| Prepaid income tax | 14,166 | 1,131 |
| Other current assets | 5,200 | 5,148 |
| Total current assets | 199,604 | 214,474 |
| Property, plant, and equipment — net | 103,973 | 126,745 |
| Other assets: | | |
| Goodwill | 18,932 | 81,752 |
| Other intangibles — net | 63,519 | 134,927 |
| Deferred tax assets | | 226 |
| Investments | 4,031 | 5,321 |
| Other assets | 2,964 | 3,215 |
| Total assets | \$393,023 | \$566,660 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current liabilities: | | |
| Accounts payable | \$ 37,744 | \$ 55,804 |
| Deferred revenue | 7,597 | 6,934 |
| Accrued payroll and employee benefits | 7,497 | 10,255 |
| Accrued warranty | 10,154 | 8,755 |
| Current maturities of long-term debt | 10,386 | 1,335 |
| Other accrued liabilities | 8,953 | 8,563 |
| Total current liabilities | 82,331 | 91,646 |
| Long-term debt | 149,179 | 167,419 |
| Deferred tax liabilities | 11,371 | 8,926 |
| Other long-term liabilities | 16,891 | 15,837 |
| Stockholders' equity: | | |
| Common stock, par value \$0.01, authorized 20,000,000 shares; shares issued at December 31, | | |
| 2016 and December 31, 2015, 11,115,779; shares outstanding at December 31, 2016 and | | |
| December 31, 2015, 10,312,625 and 10,221,006, respectively | 111 | 111 |
| Paid-in capital | 44,098 | 46,681 |
| Retained earnings | 133,667 | 276,571 |
| Treasury stock — at cost, common stock, shares at December 31, 2016 and December 31, 2015, | | |
| 803,154 and 894,773, respectively | (19,336) | (22,591) |
| Accumulated other comprehensive loss | (25,289) | (17,940) |
| Total stockholders' equity | 133,251 | 282,832 |
| TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY | \$393,023 | \$566,660 |
| | | |

The accompanying notes are an integral part of these Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF OPERATIONS THE THREE YEARS ENDED DECEMBER 31,

(In thousands, except share data)

| | 2016 | 2015 | 2014 |
|--|-------------|-------------|-----------|
| Sales of goods | \$ 415,375 | \$537,214 | \$561,899 |
| Sales of services | 68,139 | 87,309 | 45,293 |
| Total net sales | 483,514 | 624,523 | 607,192 |
| Cost of goods sold | 331,437 | 420,169 | 449,964 |
| Cost of services sold | 61,721 | 70,701 | 35,637 |
| Total cost of sales | 393,158 | 490,870 | 485,601 |
| Gross profit | 90,356 | 133,653 | 121,591 |
| Selling and administrative expenses | 85,976 | 92,648 | 79,814 |
| Amortization expense | 9,575 | 12,245 | 4,695 |
| Asset impairments | 135,884 | 80,337 | _ |
| Interest expense | 6,551 | 4,378 | 512 |
| Interest income | (228) | (206) | (530) |
| Equity in loss (income) of nonconsolidated investments | 1,290 | 413 | (1,282) |
| Other income | (1,523) | (5,585) | (678) |
| | 237,525 | 184,230 | 82,531 |
| (Loss) income before income taxes | (147,169) | (50,577) | 39,060 |
| Income tax (benefit) expense | (5,509) | (6,132) | 13,404 |
| Net (loss) income | \$(141,660) | \$ (44,445) | \$ 25,656 |
| Basic (loss) earnings per common share | \$ (13.79) | \$ (4.33) | \$ 2.51 |
| Diluted (loss) earnings per common share | \$ (13.79) | \$ (4.33) | \$ 2.48 |
| Dividends paid per common share | \$ 0.12 | \$ 0.16 | \$ 0.13 |

CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME THE THREE YEARS ENDED DECEMBER 31,

(In thousands)

| | 2016 | 2015 | 2014 |
|--|---------------------|-------------------|----------|
| Net (loss) income | <u>\$(141,660)</u> | <u>\$(44,445)</u> | \$25,656 |
| Other comprehensive loss, net of tax: | | | |
| Foreign currency translation adjustment | (5,896) | (6,947) | (4,863) |
| Unrealized loss on cash flow hedges, net of tax expense (benefit) of (\$54) and (\$76) | (83) | (121) | _ |
| Pension and post-retirement benefit plans benefit (expense), net of tax expense (benefit): (\$491), \$208, and (\$1,383) | (1,671) | 631 | (2,631) |
| Reclassification of pension liability adjustments to earnings, net of tax expense of \$135, \$160 and \$63* | 301 | 389 | 185 |
| Other comprehensive loss, net of tax | (7,349) | (6,048) | (7,309) |
| Comprehensive (loss) income | <u>\$(149,009</u>) | <u>\$(50,493)</u> | \$18,347 |

^{*} Reclassifications out of accumulated other comprehensive income for pension obligations are charged to selling and administrative expense.

CONSOLIDATED STATEMENTS OF CASH FLOWS THE THREE YEARS ENDED DECEMBER 31,

(In thousands)

| (III thousands) | | | |
|--|-------------|-------------|-------------|
| | 2016 | 2015 | 2014 |
| CASH FLOWS FROM OPERATING ACTIVITIES: | | | |
| Net (loss) income | \$(141,660) | \$ (44,445) | \$ 25,656 |
| Deferred income taxes | 3,375 | (14,582) | (2,914) |
| Depreciation | 13,917 | 14,429 | 7,882 |
| Amortization | 9,575 | 12,245 | 4,695 |
| Asset impairments | 135,884 | 80,337 | · — |
| Equity loss (income) and remeasurement gain | 1,290 | (167) | (1,282) |
| Loss on sales and disposals of property, plant, and equipment | 202 | (2,064) | 21 |
| Share-based compensation | 1,346 | 1,471 | 3,007 |
| Excess income tax deficiency (benefit) from share-based compensation | 332 | (253) | (336) |
| Change in operating assets and liabilities, net of acquisitions: | | | |
| Accounts receivable | 11,959 | 31,223 | 15,311 |
| Inventories | 10,479 | 4,331 | (9,872) |
| Other current assets | 1,380 | 3,248 | (1,004) |
| Prepaid income tax | (13,035) | 1,134 | 2,530 |
| Other noncurrent assets | 59 | (909) | (386) |
| Dividends from LB Pipe & Coupling Products, LLC | _ | 90 | 630 |
| Accounts payable | (16,005) | (17,204) | 16,285 |
| Deferred revenue | 984 | (2,279) | 591 |
| Accrued payroll and employee benefits | (2,676) | (5,136) | 2,542 |
| Other current liabilities | 1,432 | (4,189) | 2,732 |
| Other liabilities | (433) | (1,108) | 651 |
| Net cash provided by operating activities | 18,405 | 56,172 | 66,739 |
| CASH FLOWS FROM INVESTING ACTIVITIES: | | | |
| Proceeds from the sale of property, plant, and equipment | 969 | 5,339 | 184 |
| Capital expenditures on property, plant, and equipment | (7,664) | (14,913) | (17,056) |
| Acquisitions, net of cash acquired | _ | (196,001) | (80,797) |
| Loans and capital contributions to equity method investment | (1,235) | | (82) |
| Net cash used by investing activities | (7,930) | (205,575) | (97,751) |
| CASH FLOWS FROM FINANCING ACTIVITIES: | | | |
| Repayments of debt | (155,427) | (161,068) | (125) |
| Proceeds from debt | 146,243 | 301,063 | 24,516 |
| Proceeds from exercise of stock options and stock awards | | 68 | 131 |
| Financing fees | (1,417) | (1,670) | (473) |
| Treasury stock acquisitions | (342) | (2,701) | (985) |
| Cash dividends on common stock paid to shareholders | (1,244) | (1,656) | (1,345) |
| Excess income tax (deficiency) benefit from share-based compensation | (332) | 253 | 336 |
| Net cash (used) provided by financing activities | (12,519) | 134,289 | 22,055 |
| Effect of exchange rate changes on cash and cash equivalents | (905) | (3,598) | (3,642) |
| Net decrease in cash and cash equivalents | (2,949) | (18,712) | (12,599) |
| Cash and cash equivalents at beginning of period | 33,312 | 52,024 | 64,623 |
| Cash and cash equivalents at end of period | \$ 30,363 | \$ 33,312 | \$ 52,024 |
| Supplemental disclosure of cash flow information: | | | |
| Interest paid | \$ 4,855 | \$ 3,674 | \$ 362 |
| Income taxes paid | \$ 3,942 | \$ 7,835 | \$ 14,617 |
| Capital expenditures funded through financing agreements | \$ — | \$ 288 | \$ 1,981 |
| | | | |

The accompanying notes are an integral part of these Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY FOR THE THREE YEARS ENDED DECEMBER 31, 2016

| | | | | | Accumulated Other | |
|---|-----------------|--------------------|-----------------------------|-------------------|--------------------------------|--------------------|
| | Common Stock | Paid-in Capital | Retained Earnings | Treasury Stock | Comprehensive (Loss) Income | Total |
| | | | (In thousand | s, except sha | re data) | |
| Balance, January 1, 2014 | \$111 | \$47,239 | \$ 298,361 | \$(24,731) | \$ (4,583) | \$ 316,397 |
| Net income | | | 25,656 | | | 25,656 |
| Pension liability adjustment | | | | | (2,446) (4,863) | (2,446) (4,863) |
| withheld for taxes | | (2,467) | | 1,613 | | (854) |
| benefit | | 3,343 | | | | 3,343 |
| shareholders | | | (1,345) | | | (1,345) |
| Balance, December 31, 2014 | 111 | 48,115 | 322,672 | (23,118) | (11,892) | 335,888 |
| Net loss | | | (44,445) | | | (44,445) |
| Pension liability adjustment | | | | | 1,020 | 1,020 |
| Foreign currency translation adjustment Unrealized derivative loss on cash flow | | | | | (6,947) | (6,947) |
| hedges | | | | | (121) | (121) |
| Purchase of 80,512 common shares for treasury Issuance of 59,113 common shares, net of shares | | | | (1,587) | | (1,587) |
| withheld for taxes | | (3,158) | | 2,114 | | (1,044) |
| Stock based compensation and related excess tax benefit | | 1,724 | | | | 1,724 |
| Cash dividends on common stock paid to shareholders | | | (1,656) | | | (1,656) |
| Balance, December 31, 2015 | 111 | 46,681 | 276,571 | (22,591) | (17,940) | 282,832 |
| Net loss | | | $\frac{270,571}{(141,660)}$ | (22,371) | (17,210) | (141,660) |
| Other comprehensive loss, net of tax: | | | (141,000) | | | (141,000) |
| Pension liability adjustment | | | | | (1,370) | (1,370) |
| Foreign currency translation adjustment | | | | | (5,896) | (5,896) |
| Unrealized derivative loss on cash flow | | | | | (83) | (83) |
| hedges | | | | (67) | (63) | (67) |
| Issuance of 96,619 common shares, net of shares | | | | (**) | | (**) |
| withheld for taxes | | (3,597) | | 3,322 | | (275) |
| Stock based compensation and related excess tax | | 1.014 | | | | 1.014 |
| deficiency | | 1,014 | | | | 1,014 |
| shareholders | | | (1,244) | | | (1,244) |
| Balance, December 31, 2016 | \$111 | \$44,098 | \$ 133,667 | \$(19,336) | \$(25,289) | \$ 133,251 |
| | | | | <u> </u> | | |

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands, except share data unless otherwise noted)

Note 1.

Summary of Significant Accounting Policies

Basis of financial statement presentation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries, ventures, and partnerships in which a controlling interest is held. Inter-company transactions and accounts have been eliminated. The Company utilizes the equity method of accounting for companies where its ownership is less than or equal to 50% and significant influence exists.

Cash and cash equivalents

The Company considers cash and other instruments with maturities of three months or less, when purchased, to be cash and cash equivalents. The Company invests available funds in a manner to maximize returns, preserve investment principal, and maintain liquidity while seeking the highest yield available.

Cash and cash equivalents held in non-domestic accounts were approximately \$29,400 and \$29,700 at December 31, 2016 and 2015, respectively. Included in non-domestic cash equivalents are investments in bank term deposits of approximately \$16 and \$1,939 at December 31, 2016 and 2015, respectively. The carrying amounts approximated fair value because of the short maturity of the instruments.

Inventories

Certain inventories are valued at the lower of the last-in, first-out ("LIFO") cost or market. Approximately 47% in 2016 and 43% in 2015 of the Company's inventory is valued at average cost or market, whichever is lower. Slow-moving inventory is reviewed and adjusted regularly, based upon product knowledge, physical inventory observation, and the age of the inventory.

Property, plant, and equipment

Depreciation and amortization are provided on a straight-line basis over the estimated useful lives of 5 to 40 years for buildings and 2 to 10 years for machinery and equipment. Leasehold improvements are amortized over 3 to 13 years, which represent the lives of the respective leases or the lives of the improvements, whichever is shorter. Depreciation expense is recorded within "cost of sales" and "selling and administrative" expenses based upon the particular asset's use. The Company reviews a long-lived asset for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. The Company impaired \$14,956 of property, plant and equipment related to the test and inspection services division within the Tubular and Energy Services segment during the year ended December 31, 2016. There were no material asset impairments recorded for the years ended December 31, 2015 and 2014.

Maintenance, repairs, and minor renewals are charged to operations as incurred. Major renewals and betterments that substantially extend the useful life of the property are capitalized at cost. Upon sale or other disposition of assets, the costs and related accumulated depreciation and amortization are removed from the accounts and the resulting gain or loss, if any, is reflected in income.

Allowance for doubtful accounts

The allowance for doubtful accounts is recorded to reflect the ultimate realization of the Company's accounts receivable and includes assessment of the probability of collection and the credit-worthiness of certain customers. Reserves for uncollectible accounts are recorded as part of selling and administrative expenses on the Consolidated Statements of Operations. The Company reviews its accounts receivable aging and calculates an allowance through application of historic reserve factors to overdue receivables. This calculation is supplemented by specific account reviews performed by the Company's credit department. As necessary, the application of the Company's allowance rates to specific customers is reviewed and adjusted to more accurately reflect the credit risk inherent within that customer relationship.

Investments

Investments in companies in which the Company has the ability to exert significant influence, but not control, over operating and financial policies (generally 20% to 50% ownership) are accounted for using the equity method. Under the equity method, investments are initially recorded at cost and adjusted for dividends and undistributed earnings and losses. The equity method of accounting requires a company to recognize a loss in the value of an equity method investment that is other than a temporary decline.

Goodwill and other intangible assets

Goodwill is tested annually for impairment or more often if there are indicators of impairment. The goodwill impairment test involves comparing the fair value of a reporting unit to its carrying value, including goodwill. If the carrying amount of the reporting unit exceeds its fair value, a second step is required to measure the goodwill impairment loss. This step compares the implied fair value of the reporting unit's goodwill to the carrying amount of that goodwill. If the carrying amount of the goodwill exceeds the implied fair value of the goodwill, an impairment loss equal to the excess is recorded as a component of operations. The Company performs its annual impairment tests as of October 1st.

During 2016 and 2015, the Company identified certain triggering events that indicated an interim impairment test was required. As a result of the Company's assessment, the Company recorded goodwill impairment of \$61,142 and \$80,337 during 2016 and 2015, respectively. The 2016 charges related to the full impairment of the Chemtec Energy Services ("Chemtec") and Protective Coatings divisions goodwill within the Tubular and Energy Services segment resulting from the Chemtec acquisition in 2014 and the 2013 acquisition of Ball Winch, LLC and a partial impairment of the Rail Technologies division goodwill within the Rail Products and Services segments, respectively. The 2015 impairment charge related to the goodwill resulting from the acquisition of IOS (or "test and inspection services") and Chemtec within the Tubular and Energy Services segment. The measurement of goodwill impairment is a Level 3 fair value measurement, since the primary assumptions, including estimates of future revenue growth, gross margin, and EBITDA margin, are not market observable and require management to make judgements regarding future outcomes. Additional information concerning the impairments is set forth in Note 4 Goodwill and Other Intangible Assets, to the financial statements. No additional charges were recorded as a result of the 2016 annual impairment test. No goodwill impairment was recognized during 2014.

The Company has no indefinite-lived intangible assets. The Company reviews a long-lived intangible asset for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. All intangible assets are amortized over their useful lives ranging from 2 to 25 years, with a total weighted average amortization period of approximately 15 years, at December 31, 2016. During the year ended December 31, 2016, the Company recorded a definite-lived intangible asset impairment of \$59,786 related to Chemtec and test and inspection services within the Tubular and Energy Services segment. There were no definite-lived intangible asset impairments during the years ended December 31, 2015 and 2014. See Note 4 Goodwill and Other Intangible Assets for additional information regarding the Company's intangible assets.

Environmental remediation and compliance

Environmental remediation costs are accrued when the liability is probable and costs are estimable. Environmental compliance costs, which principally include the disposal of waste generated by routine operations, are expensed as incurred. Capitalized environmental costs, when appropriate, are depreciated over their useful life. Reserves are not reduced by potential claims for recovery and are not discounted. Claims for recovery are recognized as agreements are reached with third parties or as amounts are received. Reserves are periodically reviewed throughout the year and adjusted to reflect current remediation progress, prospective estimates of required activity, and other factors that may be relevant, including changes in technology or regulations. See Note 19 Commitments and Contingent Liabilities, for additional information regarding the Company's outstanding environmental and litigation reserves.

Earnings per share

Basic earnings per share is calculated by dividing net income by the weighted average of common shares outstanding during the year. Diluted earnings per share is calculated by using the weighted average of common shares outstanding adjusted to include the potentially dilutive effect of outstanding stock options and restricted stock utilizing the treasury stock method.

Revenue recognition

The Company's revenues are comprised of product and service sales as well as products and services provided under long-term contracts. For product and service sales, the Company recognizes revenue when the following criteria have been satisfied: persuasive evidence of a sales arrangement exists; product delivery and transfer of title to the customer has occurred or services have been rendered; the price is fixed or determinable; and collectability is reasonably assured. Generally, product title passes to the customer upon shipment. In limited cases, title does not transfer and revenue is not recognized until the customer has received the products at its physical location. Revenue is recorded net of returns, allowances, customer discounts, and incentives. Sales taxes collected from customers and remitted to governmental authorities are accounted for on a net (excluded from revenues) basis. Shipping and handling costs are included in cost of goods sold.

Revenues for products and services under long-term contracts are recognized using the percentage-of-completion method. Sales and gross profit are recognized as work is performed based upon the proportion of actual costs incurred to estimated total project costs. Sales and gross profit are adjusted prospectively for revisions in estimated total project costs and contract values. For certain products and services, the percentage of completion is based upon actual labor costs as a percentage of estimated total labor costs. At the time a loss contract becomes known, the entire amount of the estimated loss is recognized in the Consolidated Statements of Operations. Costs in excess of billings are classified as work-in-process inventory. Projects with billings in excess of costs are recorded within deferred revenue.

Revenue recognition involves judgments, including assessments of expected returns, the likelihood of non-payment, and estimates of expected costs and profits on long-term contracts. In determining when to recognize revenue, the Company analyzes various factors, including the specifics of the transaction, historical experience, creditworthiness of the customer, and current market and economic conditions. Changes in judgments on these factors could impact the timing and amount of revenue recognized with a resulting impact on the timing and amount of associated income.

Deferred revenue

Deferred revenue consists of customer payments received for which the revenue recognition criteria have not yet been met as well as billings in excess of costs on percentage of completion projects. Advanced payments from customers typically relate to contracts with respect to which the Company has significantly fulfilled its obligations, but due to the Company's continuing involvement with the project, revenue is precluded from being recognized until title, ownership, and risk of loss have passed to the customer.

Fair value of financial instruments

The Company's financial instruments consist of cash equivalents, accounts receivable, accounts payable, interest rate swap agreements, and debt.

The carrying amounts of the Company's financial instruments at December 31, 2016 and 2015 approximate fair value. See Note 18 Fair Value Measurements, for additional information.

Stock-based compensation

The Company applies the provisions of FASB ASC 718, "Compensation — Stock Compensation," to account for the Company's share-based compensation. Under the guidance, share-based compensation cost is measured at the grant date based on the calculated fair value of the award. The expense is recognized over the employees' requisite service period, generally the vesting period of the award. See Note 15 Share-based Compensation, for additional information.

Product warranty

The Company maintains a current warranty liability for the repair or replacement of defective products. For certain manufactured products, an accrual is made on a monthly basis as a percentage of cost of sales based upon historical experience. For long-lived construction products, a warranty is established when the claim is known and quantifiable. The product warranty accrual is periodically adjusted based on the identification or resolution of known individual product warranty claims or due to changes in the Company's historical warranty experience. At December 31, 2016 and 2015, the product warranty reserve was \$10,154 and \$8,755, respectively. See Note 19 Commitments and Contingencies for additional information regarding the product warranty.

Income taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of assets and liabilities and their respective tax bases. Deferred taxes are measured using enacted tax laws and rates expected to be in effect when such differences are recovered or settled. The effect of a change in tax rates on deferred taxes is recognized in income in the period that includes the enactment date of the change.

The Company makes judgments regarding the recognition of deferred tax assets and the future realization of these assets. As prescribed by FASB ASC 740 "Income Taxes" and applicable guidance, valuation allowances must be provided for those deferred tax assets for which it is more likely than not (a likelihood more than 50%) that some portion or all of the deferred tax assets will not be realized. The guidance requires the Company to evaluate positive and negative evidence regarding the recoverability of deferred tax assets. The determination of whether the positive evidence outweighs the negative evidence and quantification of the valuation allowance requires the Company to make estimates and judgments of future financial results.

The Company evaluates all tax positions taken on its federal, state, and foreign tax filings to determine if the position is more likely than not to be sustained upon examination. For positions that meet the more likely than not to be sustained criteria, the largest amount of benefit to be realized upon ultimate settlement is determined on a cumulative probability basis. A previously recognized tax position is derecognized when it is subsequently determined that a tax position no longer meets the more likely than not threshold to be sustained. The evaluation of the sustainability of a tax position and the expected tax benefit is based on judgment, historical experience, and various other assumptions. Actual results could differ from those estimates upon subsequent resolution of identified matters. The Company accrues interest and penalties related to unrecognized tax benefits in its provision for income taxes.

Foreign currency translation

The assets and liabilities of our foreign subsidiaries are measured using the local currency as the functional currency and are translated into U.S. dollars at exchange rates as of the balance sheet date. Income statement amounts are translated at the weighted-average rates of exchange during the year. The translation adjustment is accumulated as a separate component of accumulated other comprehensive income (loss). Foreign currency transaction gains and losses are included in determining net income. Included in net income for the years ended December 31, 2016, 2015, and 2014 were foreign currency transaction (losses) gains of approximately (\$12), \$1,616, and \$422, respectively.

Research and development

The Company expenses research and development costs as costs are incurred. For the years ended December 31, 2016, 2015, and 2014, research and development expenses were \$3,511, \$3,937, and \$3,096, respectively, and were principally related to the Company's friction management and railroad monitoring system products.

Use of estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles ("GAAP") requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Recently issued accounting guidance

In March 2016, the FASB issued ASU No. 2016-09, "Compensation — Stock Compensation (Topic 718)." This standard makes several modifications to Topic 718 related to the accounting for forfeitures, employer tax withholding on share-based compensation, and the financial statement presentation of excess tax benefits or deficiencies. ASU 2016-09 also clarifies the statement of cash flows presentation for certain components of share-based awards. The standard is effective for interim and annual reporting periods beginning after December 15, 2016, although early adoption is permitted. The adoption of this new guidance is not expected to have a material impact on the Company's financial position and results of operations.

In May 2014, the FASB issued Accounting Standards Update ("ASU") 2014-09, "Revenue from Contracts with Customers (Topic 606)" ("ASU 2014-09"), which supersedes the revenue recognition requirements in ASC 605, "Revenue Recognition." ASU 2014-09 is based on the principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. It also requires additional disclosure about the nature, amount, timing, and uncertainty of revenue, cash flows arising from customer contracts, including significant judgments and changes in judgments, and assets recognized from costs incurred to obtain or fulfill a contract. ASU 2014-09 is effective for fiscal years beginning after December 15, 2017, including interim periods within that reporting period. The Company continues to evaluate the impacts that this standard will have on the Company's financial statements. The Company anticipates using the modified retrospective approach at adoption as it relates to ASU 2014-09.

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)". The new accounting requirements include the accounting for, presentation of, and classification of leases. The guidance will result in most leases being capitalized as a right of use asset with a related liability on our balance sheets. The requirements of the new standard are effective for annual reporting periods beginning after December 15, 2018, and interim periods within those annual periods. The Company is in the process of analyzing the impact of ASU 2016-02 on our financial position and results of operations. The Company has a significant number of leases, and, as a result, expects this guidance to have a material impact on its consolidated balance sheet, the impact of which is currently being evaluated.

In October 2016, the FASB issued ASU No. 2016-16, "Income Taxes — Intra-Entity Transfers of Assets Other Than Inventory (Topic 740)," which will require an entity to recognize the income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. The ASU is effective on January 1, 2018 with early adoption permitted. The Company continues to evaluate the impact this standard will have on the Company's financial statements.

In January 2017, the FASB issued ASU 2017-04, "Intangibles — Goodwill and Other (Topic 350)," which simplifies the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test. Under the new guidance, an entity will recognize an impairment charge for the amount by which the carrying value exceeds the fair value. This standard is effective for annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company is evaluating its implementation approach and assessing the impact of ASU 2017-04 on our financial position and results of operations.

Recently adopted accounting guidance

In August 2014, the FASB issued ASU 2014-15, "Presentation of Financial Statements — Going Concern (Subtopic 205-40)". This standard requires management to assess an entity's ability to continue as a going concern and to provide related footnote disclosures in certain circumstances. The standard is effective for annual reporting periods, and interim periods therein, ending after December 15, 2016. Accordingly, the Company has adopted this ASU and evaluated the Company's ability to continue as a going concern as well as the need for related footnote disclosure. The Company has concluded no disclosure is necessary regarding the entity's ability to continue as a going concern.

Note 2.

Business Segments

The Company is a leading manufacturer and distributor of products and services for transportation and energy infrastructure. The Company is organized and evaluated by product group, which is the basis for identifying reportable segments. Each segment represents a revenue-producing component of the Company for which separate financial information is produced internally that is subject to evaluation by the Company's chief operating decision maker in deciding how to allocate resources. Each segment is evaluated based upon its segment profit contribution to the Company's consolidated results.

The Company markets its products directly in all major industrial areas of the United States, Canada, and Europe, primarily through an internal sales force.

The Company's Rail Products and Services segment provides a full line of new and used rail, trackwork, and accessories to railroads, mines, and other customers in the rail industry. The Rail segment also designs and produces insulated rail joints, power rail, track fasteners, concrete railroad ties, coverboards, and special accessories for mass transit and other rail systems. In addition, the Rail Products and Services segment engineers, manufactures, and assembles friction management products and railway wayside data collection and management systems.

The Company's Construction Products segment sells and rents steel sheet piling, H-bearing pile, and other piling products for foundation and earth retention requirements. The Company's Fabricated Bridge Products division sells bridge decking, bridge railing, structural steel fabrications, expansion joints, bridge forms, and other products for highway construction and repair. The concrete products businesses produce precast concrete buildings and a variety of specialty precast concrete products.

The Company's Tubular and Energy Services segment provides pipe coatings for natural gas pipelines and utilities, upstream test and inspection services, and precision measurement systems for the oil and gas market, and produces threaded pipe products for the oil and gas markets as well as industrial water well and irrigation markets.

The following table illustrates net sales, profit (loss), assets, depreciation/amortization, and expenditures for long-lived assets of the Company by segment for the years ended or at December 31, 2016, 2015, and 2014. Segment profit is the earnings from operations before income taxes and includes internal cost of capital charges for net assets used in the segment at a rate of generally 1% per month excluding recently acquired businesses. The internal cost of capital charges are eliminated during the consolidation process. The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies except that the Company accounts for inventory on a First-In, First-Out ("FIFO") basis at the segment level compared to a Last-In, First-Out ("LIFO") basis at the consolidated level.

| | | | 2016 | | |
|---|------------------------|----------------------------|--------------------------|-------------------------------|--|
| | Net Sales | Segment Profit (Loss)* | Segment Assets | Depreciation/ Amortization | Expenditures for Long-Lived Assets |
| Rail Products and Services | \$239,127 | \$ (26,228) | \$174,049 | \$ 7,276 | \$ 856 |
| Construction Products | 145,602 | 8,189 | 81,074 | 2,256 | 687 |
| Tubular and Energy Services | 98,785 | (116,126) | 100,006 | 12,644 | 3,810 |
| Total | <u>\$483,514</u> | <u>\$(134,165)</u> | <u>\$355,129</u> | \$22,176 | <u>\$5,353</u> |
| | | | | | |
| | | | 2015 | | |
| | Net Sales | Segment Profit (Loss)** | Segment Assets | Depreciation/ Amortization | Expenditures for Long-Lived Assets |
| Rail Products and Services | Net Sales \$328,982 | | Segment | | Long-Lived |
| Rail Products and Services Construction Products | | Profit (Loss)** | Segment Assets | Amortization | Long-Lived Assets |
| | \$328,982 | Profit (Loss)** \$ 27,037 | Segment Assets \$241,222 | Amortization \$ 8,098 | Long-Lived Assets \$4,273 |

| | | | 2014 | | |
|-----------------------------|-----------|-------------------|-------------------|-------------------------------|---|
| | Net Sales | Segment Profit | Segment Assets | Depreciation/ Amortization | Expenditures for Long- Lived Assets |
| Rail Products and Services | \$374,615 | \$30,093 | \$239,951 | \$ 6,153 | \$ 5,115 |
| Construction Products | 178,847 | 13,106 | 102,978 | 2,232 | 3,343 |
| Tubular and Energy Services | 53,730 | 5,350 | 130,289 | 3,208 | 6,988 |
| Total | \$607,192 | <u>\$48,549</u> | <u>\$473,218</u> | <u>\$11,593</u> | <u>\$15,446</u> |

2014

During 2016, 2015, and 2014, no single customer accounted for more than 10% of the Company's consolidated net sales. Sales between segments are immaterial.

Reconciliations of reportable segment net sales, profits, assets, depreciation/amortization, and expenditures for long-lived assets to the Company's consolidated totals are as follows for the years ended and as of December 31:

| | 2016 | 2015 | 2014 |
|--|--------------------|--------------------|------------------|
| (Loss) income from Operations: | | | |
| Total for reportable segments | \$(134,165) | \$ (41,349) | \$ 48,549 |
| Adjustment of inventory to LIFO | 2,643 | 2,468 | 738 |
| Unallocated interest income | 87 | 206 | 530 |
| Unallocated equity in (loss) income of nonconsolidated investments | (1,290) | (413) | 1,282 |
| Unallocated corporate amounts | (14,444) | (11,489) | (12,039) |
| (Loss) income from operations, before income taxes | <u>\$(147,169)</u> | <u>\$ (50,577)</u> | \$ 39,060 |
| Assets: | | | |
| Total for reportable segments | \$ 355,129 | \$544,272 | \$473,218 |
| Unallocated corporate assets | 41,072 | 28,209 | 26,788 |
| LIFO | (3,178) | (5,821) | (8,289) |
| Total assets | \$ 393,023 | \$566,660 | <u>\$491,717</u> |
| Depreciation/Amortization: | | | |
| Total for reportable segments | \$ 22,176 | \$ 25,675 | \$ 11,593 |
| Other | 1,316 | 999 | 984 |
| Total | \$ 23,492 | \$ 26,674 | \$ 12,577 |
| Expenditures for Long-Lived Assets: | | | |
| Total for reportable segments | \$ 5,353 | \$ 9,836 | \$ 15,446 |
| Expenditures funded through financing agreements | _ | 288 | 1,981 |
| Other expenditures | 2,311 | 5,077 | 1,610 |
| Total | \$ 7,664 | <u>\$ 15,201</u> | <u>\$ 19,037</u> |

^{* -} Segment loss includes impairment of goodwill, definite-lived intangible assets and property, plant and equipment as further described in Note 4 Goodwill and Other Intangible Assets and Note 7 Property, Plant and Equipment.

^{** -} Segment loss includes impairment of goodwill as further described in Note 4 Goodwill and Other Intangible Assets.

The following table summarizes the Company's sales by major geographic region in which the Company has operations for the years ended December 31:

| • | 2016 | 2015 | 2014 |
|---|--------------|--------------|-------------|
| United States | \$390,930 | \$522,404 | \$498,025 |
| United Kingdom | 37,188 | 26,817 | 22,625 |
| Canada | 30,644 | 40,545 | 39,375 |
| Other | 24,752 | 34,757 | 47,167 |
| | \$483,514 | \$624,523 | \$607,192 |
| The following table summarizes the Company's long-lived assets by | y geographic | region at De | ecember 31: |
| | 2016 | 2015 | 2014 |
| United States | \$ 96,650 | \$118,053 | \$66,905 |
| Canada | | 6,186 | 7,440 |
| Other | 1,878 | 2,506 | 457 |
| | \$103,973 | \$126,745 | \$74,802 |
| The following table summarizes the Company's sales by major pro | duct line: | | |
| | 2016 | 2015 | 2014 |
| Rail Technologies products | \$ 90,469 | \$ 98,237 | \$109,053 |
| Rail distribution products | 83,236 | 126,277 | 139,529 |
| Piling products | 70,535 | 94,853 | 111,182 |
| Concrete products | 54,514 | 52,044 | 36,396 |
| Precision measurement systems | 42,830 | 36,048 | _ |
| Allegheny Rail Products | 24,102 | 35,155 | 45,008 |
| Upstream test and inspection services | 20,765 | 35,906 | _ |
| CXT concrete tie products | 16,288 | 35,740 | 52,562 |
| Other products | 80,775 | 110,263 | 113,462 |
| | \$483,514 | \$624,523 | \$607,192 |

Note 3.

Acquisitions

TEW Plus, Ltd

On November 23, 2015, the Company acquired the 75% balance of the remaining shares of TEW Plus, Ltd ("Tew Plus") for \$2,130, net of cash acquired. Headquartered in Nottingham, UK, Tew Plus provides telecommunications and security systems to the railway and commercial markets. Their offerings include full installation services including: design, project management, survey, and commissioning along with future maintenance. The results of Tew Plus' operations are included within the Rail Products and Services segment from the date of acquisition.

Inspection Oilfield Services

On March 13, 2015, the Company acquired IOS Holdings, Inc. ("IOS") for \$167,404, net of cash acquired and a net working capital receivable adjustment of \$2,363. The purchase agreement includes an earn-out provision for the seller to generate an additional \$60,000 of proceeds upon achieving certain levels of EBITDA during the three-year period beginning on January 1, 2015. The Company has not accrued an estimated earn-out obligation based upon a probability weighted valuation model of the projected EBITDA results, which indicates that the minimum target will not be achieved. Approximately \$7,600 of the purchase price relates to amounts held in

escrow to satisfy potential indemnity claims made under the purchase agreement. Headquartered in Houston, TX, IOS is a leading independent provider of tubular management services with operations in every significant oil and gas producing region in the continental United States. The acquisition is included within our Tubular and Energy Services segment from the date of acquisition. See Note 4 Goodwill and Other Intangible Assets, with respect to an impairment of the goodwill related to this acquisition.

TEW Holdings, Ltd

On January 13, 2015, the Company acquired TEW Holdings, Ltd ("Tew") for \$26,467, net of cash acquired, working capital, and net debt adjustments totaling \$4,200. The purchase price includes approximately \$600 which is held in escrow to satisfy potential indemnity claims made under the purchase agreement. Headquartered in Nottingham, UK, Tew provides application engineering solutions primarily to the rail market and other major industries. The results of Tew's operations are included within the Rail Products and Services segment from the date of acquisition.

Chemtec Energy Services, L.L.C.

On December 30, 2014, the Company acquired Chemtec Energy Services, LLC ("Chemtec") for \$66,719, net of cash received, which is inclusive of \$1,867 related to working capital adjustments. The cash payment included \$5,000 that is held in escrow to satisfy potential indemnity claims made under the purchase agreement. Headquartered in Willis, TX, Chemtec is a domestic manufacturer and turnkey provider of blending, injection, and metering equipment for the oil and gas industry. The acquired business is included within our Tubular and Energy Services segment. See Note 4 Goodwill and Other Intangible Assets, with respect to an impairment of the goodwill related to this acquisition.

FWO

On October 29, 2014, the Company acquired assets of FWO, a business of Balfour Beatty Rail GmbH for \$1,103, inclusive of a \$161 post-closing working capital receivable adjustment. Headquartered in Germany, FWO is engaged in the electronic track lubrication and maintenance business and has been included in our Rail Products and Services segment.

Carr Concrete

On July 7, 2014, the Company acquired assets of Carr Concrete Corporation ("Carr") for \$12,480, inclusive of a \$189 post-closing purchase price adjustment. Carr is a provider of pre-stressed and precast specialty concrete products located in Waverly, WV. Included within the purchase price is \$1,000 that is held in escrow to satisfy potential indemnity claims made under the purchase agreement. The results of Carr's operations are included in our Construction Products segment.

Acquisition Summary

Each transaction was accounted for under the acquisition method of accounting under U.S. generally accepted accounting principles, which requires an acquiring entity to recognize, with limited exceptions, all of the assets acquired and liabilities assumed in a transaction at fair value as of the acquisition date. Goodwill primarily represents the value paid for each acquisition's enhancement to the Company's product and service offerings and capabilities, as well as a premium payment related to the ability to control the acquired assets. The Company has concluded that intangible assets and goodwill values resulting from the Chemtec, FWO, and Carr transactions are deductible for tax purposes.

No acquisition-related costs were incurred during the year ended December 31, 2016. The Company incurred \$760 and \$2,240 of acquisition-related costs that are included in the results of operations within selling and administrative costs for the years ended December 31, 2015 and 2014.

The following unaudited pro forma consolidated income statement presents the Company's results as if the acquisitions of IOS, Tew, and Chemtec had occurred on January 1, 2014. The 2015 pro forma results include the impact of the current year impairment of goodwill as further described in Note 4.

| | Twelve months ended December, 31 | | | |
|-----------------------------------|----------------------------------|---------|------|--------|
| | | 2015 | | 2014 |
| Net sales | \$6 | 40,596 | \$80 | 06,384 |
| Gross profit | 1 | 38,123 | 18 | 33,163 |
| Net (loss) income | (| 44,399) | 4 | 11,745 |
| Diluted (loss) earnings per share | | | | |
| As Reported | \$ | (4.33) | \$ | 2.48 |
| Pro forma | \$ | (4.32) | \$ | 4.04 |

The following table summarizes the estimated fair values of the assets acquired and liabilities assumed at the date of the acquisition:

| Allocation of Purchase Price | | | January 13, 2015 - Tew | December 30, 2014 - Chemtec | October 29, 2014 - FWO | July 7, 2014 - Carr |
|--------------------------------|----------|-----------|---------------------------|--------------------------------|---------------------------|------------------------|
| Current assets | \$ 4,420 | \$ 19,877 | \$12,125 | \$15,528 | \$ 131 | \$ 3,180 |
| Other assets | | 708 | _ | _ | _ | 45 |
| Property, plant, and equipment | 47 | 51,453* | 2,398 | 4,705 | _ | 7,648 |
| Goodwill | 822 | 69,908* | 8,772 | 22,302 | *971 | 1,936 |
| Other intangibles | 1,074 | 50,354* | 14,048 | 33,130 | 419 | 1,348 |
| Liabilities assumed | (3,597) | (23,596) | (6,465) | (6,756) | (418) | (1,677) |
| Total | \$ 2,766 | \$168,704 | \$30,878 | \$68,909 | \$1,103 | \$12,480 |

^{* -} See Note 4 Goodwill and Other Intangible Assets, and Note 7 Property, Plant, and Equipment, with respect to an impairment of property, plant, and equipment, intangible assets, and goodwill related to this acquisition.

The following table summarizes the estimates of the fair values and amortizable lives of the identifiable intangible assets acquired:

| Intangible Asset | November 23, 2015 - Tew Plus | March 13, 2015 - IOS | January 13, 2015 - Tew | December 30, 2014 - Chemtec | October 29, 2014 - FWO | July 7, 2014 - Carr |
|------------------------------------|---------------------------------|-------------------------|---------------------------|--------------------------------|---------------------------|------------------------|
| Trade name | \$ — | \$ 2,641 | \$ 870 | \$ 3,149 | \$ — | \$ 613 |
| Customer relationships | 817 | 41,171 | 10,035 | 23,934 | 34 | 524 |
| Technology | 203 | 4,364 | 2,480 | 4,930 | 341 | 87 |
| Non-competition agreements | 54 | 2,178 | 663 | 1,117 | 44 | 124 |
| Total identified intangible assets | \$1,074 | \$50,354** | * \$14,048 | \$33,130 | <u>\$419</u> | \$1,348 |

^{** -} See Note 4 Goodwill and Other Intangible Assets, with respect to an impairment of intangible assets related to this acquisition.

Note 4.

Goodwill and Other Intangible Assets

The following table represents the goodwill balance by reportable segment:

| | Rail Products and Services | Construction Products | Tubular and Energy Services | Total |
|-------------------------------------|-------------------------------|--------------------------|--------------------------------|-----------|
| Balance at December 31, 2014: | \$ 38,956 | \$5,147 | \$ 38,846 | \$ 82,949 |
| Acquisitions | 9,594 | _ | 69,908 | 79,502 |
| Foreign currency translation impact | (362) | | _ | (362) |
| Impairment charges | | | (80,337) | (80,337) |
| | 48,188 | 5,147 | 108,754 | 162,089 |
| Accumulated impairment losses | | | (80,337) | (80,337) |
| Balance at December 31, 2015: | 48,188 | 5,147 | 28,417 | 81,752 |
| Foreign currency translation impact | (1,524) | _ | _ | (1,524) |
| Disposition | (154) | | _ | (154) |
| Impairment charges | (32,725) | | (28,417) | (61,142) |
| | 46,510 | 5,147 | 108,754 | 160,411 |
| Accumulated impairment losses | (32,725) | | (108,754) | (141,479) |
| Balance at December 31, 2016: | \$ 13,785 | <u>\$5,147</u> | <u> </u> | \$ 18,932 |

The Company performs goodwill impairment tests annually during the fourth quarter, and also performs interim goodwill impairment tests if it is determined that it is more likely than not that the fair value of a reporting unit is less than the carrying amount. Qualitative factors are assessed to determine whether it is more likely than not that the fair value of a reporting unit is less than the carrying amount.

During the current year, various reporting units underperformed against their projections and revised their forecasts downward. The revised forecasts, which were primarily attributable to weakness in the rail and energy markets, indicated longer recovery horizons than we previously projected. In connection with the revisions to the longer term projections and a substantial decline in market capitalization, the Company concluded that these qualitative factors indicated that there was a more likely than not risk that the carrying value of goodwill exceeded its fair value.

As a result of the Company's qualitative review, with the assistance of an independent valuation firm, the Company performed a quantitative interim test for impairment of goodwill as of June 1, 2016. The valuation included the use of both the income and market approaches. Greater weighting was applied to the income approach since the Company believes it is the most reliable indication of value as it captures forecasted revenues and earnings for the reporting units in the projection period that the market approach may not directly incorporate. In addition, a lack of comparable market transactions in recent months has limited the availability of information necessary for the market approach.

The results of the test indicated that the Rail Technologies (within the Rail Products and Services segment), Chemtec (or "precision measurement systems"), and protective coatings (Chemtec and protective coatings are within the Tubular and Energy Services segment) reporting units' respective fair values were less than their carrying value. All other reporting units that maintain goodwill substantially exceeded their carrying value and were not at risk of impairment. As a result of the continued weakness in the commodity cycles impacting the energy and rail markets, the near term projections of the Rail Technologies, Chemtec and protective coatings reporting units have deteriorated and the expected future growth of these reporting units was determined to be insufficient to support the carrying values.

The Company determined the implied fair values of the Rail Technologies, Chemtec, and protective coatings reporting units by using level 3 unobservable inputs, which incorporated assumptions that we believe would be a reasonable market participant's view in a hypothetical purchase, to develop the discounted cash flows of the

respective reporting units. Significant level 3 inputs included estimates of future revenue growth, gross margin and earnings before interest, taxes, depreciation and amortization ("EBITDA"). The resulting fair values of each reporting unit were allocated to the assets and liabilities of the respective reporting unit as if each reporting unit had been acquired in business combinations as of the test date and the fair value was the purchase price paid to acquire each reporting unit. The results of the step 2 analysis indicated that the carrying amounts of the goodwill of Rail Technologies, Chemtec, and protective coatings exceeded the implied fair values of that goodwill. Accordingly, the Company recognized a non-cash goodwill impairment of \$61,142, which represented the full impairment of goodwill within the Chemtec and protective coatings reporting units and approximately 68% of Rail Technologies goodwill. No additional impairments were triggered as a result of the Company's 2016 annual impairment test.

At December 31, 2016, approximately \$13,785 of the Company's goodwill balance is allocated to the Rail Technologies reporting unit within the Rail Products and Services reportable segment.

In 2015, the Company compared the implied fair values of the IOS and Chemtec goodwill amounts to the carrying amounts of that goodwill. The fair values of the IOS and Chemtec reporting units were allocated to all of the assets and liabilities of the respective reporting unit as if IOS and Chemtec had been acquired in business combinations as of the test date and the fair value was the purchase price paid to acquire each reporting unit. As a result of this valuation, it was determined that the carrying amounts of IOS's and Chemtec's goodwill exceeded the implied fair values of that goodwill. The Company recognized a non-cash goodwill impairment charge of \$80,337 to write down the carrying values to the implied fair values, of which \$69,908 represented the full carrying value of goodwill related to the IOS acquisition and the remaining \$10,429 related to the Chemtec reporting unit. No additional impairments were triggered as a result of the Company's 2015 annual impairment test.

The following table represents the gross definite-lived intangible assets balance by reportable segment at December 31:

| | 2016 | 2015 |
|-----------------------------|----------|------------------|
| Rail Products and Services | \$56,476 | \$ 59,226 |
| Construction Products | 1,348 | 1,348 |
| Tubular and Energy Services | 29,179 | 98,166 |
| | \$87,003 | <u>\$158,740</u> |

During the year ended December 31, 2016, the Company performed recoverability tests on reporting units when it was more likely than not that the carrying value of the long-lived asset group would not be recoverable. The results of our testing indicated that the long-lived assets related to the IOS and Chemtec divisions, within the Tubular and Energy Services segment, had carrying values in excess of the asset groups' fair value. Based upon level 3 unobservable inputs, the Company incorporated assumptions that it believes would be a reasonable market participant's view in a hypothetical purchase, to develop the discounted cash flows. Significant level 3 inputs included estimates of future revenue growth, gross margin and EBITDA. As a result of the analysis, the Company recorded a \$42,982 non-cash impairment of definite-lived intangible assets related to the IOS division and a \$16,804 non-cash impairment of definite-lived intangible assets related to the Chemtec division. There were no definite-lived intangible asset impairments recorded during the years ended December 31, 2015 or 2014.

The components of the Company's intangible assets are as follows at:

| | December 31, 2016 | | | | |
|----------------------------|---|--|---|--|--|
| | Weighted Average Amortization Period In Years | Gross Carrying Value | Accumulated Amortization | Net Carrying Amount | |
| Non-compete agreements | 5 | \$ 4,219 | \$ (2,217) | \$ 2,002 | |
| Patents | 10 | 373 | (143) | 230 | |
| Customer relationships | 18 | 36,843 | (6,582) | 30,261 | |
| Trademarks and trade names | 14 | 10,018 | (3,238) | 6,780 | |
| Technology | 14 | 35,550 | (11,304) | 24,246 | |
| | | \$ 87,003 | \$(23,484) | \$ 63,519 | |
| | | | | | |
| | | December 3 | 1, 2015 | | |
| | Weighted Average Amortization Period In Years | Gross Carrying Value | 1, 2015 Accumulated Amortization | Net Carrying Amount | |
| Non-compete agreements | Amortization | Gross Carrying | Accumulated | Carrying | |
| Non-compete agreements | Amortization Period In Years | Gross Carrying Value | Accumulated Amortization | Carrying Amount | |
| | Amortization Period In Years | Gross Carrying Value \$ 6,984 | Accumulated Amortization \$ (2,495) | Carrying Amount \$ 4,489 | |
| Patents | Amortization Period In Years 4 10 | Gross Carrying Value \$ 6,984 378 | Accumulated Amortization \$ (2,495) (124) | Carrying Amount \$ 4,489 254 | |
| Patents | Amortization Period In Years 4 10 16 | Gross Carrying Value \$ 6,984 378 94,338 | Accumulated Amortization \$ (2,495) | Carrying Amount \$ 4,489 254 85,897 | |
| Patents | Amortization Period In Years 4 10 16 5 | Gross Carrying Value \$ 6,984 378 94,338 350 | Accumulated Amortization \$ (2,495) (124) (8,441) (335) | Carrying Amount \$ 4,489 | |

Intangible assets are amortized over their useful lives ranging from 5 to 25 years, with a total weighted average amortization period of approximately 15 years. Amortization expense for the years ended December 31, 2016, 2015, and 2014 was \$9,575, \$12,245, and \$4,695, respectively.

Estimated amortization expense for the years 2017 and thereafter is as follows:

| | Amortization Expense |
|---------------------|-------------------------|
| 2017 | \$ 7,042 |
| 2018 | 6,937 |
| 2019 | 6,203 |
| 2020 | 5,845 |
| 2021 | 5,771 |
| 2022 and thereafter | 31,721 |
| | \$63,519 |

Note 5.

Accounts Receivable

Accounts receivable at December 31, 2016 and 2015 are summarized as follows:

| | 2016 | 2015 |
|---------------------------------|----------|----------|
| Trade | \$64,707 | \$79,100 |
| Allowance for doubtful accounts | (1,417) | (1,485) |
| | 63,290 | 77,615 |
| Other | 3,342 | 872 |
| | \$66,632 | \$78,487 |

The Company's customers are principally in the transportation and energy infrastructure sectors. At December 31, 2016 and 2015, trade receivables, net of allowance for doubtful accounts, from customers were as follows:

| | 2016 | 2015 |
|-----------------------------|----------|----------|
| Rail Products and Services | \$29,552 | \$43,155 |
| Construction Products | 20,531 | 20,489 |
| Tubular and Energy Services | 13,207 | 13,971 |
| | \$63,290 | \$77,615 |

Credit is extended based upon an evaluation of the customer's financial condition and, while collateral is not required, the Company periodically receives surety bonds that guarantee payment. Credit terms are consistent with industry standards and practices.

Note 6.

Inventory

Inventories at December 31, 2016 and 2015 are summarized in the following table:

| | December 31, 2016 | December 31, 2015 |
|------------------------------------|----------------------|-------------------|
| Finished goods | \$46,673 | \$ 62,547 |
| Work-in-process | 21,716 | 20,178 |
| Raw materials | 18,032 | 19,492 |
| Total inventories at current costs | 86,421 | 102,217 |
| Less: LIFO reserve | (3,178) | (5,821) |
| | \$83,243 | \$ 96,396 |

At December 31, 2016 and 2015, the LIFO carrying value of inventories for book purposes exceeded the LIFO value for tax purposes by approximately \$8,925 and \$5,046, respectively. At December 31, 2016, 2015, and 2014 liquidation of certain LIFO inventory layers carried at costs that were higher than the costs of current purchases resulted in increases in cost of goods sold of \$1,304, \$115 and \$6, respectively.

Note 7. Property, Plant, and Equipment

Property, plant, and equipment at December 31, 2016 and 2015 consist of the following:

| | 2016 | 2015 |
|---|-----------|-----------|
| Land | \$ 14,826 | \$ 17,054 |
| Improvements to land and leaseholds | 17,408 | 16,590 |
| Buildings | 33,910 | 39,366 |
| Machinery and equipment, including equipment under capitalized leases | 118,060 | 118,677 |
| Construction in progress | 1,291 | 11,844 |
| | 185,495 | 203,531 |
| Less accumulated depreciation and amortization, including accumulated | | |
| amortization of capitalized leases | 81,522 | 76,786 |
| | \$103,973 | \$126,745 |

During the year ended December 31, 2016, the Company performed recoverability tests on reporting units when it was more likely than not that the carrying value of the long-lived asset group would not be recoverable. The results of our testing indicated that the long-lived assets related to the IOS business, within the Tubular and Energy Services segment, had carrying values in excess of the asset groups' fair value. Based upon level 3 unobservable inputs, the Company incorporated assumptions that it believes would be a reasonable market participant's view in a hypothetical purchase, to develop the discounted cash flows. Significant level 3 inputs included estimates of future revenue growth, gross margin, and EBITDA. As a result of the analysis, the Company recorded a \$14,956 non-cash impairment of property, plant and equipment related to the IOS business. There were no impairments of property, plant and equipment recorded during the years ended December 31, 2015 or 2014.

Depreciation expense, including amortization of assets under capital leases, for the years ended December 31, 2016, 2015, and 2014 amounted to \$13,917, \$14,429 and \$7,882, respectively.

Note 8.

Investments

The Company is a member of a joint venture, L B Pipe and Coupling Products, LLC ("LB Pipe JV"), in which it maintains a 45% ownership interest. LB Pipe JV manufactures, markets, and sells various precision coupling products for the energy, utility, and construction markets and is scheduled to terminate on June 30, 2019.

Under applicable guidance for variable interest entities in ASC 810, "Consolidation," the Company determined that LB Pipe JV is a variable interest entity. The Company concluded that it is not the primary beneficiary of the variable interest entity, as the Company does not have a controlling financial interest and does not have the power to direct the activities that most significantly impact the economic performance of LB Pipe JV. Accordingly, the Company concluded that the equity method of accounting remains appropriate.

During the years ended December 31, 2016 and 2015, each of the LB Pipe JV members received proportional distributions from LB Pipe JV. The Company's 45% ownership interest resulted in cash distributions of \$90 during 2015. There were no changes to the members' ownership interests as a result of the distribution. During 2016, the Company and the other 45% member each executed a revolving line of credit with LB Pipe JV with an available limit of \$1,350. The Company and the other 45% member each loaned \$1,235 to LB Pipe JV in an effort to maintain compliance with LB Pipe JV's debt covenants with an unaffiliated bank. The Company's loan with LB Pipe JV matures on December 15, 2017.

The Company recorded equity in the (loss) income of LB Pipe JV of approximately (\$1,345), (\$410) and \$1,286 for the years ended December 31, 2016, 2015, and 2014, respectively.

At December 31, 2016 and 2015, the Company had a nonconsolidated equity method investment of \$3,902 and \$5,246, respectively, in LB Pipe JV and other investments totaling \$129 and \$75 at December 31, 2016 and 2015, respectively. The Company performed recoverability tests over its nonconsolidated equity method investments and concluded that the fair values exceeded the carrying values and no impairment was recorded by the Company during the years ended December 31, 2016, 2015 or 2014.

The Company's exposure to loss results from its capital contributions, net of the Company's share of LB Pipe JV's income or loss, it's revolving line of credit, and its net investment in the direct financing lease covering the facility used by LB Pipe JV for its operations. The carrying amounts with the maximum exposure to loss of the Company at December 31, 2016 and 2015, respectively, are as follows:

| | 2016 | 2015 |
|--|---------|---------|
| LB Pipe JV equity method investment | \$3,902 | \$5,246 |
| Revolving line of credit | 1,235 | _ |
| Net investment in direct financing lease | 871 | 995 |
| | \$6,008 | \$6,241 |

The Company is leasing five acres of land and two facilities to LB Pipe JV through June 30, 2019, with a 5.5-year renewal period. The current monthly lease payments, including interest, approximate \$17, with a balloon payment of approximately \$488, which is required to be paid at the termination of the lease, allocated over the renewal period, or during the initial term of the lease. This lease qualifies as a direct financing lease under the applicable guidance in ASC 840-30, *Leases*.

The following is a schedule of the direct financing minimum lease payments for the years 2017 and thereafter:

| | Minimum Lease Payments |
|------|------------------------|
| 2017 | \$140 |
| 2018 | 150 |
| 2019 | 581 |
| | <u>\$871</u> |

As a result of the November 23, 2015 acquisition of Tew Plus, the Company remeasured its 25% equity investment in Tew Plus resulting in other income of \$580 for the period ended December 31, 2015. Refer to Note 20, "Other Income," for additional information on the gain.

Note 9.

Deferred Revenue

Deferred revenue of \$7,597 and \$6,934 at December 31, 2016 and 2015, respectively, consists of customer payments received for which the revenue recognition criteria have not yet been met as well as billings in excess of costs on percentage of completion projects. Advanced payments from customers typically relate to contracts with respect to which the Company has significantly fulfilled its obligations, but due to the Company's continuing involvement with the project, revenue is precluded from being recognized until title, ownership, and risk of loss have passed to the customer.

Note 10. **Long-Term Debt and Related Matters**

Long-term debt at December 31, 2016 and 2015 consists of the following:

| | 2016 | 2015 |
|--|------------------|------------------|
| Revolving credit facility with an interest rate of 4.22% at December 31, 2016 and 2.10% at December 31, 2015 | \$127,073 | \$165,000 |
| Term loan payable in quarterly installments through January 1, 2020 with an interest rate of 3.92% at December 31, 2016 | 30,000 | _ |
| Financing agreement payable in installments through July 1, 2017 with an interest rate of 3.00% at December 31, 2016 | 534 | 1,247 |
| Lease obligations payable in installments through 2019 with a weighted average interest rate of 3.10% at December 31, 2016 and | | |
| 3.09% December 31, 2015 | 1,958 | 2,507 |
| Total | 159,565 | 168,754 |
| Less current maturities | 10,386 | 1,335 |
| Long-term portion | <u>\$149,179</u> | <u>\$167,419</u> |
| The maturities of long-term debt are as follows: | | |

| | December 31, 2016 |
|---------------------|-------------------|
| 2017 | \$ 10,386 |
| 2018 | 9,820 |
| 2019 | |
| 2020 | 129,625 |
| 2021 | _ |
| 2022 and thereafter | |
| Total | \$159,565 |

Borrowings

United States

On November 7, 2016, the Company, its domestic subsidiaries, and certain of its Canadian subsidiaries entered into the Second Amendment (the "Second Amendment") to the Second Amended and Restated Credit Agreement dated March 13, 2015 and as amended by the First Amendment dated June 29, 2016 (the "Amended and Restated Credit Agreement"), with PNC Bank, N.A., Bank of America, N.A., Wells Fargo Bank, N.A., Citizens Bank of Pennsylvania, and Branch Banking and Trust Company. This Second Amendment modifies the Amended and Restated Credit Agreement which had a maximum revolving credit line of \$275,000. The Second Amendment reduces the permitted revolving credit borrowings to \$195,000 and provides for additional term loan borrowing of \$30,000. The term loan will be subject to quarterly straight line amortization until fully paid off upon the final payment on January 1, 2020. Furthermore, certain matters, including excess cash flow, asset sales, and equity issuances, trigger mandatory prepayments to the Term Loan. Term Loan borrowings will not be available to draw upon once they have been repaid. Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Second Amendment or Amended and Restated Credit Agreement, as applicable.

The Second Amendment further provides for modifications to the financial covenants as defined in the Amended and Restated Credit Agreement. The Second Amendment calls for the elimination of the Maximum Leverage Ratio covenant through the quarter ended June 30, 2018. After that period, the Maximum Gross Leverage Ratio covenant will be reinstated to require a maximum ratio of 4.25 Consolidated Indebtedness to 1.00 Gross Leverage for the quarter ended September 30, 2018, and 3.75 to 1.00 for all periods thereafter until the maturity date of the credit facility. The Second Amendment also includes a Minimum Last Twelve Months

EBITDA covenant ("Minimum EBITDA"). For the quarter ending December 31, 2016 through the quarter ending June 30, 2017, the Minimum EBITDA must be at least \$18,500. For each quarter thereafter, through the quarter ended June 30, 2018, the Minimum EBITDA requirement will increase by various increments. At June 30, 2018, the Minimum EBITDA requirement will be \$31,000. After the quarter ended June 30, 2018, the Minimum EBITDA covenant will be eliminated through the maturity of the credit agreement. The Second Amendment also includes a Minimum Fixed Charge Coverage Ratio covenant. The covenant represents the ratio of the Company's fixed charges to the last twelve months of EBITDA, and is required to be a minimum of 1.00 to 1.00 through the quarter ended December 31, 2017 and 1.25 to 1.00 for each quarter thereafter through the maturity of the credit facility. The final financial covenant included in the Second Amendment is a Minimum Liquidity covenant which calls for a minimum of \$25,000 in undrawn availability on the revolving credit loan at all times through the quarter ended June 30, 2018.

The Second Amendment includes several changes to certain non-financial covenants as defined in the Credit Agreement. Through the maturity date of the loan, the Company is now prohibited from making any future acquisitions. The limitation on permitted annual distributions of dividends or redemptions of the Company's stock has been decreased from \$4,000 to \$1,700. The aggregate limitation on loans to and investments in non-loan parties was decreased from \$10,000 to \$5,000. Furthermore, the limitation on asset sales has been decreased from \$25,000 annually with a carryover of up to \$15,000 from the prior year to \$25,000 in the aggregate through the maturity date of the credit facility. At December 31, 2016, the Company was in compliance with the covenants in the Second Amendment.

The Second Amendment provides for the elimination of the three lowest tiers of the pricing grid that had previously been defined in the First Amendment. Upon execution of the Second Amendment through the quarter ended March 31, 2018, the Company will be locked into the highest tier of the pricing grid which provides for pricing of the prime rate plus 225 basis points on base rate loans and the applicable LIBOR rate plus 325 basis points on euro rate loans. For each quarter after March 31, 2018 and through the maturity date of the credit facility, the Company's position on the pricing grid will be governed by a Minimum Net Leverage ratio which is the ratio of Consolidated Indebtedness less cash on hand in excess of \$15,000 to EBITDA. If, after March 31, 2018 the Minimum Net Leverage ratio positions the Company on the lowest tier of the pricing grid, pricing will be the prime rate plus 150 basis points on base rate loans or the applicable LIBOR rate plus 250 basis points on euro rate loans.

At December 31, 2016 and 2015, the Company had outstanding letters of credit of approximately \$425 and \$526, respectively.

United Kingdom

A subsidiary of the Company has a credit facility with NatWest Bank for its United Kingdom operations that includes an overdraft availability of £1,500 pounds sterling (approximately \$1,852 at December 31, 2016). This credit facility supports the United Kingdom's working capital requirements and is collateralized by substantially all of the assets of its United Kingdom operations. The interest rate on this facility is the financial institution's base rate plus 2.50%. Outstanding performance bonds reduce availability under this credit facility. There were no outstanding borrowings under this credit facility at December 31, 2016, however, there were \$202 in outstanding guarantees (as defined in the underlying agreement) at December 31, 2016. This credit facility was renewed and amended during the fourth quarter of 2016 with all underlying terms and conditions remaining unchanged as a result of the renewal. It is the Company's intention to renew this credit facility with NatWest Bank during the annual review in 2017.

The United Kingdom loan agreements contain certain financial covenants that require the subsidiary to maintain senior interest and cash flow coverage ratios. The subsidiary was in compliance with these financial covenants at December 31, 2016 and 2015. The subsidiary had available borrowing capacity of \$1,650 and \$2,194 at December 31, 2016 and 2015, respectively.

Note 11.

Stockholders' Equity

The Company had authorized shares of 20,000,000 in common stock with 11,115,779 shares issued at December 31, 2016 and 2015. The common stock has a par value of \$0.01 per share and the Company paid dividends of \$0.04 per share for each of the first three quarters of 2016 and suspended the dividend during the fourth quarter of 2016.

At December 31, 2016 and 2015, the Company had authorized shares of 5,000,000 in preferred stock. No preferred stock has been issued. No par value has been assigned to the preferred stock.

On December 4, 2013, the Company's Board of Directors authorized the purchase of up to \$15,000 in shares of its common stock through a share repurchase program at prevailing market prices or privately negotiated transactions. The Company repurchased 80,512 shares, for an aggregate price of \$1,587, during 2015 under the repurchase program. On December 9, 2015, the Board of Directors authorized the repurchase of up to \$30,000 of the Company's common shares until December 31, 2017. This authorization became effective January 1, 2016 and replaces the prior authorization. The Second Amendment limits the amount of common shares that the Company can repurchase at this time. The Company repurchased 5,000 shares, for an aggregate price of \$67, during 2016 under the repurchase program.

At December 31, 2016 and 2015, the Company withheld 20,186 and 25,340 shares for approximately \$275 and \$1,114, respectively, from employees to pay their withholding taxes in connection with the exercise and/or vesting of stock options and restricted stock awards.

Cash dividends of \$1,244, \$1,656 and \$1,345 were declared and paid in 2016, 2015, and 2014, respectively.

| | Common Stock | |
|---|--------------|-------------|
| Share Activity | Treasury | Outstanding |
| | (Number | of Shares) |
| Balance at end of 2013 | 927,258 | 10,188,521 |
| Issued for share-based compensation plans | (53,884) | 53,884 |
| Balance at end of 2014 | 873,374 | 10,242,405 |
| Issued for share-based compensation plans | (59,113) | 59,113 |
| Repurchased common shares | 80,512 | (80,512) |
| Balance at end of 2015 | 894,773 | 10,221,006 |
| Issued for share-based compensation plans | (96,619) | 96,619 |
| Repurchased common shares | 5,000 | (5,000) |
| Balance at end of 2016 | 803,154 | 10,312,625 |

Note 12.

Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss, net of tax, for the years ended December 31, 2016 and 2015, are as follows:

| | 2016 | 2015 |
|--|-------------------|--------------------|
| Pension and post-retirement benefit plan adjustments | \$ (4,439) | \$ (3,069) |
| Unrealized loss on interest rate swap contracts | (204) | (121) |
| Foreign currency translation adjustments | (20,646) | (14,750) |
| | <u>\$(25,289)</u> | <u>\$(17,940</u>) |

Foreign currency translation adjustments are generally not adjusted for income taxes as they relate to indefinite investments in non U.S. subsidiaries. See Note 14 Income Taxes.

Note 13.

Earnings Per Common Share

(Share amounts in thousands)

The following table sets forth the computation of basic and diluted earnings per common share for the three years ended December 31:

| | 2016 | 2015 | 2014 |
|--|-------------------|------------------|----------|
| Numerator for basic and diluted (loss) earnings per common share — (Loss) income available to common stockholders: | | | |
| Net (loss) income | \$(141,660) | \$(44,445) | \$25,656 |
| Denominator: | | | |
| Weighted average shares outstanding | 10,273 | 10,254 | 10,225 |
| Denominator for basic earnings per common share | 10,273 | 10,254 | 10,225 |
| Effect of dilutive securities: | | | |
| Employee stock options | _ | _ | 6 |
| Other stock compensation plans | | | 101 |
| Dilutive potential common shares | | | 107 |
| Denominator for diluted earnings per common share — adjusted weighted average shares outstanding and assumed | | | |
| conversions | 10,273 | 10,254 | 10,332 |
| Basic (loss) earnings per common share | <u>\$ (13.79)</u> | <u>\$ (4.33)</u> | \$ 2.51 |
| Diluted (loss) earnings per common share | <u>\$ (13.79)</u> | <u>\$ (4.33)</u> | \$ 2.48 |
| Dividends paid per common share | \$ 0.12 | <u>\$ 0.16</u> | \$ 0.13 |

There were 143 and 130 anti-dilutive shares in 2016 and 2015, respectively. There were no antidilutive shares in 2014.

Note 14.

Income Taxes

(Loss) income before income taxes, as shown in the accompanying consolidated statements of operations, includes the following components:

| | 2016 | 2015 | 2014 |
|--|---------------------|-------------------|----------|
| Domestic | \$(151,027) | \$(55,061) | \$30,766 |
| Foreign | 3,858 | 4,484 | 8,294 |
| (Loss) income from operations, before income taxes | <u>\$(147,169</u>) | <u>\$(50,577)</u> | \$39,060 |

Significant components of the provision for income taxes are as follows:

| | 2016 | 2015 | 2014 |
|------------------------------------|------------------|------------|-----------------|
| Current: | | | |
| Federal | \$(9,980) | \$ 5,571 | \$11,488 |
| State | (487) | 1,540 | 1,491 |
| Foreign | 1,583 | 1,339 | 3,339 |
| Total current | (8,884) | 8,450 | 16,318 |
| Deferred: | | | |
| Federal | 2,555 | (12,016) | (2,321) |
| State | 706 | (2,014) | (122) |
| Foreign | 114 | (552) | (471) |
| Total deferred | 3,375 | (14,582) | (2,914) |
| Total income tax (benefit) expense | <u>\$(5,509)</u> | \$ (6,132) | <u>\$13,404</u> |

The reconciliation of income tax computed at statutory rates to income tax (benefit) expense is as follows:

| | 2016 | 6 | 2015 | | 2014 | |
|---|------------|--------------|------------|---------|----------|---------------|
| | Amount | Percent | Amount | Percent | Amount | Percent |
| Statutory rate | \$(51,509) | 35.0% | \$(17,702) | 35.0% | \$13,671 | 35.0% |
| Foreign tax rate differential | (485) | 0.3 | (419) | 0.8 | (870) | (2.2) |
| State income taxes, net of federal benefit | (2,893) | 2.0 | (159) | 0.3 | 1,065 | 2.7 |
| Non-deductible goodwill impairment | 11,448 | (7.8) | 12,737 | (25.2) | _ | _ |
| Non-deductible expenses | 262 | (0.2) | 452 | (0.9) | 708 | 1.8 |
| Domestic production activities deduction | 700 | (0.5) | (507) | 1.0 | (851) | (2.2) |
| Change in liability for unrecognized tax benefits | 42 | _ | (198) | 0.4 | (327) | (0.8) |
| Change in permanent reinvestment assertion | 7,932 | (5.4) | _ | _ | _ | _ |
| Change in valuation allowance | 29,719 | (20.2) | _ | _ | _ | _ |
| Other | (725) | 0.5 | (336) | 0.7 | 8 | |
| Total income tax (benefit) expense / Effective rate | \$ (5,509) | <u>3.7</u> % | \$ (6,132) | 12.1% | \$13,404 | <u>34.3</u> % |

Significant components of the Company's deferred tax assets and liabilities at December 31, 2016 and 2015 are as follows:

| | 2016 | 2015 |
|---|-------------------|------------|
| Deferred tax assets: | | |
| Goodwill and other intangibles | \$ 32,699 | \$ 1,354 |
| Pension and post-retirement liability | 2,186 | 1,801 |
| Warranty reserve | 3,633 | 3,153 |
| Deferred compensation | 1,227 | 2,275 |
| Accounts receivable | 516 | 622 |
| Contingent liabilities | 2,336 | 2,087 |
| Long-term insurance reserves | 567 | 655 |
| Net operating loss / tax credit carryforwards | 1,384 | 1,006 |
| Other | 1,107 | 949 |
| Total deferred tax assets | 45,655 | 13,902 |
| Less: valuation allowance | (29,719) | |
| Net deferred tax assets | 15,936 | 13,902 |
| Deferred tax liabilities: | | |
| Goodwill and other intangibles | \$ (6,087) | \$ (7,155) |
| Depreciation | (10,586) | (14,134) |
| Unremitted earnings of foreign subsidiaries | (7,932) | _ |
| Inventories | (1,506) | _ |
| Investment in LB Pipe joint venture | (756) | (572) |
| Other | (440) | (741) |
| Total deferred tax liabilities | (27,307) | (22,602) |
| Net deferred tax liabilities | <u>\$(11,371)</u> | \$ (8,700) |

Each quarter, management reviews operations and liquidity needs in each jurisdiction to assess the Company's intent to reinvest foreign earnings outside of the United States. In 2016, management determined that cash balances of its Canadian and United Kingdom subsidiaries exceeded our projected capital needs. As a result, we do not intend for \$23,000 of unremitted foreign earnings of our Canadian and United Kingdom subsidiaries to be permanently reinvested outside of the United States and accrued additional deferred U.S. income taxes and foreign withholding taxes of \$7,932.

At December 31, 2016, the Company has not recorded deferred U.S. income taxes or foreign withholding taxes on \$34,841 of undistributed earnings of its foreign subsidiaries. It is management's intent and practice to indefinitely reinvest such earnings outside of the United States. Determination of the amount of any unrecognized deferred income tax liability associated with these undistributed earnings is not practicable because of the complexities of the hypothetical calculation.

A valuation allowance is required to be established or maintained when, based on currently available information and other factors, it is more likely than not that all or a portion of a deferred tax asset will not be realized. The Company has considered all available evidence, both positive and negative, in assessing the need for a valuation allowance in each jurisdiction.

The negative evidence considered in evaluating U.S. deferred tax assets included cumulative financial losses over the three-year period ended December 31, 2016, the inability to achieve forecasted results in 2016 and 2015, and recent declines in revenue. Positive evidence considered included the composition and reversal patterns of existing taxable and deductible temporary differences between financial reporting and tax, the composition of financial losses, and taxable income available to absorb the carryback of current year taxable losses.

Cumulative financial losses over the three-year period ended December 31, 2016 were a significant piece of objective negative evidence, and typically limit a Company's ability to consider other subjective evidence. Based on our evaluation, a valuation allowance of \$29,719 was recorded at December 31, 2016 to recognize only the amount of deferred tax assets more likely than not to be realized. The amount of deferred tax assets considered realizable, however, could be adjusted if objective negative evidence in the form of cumulative financial losses is no longer present, and additional weight is given to subjective evidence such as our projections for growth.

At December 31, 2016 and 2015, the tax benefit of net operating loss carryforwards available for state income tax purposes was \$1,378 and \$324, respectively. The state net operating loss carryforwards will expire in various years through 2036. We believe it is more likely than not that the tax benefit from state operating loss carryforwards will not be realized. In recognition of this risk, we have provided a valuation allowance of \$1,378 against deferred tax assets related to state operating loss carryforwards at December 31, 2016.

The Company has foreign tax credit carryforwards in the amount of \$244 that will expire in 2022 through 2024. We believe it is more likely than not that the tax benefit from foreign tax credit carryforwards will not be realized. In recognition of this risk, we have provided a valuation allowance of \$244 against deferred tax assets related to foreign tax credit carryforwards at December 31, 2016. In addition, the Company has not accrued tax benefits for unborn foreign tax credits that may be available upon repatriation of excess cash by its Canadian and United Kingdom subsidiaries.

At December 31, 2016, the Company has foreign net operating loss carryforwards in Brazil and Germany of \$311 and \$424, respectively, which may be carried forward indefinitely. Both jurisdictions incurred cumulative financial losses over the three-year period ended December 31, 2016 and have projected future taxable losses. We believe it is more likely than not that the tax benefit from these loss carryforwards will not be realized. In recognition of this risk, we have provided a valuation allowance of \$274, collectively, against deferred tax assets in Brazil and Germany at December 31, 2016.

The determination to record or not record a valuation allowance involves management judgement, based on the consideration of positive and negative evidence available at the time of the assessment. Management will continue to assess the realization of its deferred tax assets based upon future evidence, and may record adjustments to valuation allowances against deferred tax assets in future periods, as appropriate, that could materially impact net income.

The following table provides a reconciliation of unrecognized tax benefits at December 31, 2016 and 2015:

2016

| | 2010 | 2013 |
|--|--------------|---------|
| Unrecognized tax benefits at beginning of period: | \$582 | \$1,013 |
| Increases based on tax positions for prior periods | 37 | 147 |
| Decreases related to settlements with taxing authorities | | (578) |
| Balance at end of period | <u>\$619</u> | \$ 582 |

The total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate is \$619 at December 31, 2016. The Company accrues interest and penalties related to unrecognized tax benefits in its provision for income taxes. At December 31, 2016 and 2015, the Company had accrued interest and penalties related to unrecognized tax benefits of \$464 and \$443, respectively. At December 31, 2016, the Company does not expect any material increases or decreases to its unrecognized tax benefits within the next 12 months. Ultimate realization of this decrease is dependent upon the occurrence of certain events, including the completion of audits by tax authorities and expiration of statutes of limitations.

The Company files income tax returns in the United States and in various state, local and foreign jurisdictions. The Company is subject to federal income tax examinations for the period 2013 and forward. With respect to the state, local, and foreign filings, certain entities of the Company are subject to income tax examinations for the periods 2012 and forward.

Note 15.

Share-based Compensation

The Company applies the provisions of FASB ASC 718, *Compensation – Stock Compensation*, to account for the Company's share-based compensation. Share-based compensation cost is measured at the grant date based on the calculated fair value of the award and is recognized over the employees' requisite service period. The Company recorded share-based compensation expense of \$1,346, \$1,471 and \$3,007 for the years ended December 31, 2016, 2015, and 2014, respectively, related to fully-vested stock awards, restricted stock awards, and performance unit awards. At December 31, 2016, unrecognized compensation expense for awards the Company expects to vest approximated \$1,550. The Company will recognize this expense over the upcoming 3.7 year period through August 2020.

Shares issued as a result of vested stock-based compensation generally will be from previously issued shares that have been reacquired by the Company and held as Treasury stock or authorized but previously unissued common stock.

The Company realized reductions in excess tax benefits of \$332 for the year ended December 31, 2016 and excess tax benefits for the tax deduction from share-based compensation of \$253 and \$336 for the years ended December 31, 2015 and 2014, respectively. This excess tax benefit is included in cash flows from financing activities in the Consolidated Statements of Cash Flows.

At December 31, 2016, the Company had stock awards issued pursuant to the 2006 Omnibus Incentive Plan, as amended and restated in May 2016 ("Omnibus Plan"). The Omnibus Plan allows for the issuance of 1,270,000 shares of common stock through the granting of stock options or stock awards (including performance units convertible into stock) to key employees and directors at no less than 100% of fair market value on the date of the grant. The Omnibus Plan provides for the granting of "nonqualified options" with a duration of not more than ten years from the date of grant. The Omnibus Plan also provides that, unless otherwise set forth in the option agreement, stock options are exercisable in installments of up to 25% annually beginning one year from the date of grant. No stock options have been granted under the Omnibus Plan and, as such, there was no share-based compensation expense related to stock options recorded in 2016, 2015, or 2014.

Stock Option Awards

No stock options were outstanding during the year ended December 31, 2016. Certain information for the years ended December 31, 2015 and 2014 relative to employee stock options is summarized as follows:

| | 2015 | 2014 |
|--|-----------------|------------------|
| Number of shares under the plans: | | |
| Outstanding and exercisable at beginning of year | 7,500 | 18,750 |
| Granted | | _ |
| Canceled | | _ |
| Exercised | <u>(7,500</u>) | <u>(11,250</u>) |
| Outstanding and exercisable at end of year | | <u>7,500</u> |

The weighted average exercise price per share of the stock options exercised in 2015 and 2014 were \$9.08, and \$11.67, respectively. The total intrinsic value of stock options exercised during the years ended December 31, 2015 and 2014 was \$253 and \$426, respectively.

Fully-Vested Stock Awards

Non-employee directors are automatically awarded fully vested shares of the Company's common stock on each date the non-employee directors are elected at the annual shareholders' meeting to serve as directors.

The non-employee directors were granted a total of 59,598, 14,000, and 10,182 fully-vested shares for the years ended December 31, 2016, 2015, and 2014, respectively. Compensation expense recorded by the Company related to fully-vested stock awards to non-employee directors was approximately \$698, \$534, and \$488 for the years ended December 31, 2016, 2015, and 2014, respectively.

The weighted average fair value of all the fully-vested stock grants awarded was \$11.72, \$38.15, and \$47.94 per share for 2016, 2015, and 2014, respectively.

Restricted Stock Awards and Performance Unit Awards

Under the 2006 Omnibus Plan, the Company grants eligible employees restricted stock and performance unit awards. The forfeitable restricted stock awards granted prior to March 2015 generally time-vest after a four-year period, and those granted subsequent to March 2015 generally time-vest ratably over a three-year period, unless indicated otherwise by the underlying restricted stock agreement. Performance unit awards are offered annually under separate three-year long-term incentive programs. Performance units are subject to forfeiture and will be converted into common stock of the Company based upon the Company's performance relative to performance measures and conversion multiples as defined in the underlying program. If the Company's estimate of the number of performance stock awards expected to vest changes in a subsequent accounting period, cumulative compensation expense could increase or decrease. The change will be recognized in the current period for the vested shares and would change future expense over the remaining vesting period.

The following table summarizes the restricted stock award and performance unit award activity for the three-year periods ended December 31, 2016, 2015, and 2014:

| | Restricted Stock Units | Performance Stock Units | Weighted Average Grant Date Fair Value |
|--|------------------------------|-------------------------------|--|
| Outstanding at January 1, 2014 | 129,726 | 61,651 | <u>\$34.00</u> |
| Granted | 19,051 | 34,652 | 44.07 |
| Vested | (40,540) | (13,588) | 34.59 |
| Adjustment for incentive awards not expected to vest | _ | (7,845) | 43.59 |
| Canceled | | (2,880) | 44.13 |
| Outstanding at December 31, 2014 | 108,237 | 71,990 | <u>\$36.25</u> |
| Granted | 29,656 | 41,114 | 44.93 |
| Vested | (39,076) | (23,877) | 32.35 |
| Adjustment for incentive awards not expected to vest | _ | (53,228) | 43.26 |
| Canceled | _(5,000) | | 44.84 |
| Outstanding at December 31, 2015 | 93,817 | 35,999 | <u>\$39.66</u> |
| Granted | 48,283 | 129,844 | 12.50 |
| Vested | (56,807) | _ | 28.45 |
| Adjustment for incentive awards not expected to vest | _ | (93,103) | 24.79 |
| Canceled | (6,021) | (9,050) | 18.82 |
| Outstanding at December 31, 2016 | 79,272 | 63,690 | <u>\$21.66</u> |

Performance units are subject to forfeiture and will be converted into common stock of the Company based upon the Company's performance relative to performance measures and conversion multiples as defined in the underlying plan. The aggregate fair value in the above table is based upon achieving 100% of the performance targets as defined in the underlying plan.

Excluding the fully-vested stock awards granted to non-employee directors, the Company recorded share-based compensation expense of \$648, \$937, and \$2,519, respectively, for the periods ended December 31, 2016, 2015, and 2014 related to restricted stock and performance unit awards.

| | 2016 | 2015 | |
|--|---------|---------|---------|
| Number of shares available for future grant: | | | |
| Beginning of year | 407,307 | 469,840 | 513,280 |
| End of year | 675,447 | 407,307 | 469,840 |

Note 16.

Retirement Plans

The Company has seven retirement plans that cover its hourly and salaried employees in the United States: three defined benefit plans (one active / two frozen) and four defined contribution plans. Employees are eligible to participate in the appropriate plan based on employment classification. The Company's contributions to the defined benefit and defined contribution plans are governed by the Employee Retirement Income Security Act of 1974 ("ERISA") and the Company's policy and investment guidelines of the applicable plan. The Company's policy is to contribute at least the minimum in accordance with the funding standards of ERISA.

Rail Technologies maintains two defined contribution plans for its employees in Canada, as well as a post-retirement benefit plan. In the United Kingdom, Rail Technologies maintains two defined contribution plans and a defined benefit plan. These plans are discussed in further detail below.

United States Defined Benefit Plans

The following tables present a reconciliation of the changes in the benefit obligation, the fair market value of the assets, and the funded status of the plans, as of December 31, 2016 and 2015:

| | 2016 | 2015 |
|--|--------------------|-------------------|
| Changes in benefit obligation: | | |
| Benefit obligation at beginning of year | \$17,759 | \$18,925 |
| Service cost | 36 | 38 |
| Interest cost | 746 | 742 |
| Actuarial loss (gain) | 534 | (1,148) |
| Benefits paid | (834) | (798) |
| Benefit obligation at end of year | <u>\$18,241</u> | <u>\$17,759</u> |
| Change to plan assets: | | |
| Fair value of assets at beginning of year | \$14,235 | \$15,205 |
| Actual gain (loss) on plan assets | 779 | (172) |
| Employer contribution | _ | _ |
| Benefits paid | (834) | (798) |
| Fair value of assets at end of year | 14,180 | 14,235 |
| Funded status at end of year | <u>\$ (4,061</u>) | <u>\$ (3,524)</u> |
| Amounts recognized in the consolidated balance sheet consist of: | | |
| Other long-term liabilities | <u>\$ (4,061)</u> | <u>\$(3,524)</u> |
| Amounts recognized in accumulated other comprehensive income consist of: | | |
| Net loss | <u>\$ 4,186</u> | \$ 3,993 |

The actuarial loss included in accumulated other comprehensive loss that will be recognized in net periodic pension cost during 2017 is \$130, before taxes.

Net periodic pension costs for the three years ended December 31, 2016 are as follows:

| | 2016 | 2015 | 2014 |
|--|--------|---------------|-----------------|
| Components of net periodic benefit cost: | | | |
| Service cost | \$ 36 | \$ 38 | \$ 23 |
| Interest cost | 746 | 742 | 771 |
| Expected return on plan assets | (717) | (816) | (968) |
| Amortization of prior service cost | _ | 3 | 1 |
| Recognized net actuarial loss | 276 | 275 | 65 |
| Net periodic pension cost (income) | \$ 341 | <u>\$ 242</u> | <u>\$(108</u>) |

The weighted average assumptions in the following table represent the rates used to develop the actuarial present value of the projected benefit obligation for the year listed and also the net periodic benefit cost for the following year.

| | <u>2016</u> | 2015 | 2014 |
|--|--------------|--------------|--------------|
| Discount rate | <u>4.3</u> % | <u>4.3</u> % | <u>4.0</u> % |
| Expected rate of return on plan assets | <u>5.2</u> % | <u>5.2</u> % | <u>5.5</u> % |

The expected long-term rate of return is based on numerous factors including the target asset allocation for plan assets, historical rate of return, long-term inflation assumptions, and current and projected market conditions. The decline in the expected rate of return on plan assets reflects a shift in the Plans' investment strategy toward a higher focus on fixed income investments.

Amounts applicable to the Company's pension plans with accumulated benefit obligations in excess of plan assets are as follows at December 31:

| | 2016 | 2015 |
|--------------------------------|----------|----------|
| Projected benefit obligation | \$18,241 | \$17,759 |
| Accumulated benefit obligation | 18,241 | 17,759 |
| Fair value of plan assets | 14,180 | 14,235 |

Plan assets consist primarily of various fixed income and equity investments. The Company's primary investment objective is to provide long-term growth of capital while accepting a moderate level of risk. The investments are limited to cash and cash equivalents, bonds, preferred stocks, and common stocks. The investment target ranges and actual allocation of pension plan assets by major category at December 31, 2016 and 2015 are as follows:

| | Target | <u>2016</u> | 2015 |
|---------------------------------|---------|-------------|------|
| Asset Category | | | |
| Cash and cash equivalents | 0 - 10% | 5% | 9% |
| Total fixed income funds | 25 - 50 | 33 | 35 |
| Total mutual funds and equities | 50 - 70 | 62 | _56 |
| Total | | 100% | 100% |

In accordance with the fair value disclosure requirements of FASB ASC 820, "Fair Value Measurements and Disclosures," the following assets were measured at fair value on a recurring basis at December 31, 2016 and 2015. Additional information regarding FASB ASC 820 and the fair value hierarchy can be found in Note 18 Fair Value Measurements.

| | 2016 | 2015 |
|---------------------------------|-----------------|-----------------|
| Asset Category | | |
| Cash and cash equivalents | \$ 660 | \$ 1,248 |
| Fixed income funds | | |
| Corporate bonds | 4,767 | 4,926 |
| Total fixed income funds | 4,767 | 4,926 |
| Equity funds and equities | | |
| Mutual funds | 8,753 | 8,061 |
| Common stock | | |
| Total mutual funds and equities | 8,753 | 8,061 |
| Total | <u>\$14,180</u> | <u>\$14,235</u> |

<u>Cash equivalents.</u> The Company uses quoted market prices to determine the fair value of these investments in interest-bearing cash accounts and they are classified in Level 1 of the fair value hierarchy. The carrying amounts approximate fair value because of the short maturity of the instruments.

<u>Fixed income funds.</u> Investments within the fixed income funds category consist of fixed income corporate debt. The Company uses quoted market prices to determine the fair value of these fixed income funds. These instruments consist of exchange-traded government and corporate bonds and are classified in Level 1 of the fair value hierarchy.

Equity funds and equities. The valuation of investments in registered investment companies is based on the underlying investments in securities. Securities traded on security exchanges are valued at the latest quoted sales price. Securities traded in the over-the-counter market and listed securities for which no sale was reported on that date are valued at the average of the last reported bid and ask quotations. These investments are classified in Level 1 of the fair value hierarchy.

The Company currently does not anticipate contributions to its United States defined benefit plans in 2017.

The following benefit payments are expected to be paid:

| | Pension Benefits |
|-----------------|---------------------|
| 2017 | \$ 894 |
| 2018 | 905 |
| 2019 | 972 |
| 2020 | 1,013 |
| 2021 | 1,078 |
| Years 2022-2026 | 5,647 |

United Kingdom Defined Benefit Plan

The Portec Rail Products (UK) Limited Pension Plan covers certain current employees, former employees, and retirees. The plan has been frozen to new entrants since April 1, 1997 and also covers the former employees of a merged plan after January 2002. Benefits under the plan were based on years of service and eligible compensation during defined periods of service. Our funding policy for the plan is to make minimum annual contributions required by applicable regulations.

The funded status of the United Kingdom defined benefit plan at December 31, 2016 and 2015 is as follows:

| r | , - | 2016 | 2015 |
|---|--------|------------------|-------------------|
| Changes in benefit obligation: | | | |
| Benefit obligation at beginning of year | | \$ 7,862 | \$ 8,797 |
| Interest cost | | 259 | 295 |
| Actuarial (gain) loss | | 1,532 | (416) |
| Benefits paid | | (273) | (339) |
| Foreign currency exchange rate changes | | (1,276) | (475) |
| Benefit obligation at end of year | | <u>\$ 8,104</u> | <u>\$ 7,862</u> |
| Change to plan assets: | | | |
| Fair value of assets at beginning of year | | \$ 6,661 | \$ 6,757 |
| Actual gain on plan assets | | 265 | 307 |
| Employer contribution | | 253 | 302 |
| Benefits paid | | (273) | (339) |
| Foreign currency exchange rate changes | | (1,080) | (366) |
| Fair value of assets at end of year | | 5,826 | 6,661 |
| Funded status at end of year | | <u>\$(2,278)</u> | <u>\$(1,201</u>) |
| Amounts recognized in the consolidated balance sheet consist of: | | | |
| Other long-term liabilities | | <u>\$(2,278)</u> | <u>\$(1,201</u>) |
| Amounts recognized in accumulated other comprehensive income consist of: | | | |
| Net loss | | \$ 2,015 | \$ 706 |
| Prior service cost | | 53 | 85 |
| | | \$ 2,068 | \$ 791 |
| Net periodic pension costs for the three years ended December 31 are as follo | ws: | | |
| | 2016 | 2015 | 2014 |
| Components of net periodic benefit cost: | | | |
| Interest cost | \$ 259 | \$ 295 | \$ 360 |
| Expected return on plan assets | (290 | 0) (324) | (370) |
| Amortization of transition obligation | _ | | (50) |
| Amortization of prior service cost | 17 | 7 27 | 30 |
| Recognized net actuarial loss | _ 275 | <u>225</u> | 185 |
| Net periodic pension cost | \$ 26 | \$ 223 | <u>\$ 155</u> |

The weighted average assumptions in the following table represent the rates used to develop the actuarial present value of the projected benefit obligation for the year listed and also the net periodic benefit cost for the following year.

| | 2 | 2016 | 2015 | 2014 |
|--|---|--------------|--------------|--------------|
| Discount rate | | <u>2.7</u> % | <u>4.0</u> % | <u>3.6</u> % |
| Expected rate of return on plan assets | | 4.4% | 5.2% | 5.0% |

Amounts applicable to the Company's pension plans with accumulated benefit obligations in excess of plan assets are as follows at December 31:

| | 2016 | 2015 |
|--------------------------------|---------|---------|
| Projected benefit obligation | \$8,104 | \$7,862 |
| Accumulated benefit obligation | 8,104 | 7,862 |
| Fair value of plan assets | 5,826 | 6,661 |

The Company has estimated the long-term rate of return on plan assets based primarily on historical returns on plan assets, adjusted for changes in target portfolio allocations, and recent changes in long-term interest rates based on publicly available information.

Plan assets are invested by the trustees in accordance with a written statement of investment principles. This statement permits investment in equities, corporate bonds, United Kingdom government securities, commercial property, and cash, based on certain target allocation percentages. Asset allocation is primarily based on a strategy to provide steady growth without undue fluctuations. The target asset allocation percentages for 2016 are as follows:

| | Portec Rail Plan |
|----------------------------|-------------------|
| Equity securities | Up to 100% |
| Commercial property | Not to exceed 50% |
| U.K. Government securities | Not to exceed 50% |
| Cash | Up to 100% |

Plan assets held within the Portec Rail Plan consist of cash and marketable securities that have been classified as Level 1 of the fair value hierarchy. All other plan assets have been classified as Level 2 of the fair value hierarchy.

The plan assets by category for the two years ended December 31, 2016 and 2015 are as follows:

| | 2016 | 2015 |
|---------------------------|---------|---------|
| Asset Category | | |
| Cash and cash equivalents | \$ 707 | \$ 242 |
| Equity securities | 2,617 | 2,656 |
| Bonds | 1,347 | 1,301 |
| Other | 1,155 | 2,462 |
| Total | \$5,826 | \$6,661 |

United Kingdom regulations require trustees to adopt a prudent approach to funding required contributions to defined benefit pension plans. The Company anticipates making contributions of \$231 to the Portec Rail Plan during 2017.

The following estimated future benefits payments are expected to be paid under the Portec Rail Plan:

| | Benefits |
|-----------------|----------|
| 2017 | \$ 219 |
| 2018 | |
| 2019 | 252 |
| 2020 | 268 |
| 2021 | 274 |
| Years 2022-2026 | 1,750 |

Other Post-Retirement Benefit Plan

Rail Technologies' operation near Montreal, Quebec, Canada, maintains a post-retirement benefit plan, which provides retiree life insurance, health care benefits, and, for a closed group of employees, dental care. Retiring employees with a minimum of 10 years of service are eligible for the plan benefits. The plan is not funded. Cost of benefits earned by employees is charged to expense as services are rendered. The expense related to this plan was not material for 2016 or 2015. Rail Technologies' accrued benefit obligation was \$909 and \$823 as of December 31, 2016 and 2015, respectively. This obligation is recognized within other long-term liabilities. Benefit payments anticipated for 2017 are not material.

The weighted average assumptions in the following table represent the rates used to develop the actuarial present value of the projected benefit obligation for the year listed and also the net periodic benefit cost for the following year.

| | 2010 | 2015 |
|---|---------------------|--------------|
| Discount rate | $\underline{4.0}\%$ | <u>4.2</u> % |
| Weighted average health care trend rate | <u>5.1</u> % | <u>5.0</u> % |

The weighted average health care rate trends downward to an ultimate rate of 4.4% in 2035.

Defined Contribution Plans

The Company sponsors eight defined contribution plans for hourly and salaried employees across our domestic and international facilities. The following table summarizes the expense associated with the contributions made to these plans.

| | Twelve Months Ended December 31, | | |
|----------------|----------------------------------|------------|---------|
| | 2016 | 2015 | 2014 |
| United States | \$1,813 | \$2,434 | \$2,425 |
| Canada | 225 | 226 | 227 |
| United Kingdom | 376 | <u>494</u> | 158 |
| | \$2,414 | \$3,154 | \$2,810 |

Note 17.

Rental and Lease Information

The Company has capital and operating leases for certain plant facilities, office facilities, and equipment. Rental expense for the years ended December 31, 2016, 2015, and 2014 amounted to \$4,864, \$4,611, and \$3,062, respectively. Generally, land and building leases include escalation clauses.

The following is a schedule, by year, of the future minimum payments under capital and operating leases, together with the present value of the net minimum payments at December 31, 2016:

| Year ending December 31, | Capital Leases | Operating Leases |
|---|-------------------|---------------------|
| 2017 | \$ 626 | \$ 4,292 |
| 2018 | 589 | 2,883 |
| 2019 | 503 | 2,109 |
| 2020 | 240 | 1,784 |
| 2021 | | 1,511 |
| 2022 and thereafter | | 6,538 |
| Total minimum lease payments | 1,958 | <u>\$19,117</u> |
| Less amount representing interest | 114 | |
| Total present value of minimum payments with interest rates ranging from 2.95% to 4.25% | <u>\$1,844</u> | |

Assets recorded under capital leases are as follows for the years ended December 31, 2016 and 2015:

| | 2016 | 2015 |
|---------------------------------|---------|---------|
| Machinery and equipment at cost | \$3,152 | \$3,157 |
| Less accumulated amortization | 829 | 450 |
| Net capital lease assets | \$2,323 | \$2,707 |

Note 18.

Fair Value Measurements

The Company determines the fair value of assets and liabilities based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. The fair values are based on assumptions that market participants would use when pricing an asset or liability, including assumptions about risk and the risks inherent in valuation techniques and the inputs to valuations. The fair value hierarchy is based on whether the inputs to valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Company's own assumptions of what market participants would use. The fair value hierarchy includes three levels of inputs that may be used to measure fair value as described below.

- Level 1: Quoted market prices in active markets for identical assets or liabilities.
- Level 2: Observable market-based inputs or unobservable inputs that are corroborated by market data.
- Level 3: Unobservable inputs that are not corroborated by market data.

The classification of a financial asset or liability within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The Company has an established process for determining fair value for its financial assets and liabilities, principally cash and cash equivalents and interest rate swaps. Fair value is based on quoted market prices, where available. If quoted market prices are not available, fair value is based on assumptions that use as inputs market-based parameters. The following section describes the valuation methodologies used by the Company to measure different financial instruments at fair value, including an indication of the level in the fair value hierarchy in which each instrument is generally classified. Where appropriate, the description includes details of the key inputs to the valuations and any significant assumptions.

<u>Cash equivalents.</u> Included within "Cash and cash equivalents" are investments in non-domestic term deposits. The carrying amounts approximate fair value because of the short maturity of the instruments.

<u>LIBOR-Based interest rate swaps</u>. To reduce the impact of interest rate changes on outstanding variable-rate debt, the Company entered into forward starting LIBOR-based interest rate swaps with notional values totaling \$50,000. The swaps will become effective in February 2017 at which point they will effectively convert a portion of the debt from variable to fixed-rate borrowings during the term of the swap contract. The fair value of the interest rate swaps is based on market-observable forward interest rates and represents the estimated amount that the Company would pay to terminate the agreements. As such, the swap agreements have been classified as Level 2 within the fair value hierarchy.

The following assets of the Company were measured at fair value on a recurring basis subject to the disclosure requirements of ASC 820 at December 31, 2016 and December 31, 2015:

| | Fair Value | | nents at Repo | orting Date | Fair Value | | nents at Repo | orting Date |
|---------------------|----------------------|------------------|---------------|--|----------------------|------------------|---------------|--|
| | December 31, 2016 | for Identical | Inputs | Significant Unobservable Inputs (Level 3) | December 31, 2015 | for Identical | Inputs | Significant Unobservable Inputs (Level 3) |
| Term deposits | \$ 16 | \$16 | <u>\$ —</u> | <u>\$—</u> | \$1,939 | \$1,939 | <u>\$ —</u> | <u>\$—</u> |
| Total assets | \$ 16 ==== | \$16 === | <u>\$ —</u> | <u>\$—</u> | \$1,939 | \$1,939 | <u>\$ —</u> | <u>\$—</u> |
| Interest rate swaps | \$334 | <u>\$—</u> | \$334 | <u>\$—</u> | \$ 196 | <u>\$</u> | <u>\$196</u> | <u>\$—</u> |
| Total liabilities | \$334 | <u>\$—</u> | \$334 | <u>\$—</u> | \$ 196 | <u>\$</u> | \$196 | <u>\$—</u> |

Information regarding the fair value disclosures associated with the assets of the Company's defined benefit plans can be found in Note 16 Retirement Plans.

Note 19.

Commitments and Contingent Liabilities

The Company is subject to product warranty claims that arise in the ordinary course of its business. For certain manufactured products, the Company maintains a product warranty accrual that is adjusted on a monthly basis as a percentage of cost of sales. This product warranty accrual is periodically adjusted based on the identification or resolution of known individual product warranty claims.

The following table sets forth the Company's product warranty accrual:

| | Warranty Liability |
|---------------------------------|--------------------|
| Balance at December 31, 2015 | \$ 8,755 |
| Additions to warranty liability | 2,524 |
| Warranty liability utilized | (1,125) |
| Balance at December 31, 2016 | \$10,154 |

Included within the above table are concrete tie warranty reserves of approximately \$7,574 and \$7,544, respectively, at December 31, 2016 and 2015. For the periods ended December 31, 2016, 2015, and 2014, the Company recorded approximately \$204, \$972 and \$9,854, respectively, in pre-tax concrete tie warranty charges within "Cost of Goods Sold" in the Company's Rail Products and Services segment primarily related to concrete ties manufactured at the Company's former Grand Island, NE facility. During the year ended December 31, 2016, the Company recorded approximately \$1,224 in pre-tax warranty charges within "Cost of Goods Sold" in the Company's Rail Products and Services segment related to transit products project.

UPRR Warranty Claims

On July 12, 2011, UPRR notified (the "UPRR Notice") the Company and its subsidiary, CXT Incorporated ("CXT"), of a warranty claim under CXT's 2005 supply contract relating to the sale of pre-stressed concrete railroad ties to UPRR. UPRR asserted that a significant percentage of concrete ties manufactured in 2006 through 2011 at CXT's Grand Island, NE facility failed to meet contract specifications, had workmanship defects and were cracking and failing prematurely. Of the 3.0 million ties manufactured between 1998 and 2011 from the Grand Island, NE facility, approximately 1.6 million ties were sold during the period UPRR had claimed nonconformance. The 2005 contract called for each concrete tie which failed to conform to the specifications or had a material defect in workmanship to be replaced with 1.5 new concrete ties, provided, that, within five years of the sale of a concrete tie, UPRR notified CXT of such failure to conform or such defect in workmanship. The UPRR Notice did not specify how many ties manufactured during this period were defective nor the exact nature of the alleged workmanship defect.

Following the UPRR Notice, the Company worked with material scientists and pre-stressed concrete experts to test a representative sample of Grand Island, NE concrete ties and assess warranty claims for certain concrete ties made in its Grand Island, NE facility between 1998 and 2011. The Company discontinued manufacturing operations in Grand Island, NE in early 2011.

2012

During 2012, the Company completed sufficient testing and analysis to further understand this matter. Based upon testing results and expert analysis, the Company believed it discovered conditions, which largely related to the 2006 to 2007 manufacturing period, that can shorten the life of the concrete ties produced during this period. During the fourth quarter of 2012 and first quarter of 2013, the Company reached agreement with UPRR on several matters including a tie rating process for the Company and UPRR to work together to identify, prioritize, and replace defective ties that meet the criteria for replacement. This process applies to the ties the Company shipped to UPRR from its Grand Island, NE facility from 1998 to 2011. During most of this period, the Company's warranty policy for UPRR carried a 5-year warranty with a 1.5:1 replacement ratio for any defective ties. In order to accommodate UPRR and other customer concerns, the Company also reverted to a previously used warranty policy providing a 15-year warranty with a 1:1 replacement ratio. This change provided an additional 10 years of warranty protection. In the amended 2005 supply agreement, the Company and UPRR also extended the supply of Tucson ties by five years and agreed on a cash payment of \$12,000 to UPRR as compensation for concrete ties already replaced by UPRR during the investigation period.

During 2012, as a result of the testing that the Company conducted on concrete ties manufactured at its former Grand Island, NE facility and the developments related to UPRR and other customer matters, the Company recorded pre-tax warranty charges of \$22,000 in "Cost of Goods Sold" within its Rail Products and Services segment based on the Company's estimate of the number of defective concrete ties that will ultimately require replacement during the applicable warranty periods.

2013

Throughout 2013, at UPRR's request and under the terms of the amended 2005 supply agreement, the Company provided warranty replacement concrete ties for use across certain UPRR subdivisions. The Company attempted to reconcile the quantity of warranty claims for ties replaced and obtain supporting detail for the ties removed. The Company believes that UPRR did not replace concrete ties in accordance with the amended agreement and has not furnished adequate documentation throughout the replacement process in these subdivisions to support its full warranty claim. Based on the information received by the Company to date, the Company believes that a significant number of ties which UPRR replaced in these subdivisions did not meet the criteria to be covered as warranty replacement ties under the amended 2005 supply agreement. The disagreement related to the 2013 warranty replacement activity includes approximately 170,000 ties where the Company provided detailed documentation supporting our position with reason codes that detail why these ties are not eligible for a warranty claim.

In late November 2013, the Company received notice from UPRR asserting a material breach of the amended 2005 supply agreement. UPRR's notice asserted that the failure to honor its claims for warranty ties in these subdivisions was a material breach. Following receipt of this notice, the Company provided information to UPRR to refute UPRR's claim of breach and included the reconciliation of warranty claims supported by substantial findings from the Company's track observation team, all within the 90-day cure period. The Company also proposed further discussions to reach agreement on reconciliation for 2013 replacement activities and future replacement activities and a recommended process that will ensure future replacement activities are done with appropriate documentation and per the terms of the amended 2005 supply agreement.

2014

During the first quarter of 2014, the Company further responded within the 90-day cure period to UPRR's claim and presented a reconciliation for the subdivisions at issue. This proposed reconciliation was based on empirical data and visual observation from Company employees that were present during the replacement process for a substantial majority of the concrete ties replaced. The Company spent considerable time documenting facts related to concrete tie condition and track condition to assess whether the ties replaced met the criteria to be eligible for replacement under the terms of the amended 2005 supply agreement.

During 2014, the Company increased its accrual by an additional \$8,766 based on revised estimates of ties to be replaced based upon scientific testing and other analysis, adjusted for ties already provided to UPRR. The Company continued to work with UPRR to identify, replace, and reconcile defective ties related to the warranty claim in accordance with the amended 2005 supply agreement. The Company and UPRR met during the third quarter of 2014 to evaluate each other's position in an effort to work towards agreement on the unreconciled 2013 and 2014 replacement activity as well as the standards and practices to be implemented for future replacement activity and warranty tie replacement.

In November and December of 2014, the Company received additional notices from UPRR asserting that ties manufactured in 2000 were defective and again asserting material breaches of the amended 2005 supply agreement relating to warranty tie replacements as well as certain new ties provided to UPRR being out of specification.

At December 31, 2014, the Company and UPRR had not been able to reconcile the disagreement related to the 2013 and 2014 warranty replacement activity. The disagreement relating to the 2014 warranty replacement activity includes approximately 90,100 ties that the Company believes are not warranty-eligible.

2015

On January 23, 2015, UPRR filed a Complaint and Demand for Jury Trial in the District Court for Douglas County, NE against the Company and its subsidiary, CXT, asserting, among other matters, that the Company breached its express warranty, breached an implied covenant of good faith and fair dealing, and anticipatorily repudiated its warranty obligations, and that UPRR's exclusive and limited remedy provisions in the supply agreement have failed of their essential purpose which entitles UPRR to recover all incidental and consequential damages. The Complaint seeks to cancel all duties of UPRR under the contract, to adjudge the Company as having no remaining rights under the contracts, and to recover damages in an amount to be determined at trial for the value of unfulfilled warranty replacement ties and ties likely to become warranty eligible, for costs of cover for replacement ties, and for various incidental and consequential damages. The amended 2005 supply agreement provides that UPRR's exclusive remedy is to receive a replacement tie that meets the contract specifications for each tie that failed to meet the contract specifications or otherwise contained a material defect provided that the Company receives written notice of such failure or defect within 15 years after that tie was produced. The amended 2005 supply agreement provides that the Company's warranty does not apply to ties that (a) have been repaired or altered without the Company's written consent in such a way as to affect the stability or reliability thereof, (b) have been subject to misuse, negligence, or accident, or (c) have been improperly maintained or used contrary to the specifications for which such ties were produced. The amended 2005 supply agreement also continues to provide that the Company's warranty is in lieu of all other express or implied warranties and that neither party shall be subject to or liable for any incidental or consequential damages to the other party. The dispute is largely based on (1) claims submitted that the Company believes are for ties claimed for warranty replacement that are inaccurately under concrete tie rating guidelines and procedures agreed to in 2012 and incorporated by amendment to the 2005 supply agreement rated and are not the responsibility of the Company and claims that do not meet the criteria of a warranty replacement and (2) UPRR's assertion, which the Company vigorously disputes, that UPRR in future years will be entitled to warranty replacement ties for virtually all of the Grand Island ties. Many thousands of Grand Island ties have been performing in track for over ten years. In addition, a significant amount of Grand Island ties were rated by both parties in the excellent category of the rating system.

In June 2015, UPRR delivered an additional notice alleging deficiencies in certain ties produced in the Company's Tucson and Spokane locations and other claimed material breaches which the Company contends are unfounded. The Company again responded to UPRR that it was not in material breach of the amended 2005 supply agreement relating to warranty tie replacements and that the ties in question complied with the specifications provided by UPRR.

On June 16 and 17, 2015, UPRR issued formal notice of the termination of the concrete tie supply agreement as well as the termination of the lease agreement at the Tucson, AZ production facility and rejection and revocation of its prior acceptance of certain ties manufactured at the Company's Spokane, WA production facility. Since that time, UPRR has discontinued submitting purchase orders to the Company for shipment of warranty replacement ties.

On May 29, 2015, the Company and CXT filed an Answer, Affirmative Defenses and Counterclaims in response to the Complaint, denying liability to UPRR. As a result of UPRR's subsequent June 16-17, 2015 actions and certain related conduct, the Company on October 5, 2015 amended the pending Answer, Affirmative Defenses and Counterclaims to add, among other things, assertions that UPRR's conduct in question was wrongful and unjustified and constituted additional grounds for the affirmative defenses to UPRR's claims and also for the Company's counterclaims.

2016 - 2017

By Scheduling Order dated June 29, 2016, an August 31, 2017 deadline for the completion of fact discovery was established with trial to proceed at some future date after October 30, 2017, and UPRR filed an amended notice of trial to commence on October 30, 2017. Subsequently, by Second Amended Scheduling Order dated February 22, 2017, a March 30, 2018 deadline for completion of discovery has been established with trial to proceed at some future date after June 1, 2018. During 2016 and the first three months of 2017, the parties continued to conduct discovery. The Company intends to continue to engage in discussions in an effort to resolve the UPRR matter. However, we cannot predict that such discussions will be successful, or that the results of the litigation with UPRR, or any settlement or judgment amounts, will reasonably approximate our estimated accruals for loss contingencies. Future potential costs pertaining to UPRR's claims and the outcome of the UPRR litigation could result in a material adverse effect on our results of operations, financial condition, and cash flows.

As a result of the preliminary status of the litigation and the uncertainty of any potential judgment, an estimate of any additional loss, or a range of loss, associated with this litigation cannot be made based upon currently available information.

Other Legal Matters

In September 2015, the Company was notified of a collective action complaint by current and former test and inspection services employees to recover unpaid overtime wages and other damages under the Fair Labor Standards Act. The parties commenced court-ordered mediation on October 17, 2016. In December 2016, the Company reached an agreement in principle to settle the claim for \$900 and no admission of liability, subject to negotiation of a settlement agreement and approval by the court, which is expected to occur in the first half of 2017. For the year ended December 31, 2016, the Company recorded within "Selling and administrative expenses" in the Company's Tubular and Energy Services segment a pre-tax charge of approximately \$900 related to the anticipated settlement of this claim.

In December 2016, the Company recorded a pre-tax warranty charge within "Cost of Goods Sold" within its Rail Products and Services segment of approximately \$1,224 with respect to allegedly defective products provided in connection with a transit project. The Company intends to pursue recovery through its supply chain with respect to product cost and labor charges.

The Company is also subject to other legal proceedings and claims that arise in the ordinary course of its business. The amounts currently reserved are immaterial to our financial position and liquidity and the estimate of additional loss exposure is immaterial to our results of operations.

Environmental Matters

The Company is subject to national, state, foreign, and/or local laws and regulations relating to the protection of the environment. The Company is monitoring its potential environmental exposure related to current and former facilities. The Company's efforts to comply with environmental regulations may have an adverse effect on its future earnings. In the opinion of management, compliance with the present environmental protection laws will not have a material adverse effect on the financial condition, results of operations, cash flows, competitive position, or capital expenditures of the Company.

The following table sets forth the Company's undiscounted environmental obligation:

| | Environmental liability |
|--|--------------------------------|
| Balance at December 31, 2015 | \$6,640 |
| Additions to environmental obligations | 379 |
| Environmental obligations utilized | (749) |
| Balance at December 31, 2016 | \$6,270 |

Note 20.

Other Income

The following table summarizes the Company's other income for the three years ended December 31, 2016, 2015, and 2014.

| | 2016 | 2015 | 2014 |
|--|------------------|-----------|----------------|
| Gain on Tucson, AZ asset sale (a) | \$ — | \$(2,279) | \$ — |
| Foreign currency losses (gains) | 12 | (1,616) | (422) |
| Remeasurement gain on equity method investment (b) | _ | (580) | _ |
| Legal settlement gain (c) | _ | (460) | _ |
| Other | (1,535) | (650) | (256) |
| | <u>\$(1,523)</u> | \$(5,585) | <u>\$(678)</u> |

- a) On December 23, 2015, the Company sold certain assets related to the former Tucson, AZ precast concrete tie facility for \$2,750 resulting in a pre-tax gain on sale of \$2,279.
- b) On November 23, 2015, the Company acquired the remaining 75% of shares of Tew Plus resulting in a gain of \$580, which is recorded within other income as of December 31, 2015. The gain is included in equity loss (income) and remeasurement gain within the Consolidated Statements of Cash Flows.
- c) During the fourth quarter of 2015 the Company received \$460 from the Steel Antitrust Settlement Fund related to a claim regarding steel purchased by the Company between 2005 and 2007.

Note 21.

Quarterly Financial Information (Unaudited)

As more fully described in Note 3, "Acquisitions," the Company acquired Tew, Tew Plus, and IOS during 2015. The results of the subsidiary's operations are included from the acquisition dates.

Quarterly financial information for the years ended December 31, 2016 and 2015 is presented below:

| | 2016 | | | | |
|---------------------------------|------------------|-----------------------|----------------------|-----------------------|--|
| | First Quarter | Second Quarter (1) | Third Quarter (2) | Fourth Quarter (3) | |
| Net sales | \$126,310 | \$135,994 | \$114,644 | \$106,566 | |
| Gross profit | \$ 23,960 | \$ 27,813 | \$ 19,803 | \$ 18,779 | |
| Net loss | \$ (2,832) | \$ (91,996) | \$ (5,982) | \$ (40,851) | |
| Basic loss per common share | \$ (0.28) | \$ (8.96) | \$ (0.58) | \$ (3.97) | |
| Diluted loss per common share | \$ (0.28) | \$ (8.96) | \$ (0.58) | \$ (3.97) | |
| Dividends paid per common share | \$ 0.04 | \$ 0.04 | \$ 0.04 | \$ — | |

Differences between the sum of quarterly results and the Consolidated Statements of Operations are due to rounding.

(1) - Second quarter 2016 includes \$128,938 impairment of assets related to the Chemtec, Protective Coatings, IOS and Rail Technologies product groups.

- (2) Third quarter 2016 includes \$6,946 related to the finalization of the impairment analysis of the Chemtec and Rail Technologies product groups.
- (3) Fourth quarter 2016 includes deferred U.S. income taxes and foreign withholding taxes of \$7,932 on unremitted foreign earnings and a valuation allowance of \$29,719 against deferred tax assets.

| | 2015 | | | | | | | |
|--|------------|--------------|-----|-------------------|------|--------------------|-----|---------------------|
| | Fii Qua | rst rter_ | | Second Quarter | | Third arter (1) | | Fourth arter (2) |
| Net sales | \$137 | ,907 | \$1 | 71,419 | \$1 | 76,059 | \$1 | 39,138 |
| Gross profit | \$ 30 | ,653 | \$ | 37,089 | \$: | 36,038 | \$ | 29,872 |
| Net income (loss) | \$ 4 | ,285 | \$ | 5,362 | \$ (| 57,422) | \$ | 3,328 |
| Basic earnings (loss) per common share | \$ | 0.42 | \$ | 0.52 | \$ | (5.60) | \$ | 0.33 |
| Diluted earnings (loss) per common share | \$ | 0.41 | \$ | 0.52 | \$ | (5.60) | \$ | 0.32 |
| Dividends paid per common share | \$ | 0.04 | \$ | 0.04 | \$ | 0.04 | \$ | 0.04 |

- (1) Third quarter 2015 includes \$80,337 impairment of goodwill related to the IOS and Chemtec reporting units.
- (2) Fourth quarter 2015 includes \$2,279 pre-tax gain on sale of Tucson, AZ concrete tie facility.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

L.B. Foster Company carried out an evaluation, under the supervision and with the participation of the Company's management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rule 13a–15(e) under the Securities Exchange Act of 1934, as amended ("the Exchange Act")) as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective at the end of the period covered by this report.

Managements' Report on Internal Control Over Financial Reporting

The management of L.B. Foster Company is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a–15(f). L.B. Foster Company's internal control system is designed to provide reasonable assurance to the Company's management and Board of Directors regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States. All internal control systems, no matter how well designed, have inherent limitations. Accordingly, even effective controls can provide only reasonable assurance with respect to financial statement preparation and presentation. There were no significant changes in internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that occurred during the fourth quarter of 2016 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

L.B. Foster Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2016. In making this assessment, management used criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control-Integrated Framework* (2013 Framework). Based on this assessment, management concluded that the Company maintained effective internal control over financial reporting at December 31, 2016.

Ernst & Young LLP, the independent registered public accounting firm that also audited the Company's consolidated financial statements has issued an attestation report on the Company's internal control over financial reporting. Ernst & Young's attestation report on the Company's internal control over financial reporting appears in Part II, Item 8 of this Annual Report on Form 10-K and is incorporated herein by reference.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of L.B. Foster Company and Subsidiaries

We have audited L.B. Foster Company and Subsidiaries' internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). L.B. Foster Company and Subsidiaries' management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Managements' Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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

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

In our opinion, L.B. Foster Company and Subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of L.B. Foster Company and Subsidiaries, as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2016 of L.B. Foster Company and Subsidiaries and our report dated March 8, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Pittsburgh, Pennsylvania March 8, 2017

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

The information required by this Item regarding the directors of the Company is incorporated herein by reference to the information included in the Company's proxy statement for the 2017 annual meeting of stockholders (the "Proxy Statement") under the caption "Election of Directors."

The information required by this Item regarding the executive officers of the Company is set forth in Part I of this Annual Report on Form 10-K under the caption "Executive Officers of the Registrant" and is incorporated herein by reference.

The information required by this Item regarding compliance with Section 16(a) of the Exchange Act is incorporated herein by reference to the information included in the Proxy Statement under the caption "Section 16(a) Beneficial Reporting Compliance."

The information required by this Item regarding our Code of Ethics is set forth in Part I of this Annual Report on Form 10-K under the caption "Code of Ethics" and is incorporated herein by reference.

The information required by this Item regarding our audit committee and the audit committee financial expert(s) is incorporated herein by reference to the information included in the Proxy Statement under the caption "Corporate Governance — Board Committees — Audit Committee."

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item regarding executive compensation is incorporated herein by reference to the information included in the Proxy Statement under the captions "Director Compensation—2016," "Executive Compensation," "Summary Compensation Table (2016, 2015, and 2014)," "Grants of Plan-Based Awards in 2016," "Outstanding Equity Awards At 2016 Fiscal Year-End," "2016 Options Exercises and Stock Vested Table," "2016 Nonqualified Deferred Compensation," "Change-In-Control," "Compensation Committee Interlocks and Insider Participation," and "Compensation Committee Report."

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item regarding the Company's equity compensation plans is set forth in Part II, Item 5 of this Annual Report on Form 10-K under the caption "Securities Authorized for Issuance Under Equity Compensation Plans" and is incorporated herein by reference.

The information required by this Item regarding the beneficial ownership of the Company is incorporated herein by reference to the information included in the Proxy Statement under the caption "Stock Ownership."

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item regarding transactions with related persons is incorporated herein by reference to the information included in the Proxy Statement under the caption "Corporate Governance — Transactions with Related Parties."

The information required by this Item regarding director independence is incorporated herein by reference to information included in the Proxy Statement under the caption "Corporate Governance — The Board, Board Meetings, Independence and Tenure."

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item regarding principal accountant fees and services is incorporated herein by reference to information included in the Proxy Statement under the caption "Independent Registered Public Accountants' Fees."

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

The following documents are filed as a part of this Report:

(a)(1). Financial Statements

The following Reports of Independent Registered Public Accounting Firm, consolidated financial statements, and accompanying notes are included in Item 8 of this Report:

Reports of Independent Registered Public Accounting Firm.

Consolidated Balance Sheets as of December 31, 2016 and 2015.

Consolidated Statements of Operations for the Years Ended December 31, 2016, 2015, and 2014.

Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2016, 2015, and 2014.

Consolidated Statements of Cash Flows for the Years Ended December 31, 2016, 2015, and 2014.

Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2016, 2015, and 2014.

Notes to Consolidated Financial Statements.

(a)(2). Financial Statement Schedule

Schedules for the Years Ended December 31, 2016, 2015, and 2014:

II – Valuation and Qualifying Accounts.

The remaining schedules are omitted because of the absence of conditions upon which they are required.

(a)(3). Exhibits

The Index to Exhibits immediately following the signature page is filed as part of this Annual Report on Form 10-K.

L. B. FOSTER COMPANY AND SUBSIDIARIES

SCHEDULE II VALUATION AND QUALIFYING ACCOUNTS FOR THE YEARS ENDED DECEMBER 31, 2016, 2015, AND 2014

| | Balance at Beginning of Year | Additions Charged to Costs and Expenses | Deductions (1) | Balance at End of Year |
|---|------------------------------------|--|----------------|------------------------------|
| 2016 | | | | |
| Deducted from assets to which they apply: | | | | |
| Allowance for doubtful accounts | <u>\$1,485</u> | \$ 982 | <u>\$1,050</u> | \$ 1,417 |
| Valuation allowance for deferred tax assets | <u>\$</u> | <u>\$29,719</u> | <u>\$</u> | \$29,719 |
| 2015 | | | | |
| Deducted from assets to which they apply: | | | | |
| Allowance for doubtful accounts | <u>\$1,036</u> | <u>\$ 1,113</u> | \$ 664 | \$ 1,485 |
| 2014 | | | | |
| Deducted from assets to which they apply: | | | | |
| Allowance for doubtful accounts | \$1,099 | \$ 462 | \$ 525 | \$ 1,036 |

⁽¹⁾ Notes and accounts receivable written off as uncollectible.

ITEM 16. FORM 10-K SUMMARY

We may voluntarily include a summary of information required by Annual Report on Form 10-K under this Item 16. We have elected not to include such summary information.

SIGNATURES

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

L.B. FOSTER COMPANY

Date: March 8, 2017 By: /s/ Robert P. Bauer

(Robert P. Bauer, President and Chief Executive Officer)

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

| Name | Position Position | Date |
|---|--|---------------|
| By: /s/ Lee B. Foster II (Lee B. Foster II) | Chairman of the Board and Director | March 8, 2017 |
| By: /s/ Robert P. Bauer (Robert P. Bauer) | President, Chief Executive Officer and Director | March 8, 2017 |
| By: /s/ Dirk Jungé (Dirk Jungé) | Director | March 8, 2017 |
| By: /s/ Diane B. Owen (Diane B. Owen) | Director | March 8, 2017 |
| By: /s/ Robert S. Purgason (Robert S. Purgason) | Director | March 8, 2017 |
| By: /s/ William H. Rackoff (William H. Rackoff) | Director | March 8, 2017 |
| By: /s/ Suzanne B. Rowland (Suzanne B. Rowland) | Director | March 8, 2017 |
| By: /s/ Bradley S. Vizi (Bradley S. Vizi) | Director | March 8, 2017 |
| By: /s/ David J. Russo (David J. Russo) | Senior Vice President, Chief Financial Officer and Treasurer | March 8, 2017 |
| By: /s/ Christopher T. Scanlon (Christopher T. Scanlon) | Controller and Chief Accounting Officer | March 8, 2017 |

INDEX TO EXHIBITS

All exhibits are incorporated herein by reference:

- Agreement and Plan of Merger dated March 13, 2015 among IOS Holdings, Inc., L.B. Foster Company, L.B. Foster Raven Merger Company and IOS Holding Company LLC, solely in its capacity as the representative of IOS's shareholders is incorporated herein by reference to Exhibit 2.1 to the Current Report on Form 8-K/A, File No. 0-10436, filed on March 16, 2015.
- Restated Certificate of Incorporation of the Company, incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003, File No. 0-10436, filed on May 13, 2003.
- 3.2 Bylaws of the Company, incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2012, File No. 0-10436, filed on November 8, 2012.
- 4.1 Rights Agreement, amended and restated as of November 19, 2012, between L.B. Foster Company and American Stock Transfer & Trust Company, including the form of Rights Certificate and the Summary of Rights attached thereto, incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, File No. 0-10436, filed on November 20, 2012.
- \$335,000,000 Amended and Restated Credit Agreement dated March 13, 2015, between Registrant and PNC Bank, N.A., Bank of America, N.A., Wells Fargo Bank, N.A., Citizens Bank of Pennsylvania, and Branch Banking and Trust Company is incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K/A, File No. 0-10436, filed on March 16, 2015.
- First Amendment dated June 29, 2016 to Amended and Restated Credit Agreement dated March 13, 2015, between Registrant and PNC Bank N.A., Bank of America, N.A., Wells Fargo Bank, N.A., Citizens Bank of Pennsylvania, and Branch Banking and Trust Company including forms of Security Agreement and Pledge Agreement is incorporated by herein by reference to Exhibit 10.1 to the Current Report on form 8-K, File No. 0-10436, filed on July 1, 2016.
- Second Amendment dated November 7, 2016 to the Second Amended and Restated Credit Agreement dated March 13, 2015, and as amended by the First Amendment dated June 29, 2016, among Registrant and PNC Bank, N.A., Bank of America, N.A., Wells Fargo Bank, N.A., Citizens Bank of Pennsylvania, and Branch Banking and Trust Company is incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K/A, File No. 0-10436, filed on November 8, 2016.
- 10.4 ** Employment Agreement with Robert P. Bauer, dated January 18, 2012, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, File No. 0-10436, filed on January 23, 2012.
- 10.5 ** 2006 Omnibus Incentive Plan, as amended and restated on May 25, 2016, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K, File No. 0-10436, filed on May 27, 2016.
- 10.6 **

 Amended Form of Restricted Stock Agreement (for grants made on or after December 23, 2011), incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, File No. 0-10436, filed on December 21, 2011.
- 10.7 ** Restricted Stock Agreement between Registrant and David J. Russo dated May 28, 2010, incorporated by reference to Exhibit 10.62 to the Company's Current Report on Form 8-K, File No. 0-10436, filed on June 1, 2010.
- Form of Performance Share Unit Award Agreement (2013), incorporated by reference to Exhibit 10.13.2 to the Company's Annual Report on Form 10-K for the year ended December 31, 2012, File No. 0-10436, filed on March 8, 2013.
- 10.9 **
 Form of Performance Share Unit Award Agreement (2014), incorporated by reference to Exhibit 10.10.3 to the Company's Annual Report on Form 10-K for the year ended December 31, 2013, File No. 0-10436, filed on February 27, 2014

- 10.10 ** Executive Annual Incentive Compensation Plan (as Amended and Restated), incorporated by reference to Exhibit A to the Company's Definitive Proxy Statement on Schedule 14A, filed on April 12, 2013.
- 10.11 ** Amended and Restated Key Employee Separation Plan, incorporated by reference to Exhibit 10.15 to the Company's Annual Report on Form 10-K for the year ended December 31, 2012, File No. 0-10436, filed on March 8, 2013.
- 10.12 ** Restated Supplemental Executive Retirement Plan, incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, File No. 0-10436, filed on August 9, 2012.
- 10.13 ** Medical Reimbursement Plan (MRP1) effective January 1, 2006, incorporated by reference to Exhibit 10.45 to the Company's Annual Report on Form 10-K for the year ended December 31, 2010, File No. 0-10436, filed on March 16, 2011.
- 10.14 ** Medical Reimbursement Plan (MRP2) effective January 1, 2006, incorporated by reference to Exhibit 10.45.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2010, File No. 0-10436, filed on March 16, 2011.
- 10.15 **

 Amendments to MRP2, incorporated by reference to Exhibit 10.45.2 to the Company's Annual Report on Form 10-K for the year ended December 31, 2010, File No. 0-10436, filed on March 16, 2011.
- 10.16 ** Leased Vehicle Plan as amended and restated on September 1, 2007, incorporated by reference to Exhibit 10.46 to the Company's Annual Report on Form 10-K for the year ended December 31, 2010, File No. 0-10436, filed on March 16, 2011.
- 10.17 ** 2014 Executive Annual Incentive Compensation Plan, incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014, File No. 0-10436, filed May 5, 2014.
- 10.18 ** Form of 2014 Restricted Stock Agreement, incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014, File No. 0-10436, filed May 5, 2014.
- 10.19 **

 Retirement and Consulting Agreement and Non-Competition and Non-Solicitation Agreement dated June 20, 2014 between L.B. Foster Company and Donald L. Foster, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, File No. 0-10436, filed on June 20, 2014.
- 10.20 ** Release Agreement dated June 20, 2014 between L.B. Foster Company and Donald L. Foster, incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, File No. 0-10436, filed on June 20, 2014.
- 10.21 ** 2015 Executive Annual Incentive Compensation Plan, incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, filed May 6, 2015.
- 10.22 ** 2015 Form of Restricted Stock Agreement, incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, filed May 6, 2015.
- 10.23 ** 2015 Performance Share Unit Program (2015-2017), incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, filed May 6, 2015.
- 10.24 ** 2016 Long Term Incentive Performance Share Unit Program (2016-2018), incorporated by reference to Exhibit 10.23 to the Company's Annual Report Form 10-K for the year ended December 31, 2015, File No. 0-10436, filed on March 1, 2016.
- 10.25 ** 2016 Form of Performance Share Unit Award Agreement (2016-2018), incorporated by reference to Exhibit 10.23 to the Company's Annual Report Form 10-K for the year ended December 31, 2015, File No. 0-10436, filed on March 1, 2016.

- 10.26 ** 2016 Form of Restricted Stock Award Agreement (2016), incorporated by reference to Exhibit 10.23 to the Company's Annual Report Form 10-K for the year ended December 31, 2015, File No. 0-10436, filed on March 1, 2016.
- 10.27 ** 2016 Executive Annual Incentive Compensation Plan, incorporated by reference to Exhibit 10.23 to the Company's Annual Report Form 10-K for the year ended December 31, 2015, File No. 0-10436, filed on March 1, 2016.
- 10.28 ** 2016 Free Cash Flow Program, incorporated by reference to Exhibit 10.23 to the Company's Annual Report Form 10-K for the year ended December 31, 2015, File No. 0-10436, filed on March 1, 2016.
- Agreement dated February 12, 2016, among L. B. Foster Company, Legion Partners, L.P. I, Legion Partners, L.P. II, Legion Partners Special Opportunities, L.P. II, Legion Partners Holdings, LLC, Legion Partners Asset Management, LLC, Legion Partners Holdings, LLC, Bradley S. Vizi, Christopher S. Kiper, and Raymond White, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, File No. 0-10436, filed on February 17, 2016.
- Confidentiality Agreement dated February 12, 2016, among L.B. Foster Company, Legion Partners, L.P. I, Legion Partners, L.P. II, Legion Partners Special Opportunities, L.P. II, Legion Partners Holdings, LLC, Legion Partners Asset Management, LLC, Legion Partners Holdings, LLC, Bradley S. Vizi, Christopher S. Kiper, Raymond White, David A. Katz, and Justin Albert incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, File No. 0-10436, filed on February 17, 2016
- *10.31 ** 2017 Executive Annual Incentive Compensation Plan.
- *10.32 ** Form of Restricted Stock Award Agreement (2017).
- *10.33 ** Long Term Incentive Performance Share Unit Program (2017-2019).
- *10.34 ** Form of Performance Share Unit Award Agreement (2017-2019).
- *21 List of Subsidiaries
- *23 Consent of Independent Registered Public Accounting Firm.
- *31.1 Certification of Chief Executive Officer under Section 302 of the Sarbanes-Oxley Act of 2002.
- *31.2 Certification of Chief Financial Officer under Section 302 of the Sarbanes-Oxley Act of 2002.
- *32.0 Certification of Chief Executive Officer and Chief Financial Officer under Section 906 of the Sarbanes-Oxley Act of 2002.
- *101.INS XBRL Instance Document.
- *101.SCH XBRL Taxonomy Extension Schema Document.
- *101.CAL XBRL Taxonomy Extension Calculation Linkbase Document.
- *101.DEF XBRL Taxonomy Extension Definition Linkbase Document.
- *101.LAB XBRL Taxonomy Extension Label Linkbase Document.
- *101.PRE XBRL Taxonomy Extension Presentation Linkbase Document.
- * Exhibits are filed herewith.
- ** Exhibit represents a management contract or compensatory plan, contract or arrangement required to be filed as Exhibits to this Annual Report on Form 10-K.

Certification under Section 302 of the Sarbanes-Oxley Act of 2002

I, Robert P. Bauer, certify that:

- 1. I have reviewed this Annual Report on Form 10-K of L. B. Foster Company;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 8, 2017 /s/ Robert P. Bauer

Name: Robert P. Bauer

Title: President and Chief Executive Officer

Certification under Section 302 of the Sarbanes-Oxley Act of 2002

I, David J. Russo, certify that:

- 1. I have reviewed this Annual Report on Form 10-K of L. B. Foster Company;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 8, 2017 /s/ David J. Russo

Name: David J. Russo Title: Senior Vice President,

Chief Financial Officer and Treasurer

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

In connection with the Annual Report of L. B. Foster Company (the "Company") on Form 10-K for the period ended December 31, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned certify pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in this Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 8, 2017 /s/ Robert P. Bauer

Name: Robert P. Bauer

Title: President and Chief Executive Officer

Date: March 8, 2017 /s/ David J. Russo

Name: David J. Russo

Title: Senior Vice President, Chief Financial Officer

and Treasurer

OFFICERS

Robert P. Bauer

President and Chief Executive Officer

Steven R. Burgess

Vice President, Concrete Products

Patrick J. Guinee

Vice President, General Counsel and Corporate Secretary

John F. Kasel

Senior Vice President, Rail Business

Alex Kosmala

Senior Vice President, Energy and Construction

Brian H. Kelly

Vice President, Human Resources and Administration

Gregory W. Lippard

Vice President, Rail Product Sales

David J. Russo

Senior Vice President, Chief Financial Officer and Treasurer*

Christopher T. Scanlon

Controller, Chief Accounting Officer

SHAREHOLDER INFORMATION

Annual Meeting

The annual meeting of shareholders will be held at the Duquesne Club, 325 Sixth Avenue, Pittsburgh, PA 15222 on May 24, 2017, at 8:30 AM EDT.

Form 10-K

A copy of the company's Annual Report on Form 10-K to the Securities and Exchange Commission is available upon request from L.B. Foster's Investor Relations Department or from the Company website at www.lbfoster.com.

Stock Trading

L.B. Foster Company's common stock is traded on NASDAQ. The ticker symbol is FSTR.

Transfer Agent: Broadridge Financial Solutions, Inc.

*Mr. Russo resigned effective April 21, 2017.

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BOARD OF DIRECTORS

Lee B. Foster II

Chairman of the Board L.B. Foster Company

Robert P. Bauer

President and Chief Executive Officer L.B. Foster Company

Dirk Jungé

Chairman

Pitcairn Company

Diane B. Owen

Former Senior Vice President – Corporate Audit H.J. Heinz Company

Robert S. Purgason

Senior Managing Director, Kayne Anderson Capital Advisors

Suzanne B. Rowland

Group Vice President, Industrial Specialties, Ashland. LLC.

William H. Rackoff

President and Chief Executive Officer ASKO, Inc.

Bradley S. Vizi

Founder and Managing Director Legion Partners Asset Management, LLC.

CORPORATE HEADQUARTERS

415 Holiday Drive Pittsburgh, PA 15220 412.928.3417 800.255.4500

www.lbfoster.com



TRANSPORTATION and ENERGY INFRASTRUCTURE PRODUCTS and SERVICES

