GRAFTECH INTERNATIONAL LTD
Form 10-K
March 02, 2015
Table of Contents

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

FORM 10-K

(Mark One)
x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
for the fiscal year ended December 31, 2014
OR
¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
for the transition period from to
Commission file number: 1-13888
GRAFTECH INTERNATIONAL LTD.
(Exact name of registrant as specified in its charter)

Delaware	27-2496053
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
Suite 300 Park Center Drive I 6100 Oak Tree Boulevard Independence, Ohio	44131 (Zip Code)

Registrant's telephone number, including area code: (216) 676-2000

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

Title of each class	Name of each exchange on which registered
Common stock, par value $.01 per share	New York Stock Exchange

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

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨

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

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

Large Accelerated Filer x Accelerated Filer ¨ Non-Accelerated Filer ¨ Smaller reporting company ¨
Indicate by check mark whether the registrant is a shell company (as defined in Exchange Act Rule 12b-2).
Yes ¨ No x
The aggregate market value of our outstanding common stock held by non-affiliates, computed by reference to the closing price of our common stock on June 28, 2013, was approximately $1,346 million. On January 31, 2015, 136,817,315 shares of our common stock were outstanding.
DOCUMENTS INCORPORATED BY REFERENCE
Certain information required under Part III is incorporated by reference from the GrafTech International Ltd. Proxy Statement for the Annual Meeting of Stockholders which will be filed on or before April 30, 2015.

Table of Contents

Table of Contents

Table of Contents

Table of Contents

PART I

Preliminary Notes

Important Terms. We use the following terms to identify various matters. These terms help to simplify the presentation of information in this Report.
“Common stock” means GTI common stock, par value $.01 per share.
“Credit Agreement” refers to the credit agreement providing for our senior secured credit facilities, dated as of October 7, 2011, as amended and further restated on April 20, 2012, pursuant to the First Amendment, dated March 26, 2012, as amended as of October 29, 2012, as amended April 23, 2014 and as amended November 19, 2014, as further amended and/or restated at the relevant time. “Revolving Facility” refers to the revolving credit facility provided under the Credit Agreement, at the relevant time.
“GrafTech Finance” refers to GrafTech Finance Inc. only. GrafTech Finance is an indirect wholly-owned, special purpose finance subsidiary of GTI and the borrower under the Revolving Facility.
“GrafTech Global” refers to GrafTech Global Enterprises Inc. only. GrafTech Global is an indirect wholly-owned subsidiary of GTI and the direct or indirect holding company for all of our operating subsidiaries. GrafTech Global is a guarantor of the Revolving Facility.
“GTI” refers to GrafTech International Ltd. only. GTI is our public parent company and the issuer of our publicly traded common stock registered under the Exchange Act and listed on the NYSE. GTI is a guarantor of the Revolving Facility.
“Indenture” refers to the indenture dated November 20, 2012, under which the Senior Notes were issued.
“MTM Adjustment” refers to our accounting policy regarding pension and other postretirement benefits plans (“OPEB”) whereby we immediately recognize the change in the fair value of plan assets and net actuarial gains and losses annually in the fourth quarter of each year (referred to as “mark-to-market”).
“Senior Notes” means our 6.375% senior notes due 2020 issued on November 20, 2012.
“Senior Subordinated Notes” means our senior subordinated promissory notes issued on November 30, 2010, in connection with the Seadrift Coke L.P. (“Seadrift”) and C/G Electrodes LLC (“C/G”) acquisitions, for an aggregate total face amount of $200 million. These senior subordinated notes are non-interest bearing and will mature in 2015. Because the Senior Subordinated Notes are non-interest bearing, we were required to record them at their present value (determined using an interest rate of 7.00%).
“Subsidiaries” refers to those companies that, at the relevant time, are or were majority owned or wholly-owned directly or indirectly by GTI or its predecessors to the extent that those predecessors’ activities related to the graphite and carbon business.
“We,” "GrafTech," “us” or “our” refers to GTI and its subsidiaries collectively or, if the context so requires, GTI, GrafTech Global, GrafTech Finance or GrafTech International Holdings Inc., individually.
Presentation of Financial, Market and Legal Data. References to cost in the context of our low cost advantages and strategies do not include the impact of special charges, expenses or credits, such as those related to investigations, lawsuits, claims, restructurings or impairments, or the impact of changes in accounting principles.
Unless otherwise noted, when we refer to “dollars”, we mean U.S. dollars. Unless otherwise noted, all dollars are presented in thousands.
References to spot prices for graphite electrodes mean prices under individual purchase orders (not part of an annual or other extended purchase arrangement) for near term delivery for standard size graphite electrodes used in large electric arc steel melting furnaces (sometimes called “melters” or “melter applications”) as distinct from, for example, a ladle furnace or a furnace producing non-ferrous metals.
Neither any statement made in this Report nor any charge taken by us relating to any legal proceedings constitutes an admission as to any wrongdoing.
Unless otherwise noted, market and market share data in this Report are our own estimates. Market data relating to the steel, electronics, semiconductor, solar, thermal management, transportation, petrochemical and other metals industries, our general expectations concerning such industries and our market position and market share within such

industries, both domestically and internationally, are derived from trade publications relating to those industries and other industry sources as well as assumptions made by us, based on such data and our knowledge of

Table of Contents

such industries. Market and market share data relating to the graphite and carbon industry as well as information relating to our competitors, our general expectations concerning such industry and our market position and market share within such industry, both domestically and internationally, are derived from the sources described above and public filings, press releases and other public documents of our competitors as well as assumptions made by us, based on such data and our knowledge of such industry. Such data are used to provide a gage of our competitiveness against our competitors and are intended to describe things such as customer or potential customer bases, industries, or subsets of the industries in which we compete and intermediate or end use applications of the product or technology involved. Similarly, product descriptions are used to help understand how we develop, produce, source, manage, market, sell, or account for products. Unless otherwise noted, references to "market share" are based on sales volumes for the relevant year market data and product descriptions are not intended to define markets or products from an antitrust, trade regulation, trade remedy, or other regulatory purpose. Our estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed under "Risk Factors-Risks Relating to Us" and "Risk Factors-Forward Looking Statements" in this Report. We cannot guarantee the accuracy or completeness of this market and market share data and have not independently verified it. None of the sources mentioned above has consented to the disclosure or use of data in this Report.

The GRAFTECH logo, GRAFCELL®, GRAFOAM®, GRAFIHX™, eGraf® and HOTPRESSED™ are our trademarks and trade names used in this report. This Report also contains trademarks and trade names belonging to other parties.

We make available, free of charge, on or through our web site, copies of our proxy statements, our annual reports on Form 10-K, our quarterly reports on Form 10-Q, our current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file them with, or furnish them to, the U.S. Securities and Exchange Commission ("SEC"). We maintain our website at http://www.graftech.com. The information contained on our web site is not part of this Report. The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers that file electronically. Please see http://www.sec.gov for more information.

We have a code of ethics (which we call our Code of Conduct and Ethics) that applies to our principal executive officer, principal financial officer, principal accounting officers and controller, and persons performing similar functions, as well as our other employees, and which is intended to comply, at a minimum, with the listing standards of the New York Stock Exchange ("NYSE") as well as the Sarbanes-Oxley Act of 2002 and the SEC rules adopted thereunder. A copy of our Code of Conduct and Ethics is available on our web site at http://www.graftech.com/getdoc/fd25921b-07b1-429f-86fa-397f0d0cb30d/Code-of-Conduct-and-Ethics.aspx. We intend to report timely on our website any disclosures concerning amendments or waivers of our Code of Conduct and Ethics that would otherwise require the filing of a Form 8-K with the SEC.

We also have corporate governance guidelines which is available on our website at http://www.graftech.com/getdoc/6b8a3b4d-967c-4bdd-ab04-ea0011de0c91/GRAFTECH-INTERNATIONAL-LTD-Corp-Gov-Guide.aspx as required by the NYSE.

Table of Contents

Item 1. Business

Introduction

Our vision is to enable customer leadership, better and faster than our competition, through the creation, innovation and manufacture of graphite and carbon material science-based solutions. We have over 125 years of experience in the research and development of graphite and carbon-based solutions and our intellectual property portfolio is extensive. Our business was founded in 1886 by the National Carbon Company.

We are a leading manufacturer of a broad range of high quality graphite electrodes, products essential to the production of electric arc furnace ("EAF") steel and various other ferrous and nonferrous metals. We also produce needle coke products, which are the primary raw material needed in the manufacture of graphite electrodes. We also manufacture carbon, graphite, and semi-graphite refractory products, which protect the walls of blast furnaces and submerged arc furnaces. We are one of the leading manufacturers of high quality flexible graphite products, enabling thermal management solutions for the electronics industry. We are one of the largest manufacturers and providers of advanced graphite and carbon materials used in the transportation, solar and oil and gas exploration industries.

We currently manufacture our products in 18 manufacturing facilities strategically located on four continents. We believe our Industrial Materials network has the largest manufacturing capacity and the lowest manufacturing cost structure of all of our major competitors and delivers the highest-level quality products. We currently have the operating capability, depending on product demand and mix, to manufacture approximately 195,000 metric tons of graphite electrodes. During 2013 and 2014, we announced rationalization plans designed to significantly improve our competitiveness, allow us to better serve customers and position our Industrial Materials and Engineered Solutions businesses for success. As a result we have reduced our manufacturing facilities in both businesses, reduced graphite electrode capacity and exited certain product lines in the Engineered Solutions business. Additionally we initiated changes to the Company's operating and management structure in order to streamline, simplify and decentralize the organization, resulting in savings within our corporate functions. These strategic initiatives addressed three key areas: profitability, cash flow and future growth.

We have over 125 years of experience in the research and development of graphite and carbon based solutions and our intellectual property portfolio is extensive. We hold approximately 713 issued and pending patent applications and have been the recipient of seven R&D 100 Awards in the past 12 years. Our technological capabilities include developing products with superior thermal, electrical and physical characteristics that provide a differentiated advantage.

Products. We have seven major product categories: graphite electrodes, refractory products, needle coke products, advanced graphite materials, advanced composite materials, advanced electronics technologies, and advanced materials.

Reportable Segments. Our businesses are reported in the following reportable segments: Industrial Materials, which include graphite electrodes, refractory products and needle coke products; and Engineered Solutions, which includes advanced graphite materials, advanced composite materials, advanced electronics technologies and advanced materials.

Industrial Materials. Our Industrial Materials segment manufactures and delivers high quality graphite electrodes, refractory products and needle coke products.

We are a leading manufacturer of a broad range of high quality graphite electrodes, refractory products, and needle coke products. Electrodes are key components of the conductive power systems used to produce steel and non-ferrous metals. Approximately 70% of our graphite electrodes sold are consumed in the EAF steel melting process, the steel making technology used by all "mini-mills," typically at a rate of one graphite electrode every eight to ten operating hours. We believe that mini-mills constitute the higher long-term growth sector of the steel industry and that there is currently no commercially viable substitute for graphite electrodes in EAF steel making. The remaining approximately 30% of electrodes sold are primarily used in various other ferrous and non-ferrous melting applications, including steel refining (ladle furnace operations for both EAF and basic oxygen furnace steel production), fused materials, chemical processing, and alloy metals.

GrafTech is also a leading global supplier of carbon, semi-graphitic and graphite refractory hearth linings for blast and submerged arc furnaces used to produce iron and ferroalloys. Carbon and graphite refractory products are used to protect the walls and bottoms of these furnaces due to their ability to withstand extreme conditions, thermally and mechanically. Among the major refractory product suppliers, GrafTech has one of the most complete offerings, including a full range of brick, block, ramming paste, cement and grout products.

Table of Contents

Additionally, through our Seadrift subsidiary, we are a producer of petroleum needle coke. Needle coke is the key raw material in the manufacture of the graphite electrodes used in melting operations. Petroleum needle coke, a crystalline form of carbon derived from decant oil, is used in the production of graphite electrodes. Our Needle coke production allows us to be the only vertically integrated graphite electrode manufacturer. We believe that Seadrift is the world's second largest petroleum-based needle coke producer and assuming normal annual maintenance, a product mix of only normal premium petroleum needle coke production and related by-products, the annual capacity is approximately 140,000 metric tons. Seadrift currently provides a substantial portion of our needle coke requirements.

Engineered Solutions. The Engineered Solutions segment includes advanced graphite materials, advanced composite materials, advanced electronics technologies and advanced materials. Advanced graphite materials are highly engineered synthetic graphite products used in many areas due to their unique properties and the ability to tailor them to specific solutions. These products are used in transportation, alternative energy, metallurgical, chemical, oil and gas exploration and various other industries. Advanced composite materials are highly engineered carbon products that are woven into various shapes to primarily support the aerospace and defense industries. Advanced electronics technologies products consist of electronic thermal management solutions, fuel cell components, and sealing materials. Advanced materials use carbon and graphite powders as components or additives in a variety of industries, including metallurgical processing, battery and fuel cell components, and polymer additives.

Industrial Materials Segment

Our Industrial Materials segment, which had net sales of $1,026 million in 2012, $909 million in 2013 and $840 million in 2014 manufactures and delivers high quality graphite electrodes, refractory products and needle coke products, as well as provides customer technical services. Industrial Materials sales represented approximately 82%, 78% and 77% of consolidated net sales for 2012, 2013, and 2014, respectively. We estimate that the worldwide sales for products serviced by our Industrial Materials segment was approximately $6 billion in 2013 and approximately $5 billion in 2014. The decline in worldwide sales is primarily the result of lower prices.

Graphite Electrode Products. Graphite electrodes are consumed primarily in EAF steel production, the steel making technology used by all “mini-mills.” Graphite electrodes are also consumed in the refining of steel in ladle furnaces and in other smelting processes such as production of titanium dioxide.

Electrodes act as conductors of electricity in the furnace, generating sufficient heat to melt scrap metal, iron ore or other raw materials used to produce steel or other metals. The electrodes are consumed in the course of that production.

Electric arc furnaces operate using either alternating electric current or direct electric current. The vast majority of electric arc furnaces use alternating current. Each of these alternating current furnaces typically uses nine electrodes (in three columns of three electrodes each) at one time. The other electric arc furnaces, which use direct current, typically use one column of three electrodes. The size of the electrodes varies depending on the size of the furnace, the size of the furnace’s electric transformer and the planned productivity of the furnace. In a typical furnace using alternating current and operating at a typical number of production cycles per day, one of the nine electrodes is fully consumed (requiring the addition of a new electrode), on average, every eight to ten operating hours. The actual rate of consumption and addition of electrodes for a particular furnace depends primarily on the efficiency and productivity of the furnace. Therefore, demand for graphite electrodes is directly related to the amount and efficiency of EAF steel production.

EAF steel production requires significant heat (as high as 5,000° F) to melt the raw materials in the furnace, primarily scrap metal. Heat is generated as electricity (as much as 150,000 amps) passes through the electrodes and creates an electric arc between the electrodes and the raw materials.

Graphite electrodes are currently the only known commercially available products that have the high levels of electrical conductivity and the capability of sustaining the high levels of heat generated in an electric arc furnace producing steel. Therefore, graphite electrodes are essential to the production of steel in electric arc furnaces. We believe there is currently no commercially viable substitute for graphite electrodes in EAF steel making. We estimate that, on average, the cost of graphite electrodes represents about 2% of the total cost of producing steel in a typical electric arc furnace.

EAF steel production was estimated to be approximately 462 million metric tons in 2014, representing approximately 28% of the world's steel production. The World Steel Association's utilization rate for the total steel market was 78% in 2013 and 76% in 2014 and EAF steel capacity utilization rates typically follow the trends of the overall steel industry.

Relationship Between Graphite Electrode Demand and EAF Steel Production. The improved efficiency of electric arc furnaces has resulted in a decrease in the average rate of consumption of graphite electrodes per metric ton of steel produced in electric arc furnaces (called “specific consumption”). We estimate that the average EAF melter specific consumption is approximately 1.7 kilograms of graphite electrodes per metric ton produced.

Over the long term, specific consumption will continue to decrease at a gradual pace, as the EAF steel makers investment cost (relative to the benefits) increases to achieve further efficiencies in specific consumption. Another contributing factor is the ongoing electrode quality improvements of graphite electrode manufacturers.

We further believe that the rate of decline in the future will be impacted by the addition of modern EAF steel making capacity which tends to have lower specific consumption than older electric arc furnaces. To the extent that this new capacity replaces old capacity, it has the effect of accelerating the reduction in industry wide specific consumption due to the efficiency of new electric arc furnaces relative to the old. However, to the extent that this new capacity increases industry wide EAF steel production capacity and that capacity is utilized, it creates additional demand for graphite electrodes.

Over the long term, graphite electrode demand is estimated to grow at an average annual net growth rate of approximately 1%-2%, based on the anticipated growth of EAF steel production (average historical growth rate of 1%-2%), partially offset by the decline in future specific consumption.

Production Capacity. We believe that the worldwide total graphite electrode manufacturing capacity was approximately 1.94 million metric tons for 2012 and 2013 and approximately 1.88 million metric tons for 2014. We believe that the graphite electrode industry manufacturing capacity utilization rate worldwide was approximately 69% for 2013 and 74% for 2014. We routinely update our estimates as more information, which can vary, becomes available, as stated capacities in some cases are effective capacity adjusted for production yields and product mix.

We have the capability, depending on product demand and mix, to manufacture approximately 195,000 metric tons of graphite electrodes during 2014. This production capacity is down approximately 60,000 metric tons from previous years due to our rationalization initiatives. See Note 2 to the Financial Statements for a discussion on these rationalization activities. As a result of our acquisition of Seadrift in November 2010, our graphite electrode production is vertically integrated. Seadrift currently provides a substantial portion of our needle coke requirements.

Refractory Products. We manufacture carbon and semi-graphite, HotPressed™ refractory bricks, as well as other graphite and carbon refractory blocks, all of which are used primarily for their durability in very demanding high temperature melting environments. Common applications are in blast furnaces and submerged arc furnaces for ferroalloy production include cooling courses in the hearth bottoms for heat distribution and removal, backup linings in hearth walls for improved heat transfer and lintels over copper coding plates where a single brick cannot span the cooling plate. Our refractories are especially suitable for the lower part of these furnaces, where refractory performance is the most critical to ensure high productivity and long campaign lives.

In manufacturing the HotPressed™ bricks, GrafTech uses a proprietary carbon making process. The raw material is heated in brick sized molds and high pressure is applied simultaneously. This results in bricks with very competitive properties for these melting applications produced in only minutes compared to the month required in the traditional block process. We believe that Graftech refractory solutions offer reliability and a safer working environment for iron and ferroalloy makers all around the world.

Petroleum Needle Coke and Coke Products. We produce petroleum needle coke which is the key raw material in the manufacture of graphite electrodes which are consumed in EAF steel production. Petroleum needle coke, a crystalline form of carbon derived from decant oil is used primarily in the production of graphite electrodes. We are one of three petroleum needle coke producers in the world and this backward integration reduces our reliance on other suppliers. Graphite electrode producers combine petroleum or pitch needle coke with pitch binders and other ingredients to form graphite electrodes.

Petroleum needle and pitch needle coke, relative to other varieties of coke, are distinguished by their needle-like structure and their quality, which is measured by the presence of impurities, principally sulfur, nitrogen and ash. The needle-like structure of petroleum needle and pitch needle coke creates expansion along the length of the electrode, rather than the width, which reduces the likelihood of fractures. Impurities reduce quality because they increase the coefficient of thermal expansion and electrical resistivity of the graphite electrode, which can lead to uneven expansion and a build-up of heat and cause the graphite electrode to oxidize rapidly and break. Petroleum needle and pitch needle coke are typically low in these impurities. In order to minimize fractures caused by disproportionate expansion over the width of an electrode, and minimize the effect of impurities, large-diameter graphite electrodes (18 inches to 32 inches) employed in high-intensity electric arc furnace applications are comprised almost exclusively of petroleum needle and pitch needle coke.

Table of Contents

Engineered Solutions Segment

Our Engineered Solutions segment had sales of $222.7 million in 2012, $257.2 million in 2013 and $245.2 million in 2014. Engineered Solutions represented approximately 18% of consolidated net sales for 2012, approximately 22% for 2013 and approximately 23% for 2014. We estimate that our addressable worldwide demand for Engineered Solutions was $2,800 million in 2012, $2,300 million in 2013 and $2,400 million in 2014.
Advanced Graphite Materials. We manufacture extruded and molded graphite blocks weighing up to ten metric tons and machined graphite parts used in many applications including metallurgy, high-temperature industrial, and alternative energy applications. In addition, we produce a line of high temperature (> 1200C) insulation for induction furnaces, high temperature vacuum furnaces, direct solidification furnaces and other high temperature furnace applications.
Advanced Composite Materials. We design, manufacture and test advanced composites used in many applications including ultra-light-weight thermal protection, high-strength heat shields and various other components. Markets include automotive, petrochemical and aerospace/defense. Fiber Materials Inc. (FMI), is recognized as an industry leader producing high-temperature materials and advanced composite products for extremely demanding applications.
Advanced Electronics Technologies. We manufacture flexible natural and synthetic graphite products. Applications include thermal management and sealing solutions used in advanced consumer electronics (including smart phones, televisions, tablets and displays), automotive sealing and the petrochemical and alternative energy industries. We are one of the world's largest manufacturers of flexible natural and synthetic graphite products for these uses and applications.
Advanced Materials. We manufacture primary synthetic graphite powders, natural flake graphite powders, coke powders, and various other carbon/graphite powder derivatives. Markets include industrial lubricants, hot metal forming lubricants, conductive polymer fillers and energy storage applications.
Business Strategies
We believe that, by growing our revenues and operating income, successfully implementing LEAN initiatives, and maximizing our cash flows, we will deliver enhanced financial performance and improve shareholder value. We believe this strategy will position us to capitalize on growth opportunities that may arise. We have transformed our operations, building competitive advantages to enable us to compete successfully in our major product lines, to realize enhanced performance as economic conditions improve and to exploit growth opportunities from our intellectual property portfolio. Our business strategies are designed to expand upon our competitive advantages by:
Leveraging Our Unique Global Manufacturing Network. We believe that our global manufacturing network, our back integration and our research and development provides us with competitive advantages in product quality, product costs, timely and reliable delivery, and operational flexibility to adjust product mix to meet the diverse needs of a wide range of segments and customers.
We continue to leverage our network to seek to achieve significant increases in throughput generated from our existing assets, through productivity improvements, capital expenditures, and other efficiency initiatives. We believe we can further exploit our network by focusing our technical and customer service capabilities on:

- large global customers to whom we believe we are well positioned to offer products that meet their volume, product quality, product mix, delivery reliability and service needs at competitive prices; and
- customers in targeted segments where we have competitive advantages to meet identified customer needs due to the range and quality of our products, the utilization of our capacity, the value of our customer technical service and our low cost supplier advantage.

We sell our products in every major geographic region. Sales of our products to buyers outside the U.S. accounted for approximately 70% of net sales in 2012, approximately 75% of net sales in 2013 and approximately 74% of net sales in 2014. No single customer or group of affiliated customers accounted for more than 10% of our total net sales in 2012, 2013 or 2014.

Driving Continuous Improvement with LEAN and Six Sigma. We believe a consistent focus on our customers and diligence towards aligning our processes to satisfy these customers is essential in today's global market. We have undertaken a comprehensive launch of LEAN and Six Sigma with dedicated resources at all of our key manufacturing plants intended to create a common language and tool set centering around LEAN and Six Sigma.

Table of Contents

Our focus on waste reduction using a team approach creates knowledge at all levels of the organization. Concentrating on creating flow within processes enables us to capitalize on lower inventories while still maintaining a high percentage of on-time-delivery. As discussed in Note 2 of the Financial Statements, we have closed two graphite electrode manufacturing facilities to better align our production with customer demand. We reduced our inventory levels during 2013 and 2014 and expect further reductions in 2015. Our metric driven behavior and process of deploying corrective actions to anomalies drives us towards customer centric solutions.

We believe we will be able to continue to leverage our stream-lined processes as a sustainable competitive advantage with shorter lead times, lower costs, higher quality products, and exceptional service. We are applying these methodologies and tools to not only our manufacturing processes; but also to our transactional and business processes such as accounts receivable, new product introduction, and cash forecasting in order to develop a high-performing value stream.

Accelerating Commercialization of Advantaged Technologies. We believe that our technological capabilities for developing products with superior thermal, electrical and physical characteristics provide us with a potential growth opportunity as well as a competitive advantage. We exploit these capabilities and our intellectual property portfolio to accelerate development and commercialization of these technologies across all of our businesses, to improve existing products, and to develop and commercialize new products for higher growth rate areas such as electronic thermal management technologies. We have received R&D Magazine’s prestigious R&D 100 Award in seven of the past 12 years. The R&D 100 Award honors the 100 most technologically significant products introduced into the marketplace each year. We received this award in 2003 and 2004 for our achievements in electronic thermal management products, in 2005 for our large-diameter pinless graphite electrodes, in 2006 for GRAFOAM® carbon foam, a unique high strength, light weight carbon foam, in 2007 for GrafCell® flow field plates, a key component to the commercialization of fuel cells, in 2009 for our GRAFIHX™ Flexible Heat Exchangers, a graphite solution uniquely suited for radiant floor heating systems, and in 2011, for the eGRAF® Spreadershield SS1500™.

Delivering Exceptional and Consistent Quality. We believe that our products are among the highest quality products available in our industry. We have been recognized as a preferred or certified supplier by many major steel companies and have received numerous technological innovation and other awards by industry groups, customers and others. Using our technological capabilities, we continually seek to improve the consistent overall quality of our products and services, including the performance characteristics of each product, the uniformity of the same product manufactured at different facilities and the expansion of the range of our products. We believe that improvements in overall quality create significant efficiencies and opportunities for us, provide us the opportunity to increase sales volumes and potential demand share, and create production efficiencies for our customers.

Providing Superior Technical Service. We believe that we are recognized as one of the industry leaders in providing value added technical services to customers for our major product lines. We have a large customer technical service organization, with supporting engineering and scientific groups with more than 200 engineers and specialists around the world, and we believe that we are recognized as one of the industry leaders in providing value added technical services to customers for our major product lines. A portion of these employees assist key steel and other metals customers in furnace applications, operations and upgrades to reduce energy consumption, improve raw material costs and increase output.

Maintaining Liquidity and Building Stockholder Value. We believe that our business strategies and our rationalization and related activities support our goal of growing revenues and operating income and maximizing the cash generated from operations. Maintaining liquidity remains a priority for us. As of December 31, 2014, we had outstanding borrowings under our Revolving Facility of $40.0 million, $300 million of Senior Notes, $188.0 million carrying value outstanding related to Senior Subordinated Notes, and cash and cash equivalents of $17.6 million. As of December 31, 2013, we had outstanding borrowings under our Revolving Facility of $64.0 million, $300 million of Senior Notes, $175.7 million carrying value outstanding related to Senior Subordinated Notes, and cash and cash equivalents of $11.9 million. We had approximately $302.0 million of unused borrowing capacity under the Revolving facility (after considering financial covenants restrictions and the outstanding letters of credit of approximately $5.3 million) as of December 31, 2014.

We continually review our assets, product lines and businesses to seek out opportunities to maximize value, through re-deployment, merger, acquisition, divestiture or other means, which could include taking on more debt or issuing more equity. We may at any time buy or sell assets, product lines or businesses.

Production Planning

We plan and source production of our products globally. We have evaluated virtually every aspect of our global supply chain, and we have redesigned and implemented changes to our global manufacturing, marketing and sales processes to leverage the strengths of our repositioned manufacturing network. Among other things, we have reduced manufacturing bottlenecks, improved product and service quality and delivery reliability, expanded our range of products, improved our global sourcing for our customers and have closed or plan to close high cost manufacturing locations when lower cost manufacturing locations can absorb or expand to meet needed production capacity.

We deploy synchronous work process improvements at most of our manufacturing facilities. We have also installed and continue to install and upgrade proprietary process technologies at our manufacturing facilities, and use statistical process controls in our manufacturing processes for all products, and employ LEAN processing improvement techniques.

Our global manufacturing network also helps us to minimize risks associated with dependence on any single economic region.

Manufacturing

Graphite Electrode Products. The manufacture of a graphite electrode takes, on average, about two months. We manufacture graphite electrodes ranging in size up to 30 inches in diameter and over 11 feet in length, and weighing as much as 5,900 pounds (2.6 metric tons). The manufacture of graphite electrodes includes six main processes: forming the electrode, baking the electrode, impregnating the electrode with a special pitch that improves the strength, rebaking the electrode, graphitizing the electrode using electric resistance furnaces, and machining.

We currently manufacture graphite electrodes in the United States, Mexico, France and Spain and we have an electrode machining center in Brazil. During 2013, we closed our graphite electrode manufacturing facilities in Brazil and South Africa, as well as our machine shop in Russia. See Note 2 of the financial statements for further discussion.

Refractory Products. Refractory bricks are manufactured in the United States, using a proprietary process. We have two primary grades of refractory products. The manufacture of a refractory block begins with the mixing and blending of the raw materials. The raw materials are fed into molds and pressed into shape. Intense heat and pressure are then applied. The bricks are cooled and then cut into the desired shapes. Our bricks are generally smaller than our competitors' products. We believe our smaller brick size creates an easier installation process compared to larger bricks. We manufacture refractory bricks into sizes up to 18 inches, although we can manufacture bricks into a multitude of sizes and shapes to meet the needs of our customers.

Petroleum Needle Coke and Coke Products. Petroleum needle coke is produced through a manufacturing process very similar to a refinery. The production process converts decant oil into petroleum needle coke shaped in a needle-like structure. Pitch needle coke is produced using coal-tar pitch. We produce petroleum needle coke at one manufacturing facility in the U.S.

Advanced Graphite Materials. Advanced graphite materials are manufactured using processes and technologies similar to those of graphite electrodes. Manufacturing lead times range between four to twelve months for most products and depend on the specific material properties that are needed to be imparted in the final billet. After the forming, baking, impregnation, rebaking and graphitization steps, the billets are either dressed and sold as raw stock or are machined into custom parts against proprietary specifications supplied by our customers. We primarily produce advanced graphite materials in the United States, France and Italy.

Advanced Composite Materials. Advanced composite materials are primarily manufactured using a 3-dimensional carbon-fiber-composite weaving process. The 3-dimensional weaving process uses two sets of yarn woven in the fabric-width and length directions (X-Y) and a third yarn woven into the fabric thickness (Axial or Z direction) using specialty weaving equipment. This process results in a volumetric solid with yarns reinforcing both the planar and axial (Z) directions. Advanced composite materials are manufactured in three U.S. facilities.

Advanced Electronics Technologies. We use a proprietary process to convert mined natural graphite flake into expandable graphite, an intermediate product. We manufacture flexible graphite by subjecting expandable graphite to additional proprietary processing. Our Advanced Electronics Technologies business primarily operates two manufacturing facilities in the U.S. We believe that we operate one of the world’s most technologically sophisticated advanced natural graphite production lines.

Advanced Materials. We manufacture primary synthetic graphite powders, natural flake graphite powders, coke powders, and various other carbon/graphite powder derivatives. We manufacture advanced materials in both

Table of Contents

Industrial Materials and Engineered Solutions locations in the United States, France, Mexico, Spain and Italy, with some final processing done in the United States.

Quality Standards and Maintenance. Most of our global manufacturing facilities are certified and registered to ISO 9001-2008 international quality standards and some are certified to QS 9001-2008. Advanced electronics technologies has a quality assurance system designed to meet the most stringent requirements of its customers and is ISO TS 16949:2009 certified. Maintenance at our facilities is conducted on an ongoing basis.

Raw Materials and Suppliers. The primary raw materials for electrodes are engineered by-products and residues of the petroleum and coal industries. We use these raw materials because of their high carbon content. The primary raw materials for graphite electrodes are calcined needle coke and pitch. We purchase raw materials from a variety of sources and believe that the quality and cost of our raw materials on the whole is competitive with those available to our competitors.

We plan to obtain a substantial portion of our 2015 needle coke requirements internally.

Raw materials for refractory products are primarily sourced internally and from a variety of third parties. The primary raw material used in refractory products is crushed graphite.

The primary raw material used by Seadrift to make petroleum needle coke is decant oil, a by-product of the gasoline refining process. Seadrift is not dependent on any single refinery for decant oil. While Seadrift has purchased a substantial majority of its raw material inventory from a limited number of suppliers in recent years, we believe that there is an abundant supply of suitable decant oil in the United States available from a variety of sources.

We purchase energy from a variety of sources. Electric power used in manufacturing processes is purchased from local suppliers under contracts with pricing based on rate schedules or price indices. Our electric costs can vary significantly depending on these rates and usage. Natural gas used in manufacturing processes is purchased from local suppliers primarily under annual volume contracts with pricing based on various natural gas price indices.

Distribution

We deploy various demand management and inventory management techniques to seek to ensure we can meet our customers' delivery requirements while still maximizing the utilization of our production capacity. We can experience significant variation in our customers' delivery requirements as their specific needs vary and change through the year. We generally seek to maintain appropriate inventory levels, taking into account these factors as well as the significant differences in manufacturing cycle times for graphite electrode products and our customers' products.

Finished products are usually stored at our manufacturing facilities. Limited quantities of some finished products are also stored at local warehouses around the world to meet customer needs.

Sales and Customer Service

We believe our product quality, our global manufacturing network and our low cost structure allow us to deliver a broad range of product offerings across various segments. We differentiate and sell the value of our product offerings, depending on the segment or specific product application, primarily based on product quality and performance, delivery reliability, price, and customer technical service.

We price our products based on the value that we believe we deliver to our customers. Pricing may vary within any given industry, depending on the segment within that industry and the value of the offer to a specific customer. We believe that we can achieve increased competitiveness, customer demand, and profitability through our value added offerings to customers. In certain segments where the product is less differentiated, these value added offerings have less impact on our competitiveness.

We have a large customer technical service organization, with supporting application engineering and scientific groups and more than 200 engineers and specialists around the world, and we believe that we are recognized as one of the industry leaders in providing value added technical services to customers for our major product lines.

We deploy these selling methods and our customer technical service to address the specific needs of all products. Our direct sales force currently operates from 15 sales offices located around the world.

Industrial Materials. We sell our Industrial Materials products primarily through our direct sales force, independent sales representatives and distributors, all of whom are trained and experienced with our products.

Historically, our graphite electrode customers generally seek to negotiate to secure the reliable supply of their anticipated volume requirements on an annual basis, sometimes called the “graphite electrode book building process”. These orders are subject to renegotiation or adjustment to meet changing conditions. The balance of our graphite electrode customers purchase their electrodes as needed at current market prices.

We have customer technical service personnel based around the world to assist customers to maximize their production and minimize their costs. We employ about 90 engineers and technicians in our Industrial Materials segment, a portion of who provide technical service and advice to key steel and other metals customers. These services relate to furnace applications and operation, as well as furnace upgrades to reduce energy consumption, improve raw material costs and increase output.

Engineered Solutions. We sell our Engineered Solutions products primarily through our direct sales force, independent sales representatives and distributors, all of whom are trained and experienced with our products.

The majority of our products are custom built to customer specifications after an iterative review process between the customer's engineers and our sales and technical service employees. Our sales personnel are trained and experienced with the products they sell. We provide technical service to our customers through dedicated technical service engineers who operate out of our North American facilities, European facilities and Asian offices. We believe that our technical service differentiates us from our competition and take pride in our ability to support the technical requirements of our customers.

Technology

We believe that we are an industry leader in graphite and carbon materials science and high temperature processing know-how and that we operate premier research, development and testing facilities for our industry. We have over 125 years of experience in the research and development of graphite and carbon technologies. Over the past several years, we have analyzed our intellectual property portfolio to identify new product opportunities with high growth potential for us, redirected research to enhance and exploit our portfolio and accelerated development of such products.

Research and Development. We conduct our research and development both independently and in conjunction with our strategic suppliers, customers and others. We have a new dedicated innovation and technology center located near our corporate headquarters in Ohio that opened in February 2015 which focuses on all products. This new facility will place a greater emphasis on driving innovation to support new product development and focus on commercializing the next generation technologies in carbon and graphite material science. The activities at this center are integrated with the efforts of our engineers at our manufacturing facilities who are focused on improving manufacturing processes.

Research and development expenses amounted to $13.8 million, $10.4 million and $14.8 million in 2012, 2013 and 2014, respectively. This increase in research and development expenses is primarily related to an unfavorable pension and OPEB MTM adjustment of $2.0 million in 2014 compared to a benefit of $1.4 million in 2013 and rationalization related accelerated depreciation totaling $2.3 million in 2014.

We believe that our technological and manufacturing strengths and capabilities provide us with a significant growth opportunity as well as a competitive advantage and are important factors in our selection by industry leaders and others as a strategic partner. Our technological capabilities include developing products with superior thermal, electrical and physical characteristics that provide a differentiating advantage. We seek to exploit these strengths and capabilities across all of our businesses, to improve existing products and to develop and commercialize new products with high growth potential.

A significant portion of our research and development is focused on new product development, particularly Engineered Solutions for advanced energy applications such as solar silicon manufacturing, electronic thermal management, energy storage and generation. Other significant work focuses on advancements in electrode technology and raw material optimization.

Intellectual Property. We believe that our intellectual property, consisting primarily of patents and proprietary know-how, provides us with competitive advantages and is important to our growth opportunities. Our intellectual property portfolio is extensive, with approximately 713 U.S. and foreign patents and published patent applications which are carbon and graphite related, which we believe is more than any of our major competitors (in the business segments in which we operate). Among our competitors, we hold one of the largest number of patents for flexible graphite, as well as the largest number of patents relating to the use of natural graphite for certain fuel cell

applications. These patents expire at various times over the next two decades.
We own, and have obtained licenses to, various trade names and trademarks used in our businesses. For example, the trade name and trademark UCAR are owned by Union Carbide Corporation (which has been acquired by Dow Chemical Company) and are licensed to us on a worldwide, exclusive and royalty-free basis until 2025. This

13

Table of Contents

particular license automatically renews for successive ten-year periods. It permits non-renewal by Union Carbide in 2025 or at the end of any renewal period upon five years' notice of non-renewal.

We rely on patent, trademark, copyright and trade secret laws as well as appropriate agreements to protect our intellectual property. Among other things, we seek to protect our proprietary know-how and information, through the requirement that employees, consultants, strategic partners and others, who have access to such proprietary information and know-how, enter into confidentiality or restricted use agreements.

Competition

Industrial Materials. Competition in the Industrial Materials segment is intense and is based primarily on product differentiation and quality, delivery reliability, price, and customer service, depending on the segment or specific product application.

In the most demanding product applications (that is, graphite electrodes that can operate in the largest, most productive and demanding EAF steel mills in the world), we compete primarily on product quality, delivery reliability, price and customer technical service. We believe these are prerequisite capabilities that not all producers of graphite electrodes possess or can demonstrate consistently. In this segment, we primarily compete with higher quality graphite electrode producers, although this segment of the graphite electrode demand has become increasingly competitive in recent years as graphite electrode producers have improved the quality of their offerings and become qualified suppliers to some of the largest and most sophisticated EAF customers.

In other product applications, including ladle furnaces requiring less demanding performance and certain other ferrous and non-ferrous segments, we compete based on product differentiation, product quality and price. We believe our product quality, global manufacturing network, proximity to regional and local customers and the related lower cost structure allows us to deliver a broad range of product offerings across these various segments.

We believe that there are no current commercially viable substitutes for graphite electrodes in EAF steel production.

Our refractory products business competes based on product quality, useful life, and technology. We believe our proprietary hot press process and the smaller shape of our refractory bricks provides a more versatile product that is easier to install than larger refractory bricks.

We believe that there are certain cost and technology barriers to entry into our industry, including the need for extensive product and process know-how and other intellectual property and a high initial capital investment. It also requires high quality raw material sources and a developed energy supply infrastructure. However, competing manufacturers, particularly Chinese manufacturers, have been able to expand their sales and manufacturing geographically.

There are a number of international graphite electrode producers, including SGL Carbon A.G. (Germany), Tokai Carbon Co., Ltd. (Japan), Showa Denko Carbon K.K. (Japan), Graphite India Limited (India), HEG Limited (India), SEC Corporation Limited (Japan), Nippon Carbon Co., Ltd. (Japan), Energoprom Group (Russia), Fangda Carbon New Material Technology Co., Ltd. (China), Nantong Yangzi Carbon Co. Ltd (China), Kaifeng Carbon Co., Ltd. (China) and Sinosteel Jilin Carbon Co., Ltd (China), as well as a number of others.

All graphite electrode manufacturers, even those without multinational manufacturing operations, are capable of, and many in fact are, supplying their products globally and are experiencing increased competition from Indian, Russian and Chinese graphite electrode manufacturers. The Chinese government has strongly supported and invested heavily in industrial expansion in recent years and continues to do so. As a part of this expansion, Chinese production of graphite electrodes has increased and the quality of the electrodes produced in China has improved. The Chinese currency policies regarding the Renminbi may provide Chinese producers with a competitive advantage with respect to exports of graphite electrodes.

Coke represents a significant portion of the cost to produce a graphite electrode. Competition in the needle coke industry is based primarily on price, reliability and product specifications. Our Seadrift facility competes primarily on the specifications and price of its needle coke. In 2012, our Seadrift production team collaborated with scientists from our Engineered Solutions segment to develop a super-premium grade of needle coke that we have successfully commercialized.

We believe there are currently approximately ten other firms producing needle coke. These competitors include Philips 66 (U.S.), Petrocokes Japan Limited (Japan), Mitsubishi Chemical Company, Baosteel Group (China), C-Chem Co., Ltd. (Japan), Indian Oil Company Limited (India), Hongte Chemical Industry (Group) Co., Ltd. (China),

Table of Contents

JX Holdings Inc. (Japan), Petrochina International Jinzhou Co., Ltd. (China) and Anshan Kaitan Thermo-Energy New Materials Co., Ltd(China).

Engineered Solutions. Competitors of our Engineered Solutions segment compete on product differentiation and innovation, quality, price, delivery reliability and customer service depending on the specific demands or product applications.

We believe we are the technology leader within the segments we participate in, and we differentiate ourselves based on our ability to provide customers with a solution that gives them one of the lowest total operational costs in meeting their product manufacturing needs. We achieve this by using our extensive product, process and application knowledge.

We believe there are certain barriers to entry into this industry, including the need for extensive product and process know-how, intellectual property and a high initial capital investment.

We compete with other major specialty graphite competitors who manufacture and sell on a global basis. These competitors include SGL Carbon A.G. (Germany), Mersen S.A. (France), Tokai Carbon Co., Ltd. (Japan), Toyo Tanso Co., Ltd. (Japan), SEC Carbon Ltd. (Japan), Nippon Carbon Co. Ltd (Japan) and Graphite India Ltd. (India) and several other competitors, a number of which are in China and Japan. We also compete with Panasonic Corporation (Japan), and Kaneka Corporation (Japan) in certain thermal management markets.

Environmental Matters

We are subject to a wide variety of federal, state, local and foreign environmental laws and regulations that govern our properties, neighboring properties, and our current and former operations worldwide. These laws and regulations relate to the presence, use, storage, handling, generation, treatment, emission, release, discharge and disposal of wastes and other substances, including the packaging, labeling and transportation of products that are defined as hazardous or toxic or otherwise believed to have potential to harm the environment or human health. These laws and regulations (and the enforcement thereof) are periodically changed and are becoming increasingly stringent. We have incurred substantial costs in the past, and will continue to incur additional costs in the future, to comply with these legal requirements.

The principal U.S. laws to which our properties and operations are subject include:

- the Clean Air Act, the Clean Water Act and the Resource Conservation and Recovery Act and similar state and local laws which regulate air emissions, water discharges and hazardous waste generation, treatment, storage, handling, transportation and disposal;
- the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, and the Small Business Liability Relief and Brownfields Revitalization Act of 2002, and similar state laws that provide for the reporting of, responses to and liability for, releases of hazardous substances into the environment; and
- the Toxic Substances Control Act and related laws that are designed to track and control chemicals that are produced or imported into the United States and assess the risk to health and to the environment of new products at early developmental stages.

Further, laws and regulations adopted or proposed in various states impose or may impose, as the case may be, environmental monitoring, reporting and/or remediation requirements if operations cease or property is transferred or sold.

We believe that we are currently in compliance in all material respects with the federal, state, local and foreign environmental laws and regulations to which we are subject. We have experienced some level of regulatory scrutiny at most of our current and former facilities and, in some cases, have been required to take corrective or remedial actions and incur related costs in the past, and may experience further regulatory scrutiny, and may be required to take further corrective or remedial actions and incur additional costs, in the future. Although it has not been the case in the past, these costs could have a material adverse effect on us in the future.

We have received and may in the future receive notices from the U.S. Environmental Protection Agency ("U.S. EPA") or state environmental protection agencies, as well as claims from other parties, alleging that we are a potentially responsible party (“PRP”) under Superfund and similar state laws for past and future remediation costs at waste disposal sites and other contaminated properties. Although Superfund liability is joint and several, in general, final allocation of responsibility at sites where there are multiple PRPs is made based on each PRP's relative contribution

15

Table of Contents

of hazardous substances to the site. Based on information currently available to us, we believe that any potential liability we may have as a PRP will not have a material adverse effect on us.

As a result of amendments to the Clean Air Act enacted in 1990, certain of our U.S. facilities have been or will be required to comply with new reporting requirements and standards for air emissions that have been or may be adopted by the U.S. EPA and state environmental protection agencies pursuant to new and revised regulations that have been or could be promulgated, including the possible promulgation of future maximum achievable control technology standards that apply specifically to our manufacturing sector(s), or more generally to our operation(s) or equipment. Achieving compliance with the regulations that have been promulgated to date has resulted in the need for additional administrative and engineered controls, changes to certain manufacturing processes, and increased monitoring and reporting obligations. Similar foreign laws and regulations have been or may also be adopted to establish new standards for air emissions, which may also require additional controls on our manufacturing operations outside the U.S. Based on information currently available to us, we believe that compliance with these regulations will not have a material adverse effect on us.

As mentioned, our manufacturing operations located outside of the U.S. are also subject to their national and local laws and regulations related to environmental protection and product safety. Under the European Union's (“EU”) regulations concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (commonly referred to as “REACH”), enacted in 2007, manufacturers within the EU and importers into the EU of certain chemical substances are required to register and evaluate the potential impacts of those substances on human health and the environment. Under REACH, the continued importation into the EU, manufacture and/or use of certain chemical substances may be restricted, and manufacturers and importers of certain chemicals will be required to undertake evaluations of those substances. The requirements of REACH are being phased in over a period of years, and compliance is requiring and will continue to require expenditures and resource commitments. Based on information currently available to us, we believe that compliance with these regulations will not have a material adverse effect on us.

International accords, foreign laws and regulations, and U.S. federal, state and local laws and regulations are increasingly being enacted to address concerns about the effects that carbon dioxide emissions and other identified greenhouse gases (“GHG”) may have on the environment and climate worldwide. These effects are widely referred to as Climate Change. Some members of the international community have taken actions in the past to address Climate Change issues on a global basis. The 1997 international Kyoto Protocol set binding GHG emission reduction targets for the participating industrialized countries. Members of the international community have been meeting since 2007 to negotiate a future treaty to replace the 1997 Kyoto Protocol, which was scheduled to expire at the end of 2012. In December 2012, at the annual United Nations Climate Change Conference, an amendment was passed to extend the Protocol to 2020, but the amendment has not entered into legal force pending acceptance by participating countries. The EU Emissions Trading Scheme (“EU ETS”) enacted under the provisions of the 1997 Kyoto Protocol requires certain listed energy-intensive industries to participate in an international “cap and trade” system of GHG emission allowances. A third phase of the EU ETS started in January 2013 under Directive 2009/29/EC, which instituted a number of program changes. EU Member States brought into force the necessary laws, regulations and administrative provisions to comply with this EU Directive. Carbon and graphite manufacturing is still not a covered industry sector in the revised Annex 1 of this Directive. However, one or more of our European manufacturing operations may be required to comply with these provisions under a more general fuel combustion category, if their combustion units meet the applicability levels. If subject to these provisions, one or more of our operations may be eligible to receive free carbon dioxide emission allowances under the member state allocation program.

In 2012, the U.S., as well as Japan, Russia, Canada and New Zealand, indicated they would not join a second Kyoto Treaty commitment period. However, it is possible that the U.S. would sign an international Climate Change treaty or enact national Climate Change legislation in the future to reduce the quantity of national GHG emissions in accordance with established goals and deadlines. One or more of our U.S. facilities could be covered by such new legislation and we could incur additional compliance obligations and related expenses. In 2014, participating countries met in Paris to develop a new overall framework for reducing GHG emissions, with the goal of addressing that all major emission sources of CO2 though carbon pricing mechanisms. Recent pledges by the U.S., China and the EU to

achieve significant reductions in CO2 by 2020 may provide impetus for an international GHG agreement in 2015, in which case additional regulatory limits could be forthcoming in the U.S. or the EU.
In 2009, a Final Mandatory Reporting of Greenhouse Gases Rule was issued by the U.S. EPA, which requires facilities with specified GHG sources that emit over the annual threshold quantities to monitor and report their GHG emissions annually. In addition, corporations that are large suppliers of petroleum products (including, by definition, importers and exporters that exceed the annual GHG threshold quantities) must also submit an annual activity report to the U.S. EPA. Some of our operations are covered under this Rule, and we believe that we have the necessary

Table of Contents

administrative systems in place to comply with the requirements. Under various other foreign and U.S. state regulations, we are currently required to report certain GHG emissions to the pertinent authorities. Furthermore, in December 2009, the U.S. EPA issued an "endangerment and cause or contribute finding" for GHG, under Section 202(a) of the Clean Air Act, allowing it to issue new rules that directly regulate GHG emissions under the existing federal New Source Review, Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs. In May 2010, the U.S. EPA set GHG emissions thresholds to define when permits under these programs are required for new and existing industrial facilities. Under these programs, new or significantly modified facilities must also use best available control technologies to minimize GHG emissions. Therefore, we may incur future expenses to modify our air permits, implement additional administrative and engineered controls, invest in capital improvements, and/or make changes in certain manufacturing processes at our U.S. facilities to achieve compliance with these regulations or to expand our operations.

Based on information currently available to us, we believe that compliance with international accords, U.S. and foreign laws and regulations concerning Climate Change which have been promulgated, or that could be promulgated in the future, will not have a material adverse effect on us.

We have sold or closed a number of facilities that had operated solid waste management units on site. In most cases where we divested the properties, we have retained ownership of on-site landfills. When our landfills were or are to be sold, we obtained or seek to obtain financial assurance we believe to be adequate to protect us from any potential future liability associated with these landfills. When we have closed landfills, we believe that we have done so in material compliance with applicable laws and regulations. We continue to monitor and these landfills and observe any reporting obligations we may have with respect to them pursuant to applicable laws and regulations. To date, the costs associated with the retained landfills have not been, and we do not anticipate that future costs will be, material to us.

Estimates of future costs for compliance with U.S. and foreign environmental protection laws and regulations, and for environmental liabilities, are necessarily imprecise due to numerous uncertainties, including the impact of potential new laws and regulations, the availability and application of new and diverse technologies, the extent of insurance coverage, the potential discovery of contaminated properties, or the identification of new hazardous substance disposal sites at which we may be a PRP and, in the case of sites subject to Superfund and similar state and foreign laws, the final determination of remedial requirements and the ultimate allocation of costs among the PRPs. Subject to the inherent imprecision in estimating such future costs, but taking into consideration our experience to date regarding environmental matters of a similar nature and facts currently known, we estimate that our costs and capital expenditures (in each case, before adjustment for inflation) for environmental protection regulatory compliance programs and for remedial response actions will not increase materially over the next several years.

Furthermore, we establish accruals for environmental liabilities when it is probable that a liability has been or will be incurred, and the amount of the liability can be reasonably estimated. We adjust the accrual as new remedial actions or other commitments are made, and when new information becomes available that changes the prior estimates previously made.

Insurance

We maintain insurance against civil liabilities relating to personal injuries to third parties, for loss of or damage to property, for business interruptions and for environmental matters, that provides coverage, subject to the applicable coverage limits, deductibles and retentions, and exclusions, that we believe are appropriate upon terms and conditions and for premiums that we consider fair and reasonable in the circumstances. We cannot assure you, however, that we will not incur losses beyond the limits of or outside the coverage of our insurance.

Employees

As of December 31, 2014, we had 2,397 employees (excluding contractors), a decrease of 637 employees from December 31, 2013. A total of 493 employees were in Europe (including Russia), 671 were in Mexico and Brazil, 32 were in South Africa, 1,179 were in the U.S. and 26 were in the Asia Pacific region. As of December 31, 2014, 1,354 of our employees were hourly employees.

As of December 31, 2014, approximately 43% of our worldwide employees were covered by collective bargaining or similar agreements, which expire at various times in each of the next several years. As of December 31, 2014, approximately 862 employees, or 36% of our employees, were covered by agreements which expire, or are subject to renegotiation, at various times through December 31, 2015. We believe that, in general, our relationships with our unions are satisfactory and that we will be able to renew or extend our collective bargaining or similar agreements on reasonable terms as they expire. We cannot assure, however, that renewed or extended agreements will be reached without a work stoppage or strike or will be reached on terms satisfactory to us.

We have not had any material work stoppages or strikes during the past decade.

Item 1A. Risk Factors

An investment in our securities involves significant risks. You should carefully read all of the information included in this report and carefully consider, among other matters, the following risk factors, as well as any discussed under Item 7, “Management's Discussion and Analysis of Financial Conditions and Results of Operations.” If any of the conditions or events described in the following risk factors were to occur, our business, financial condition, results of operations or growth prospects could be affected materially and adversely. In that case, the market price of our securities could decline and you could lose part or all of your investment.

The risks described below are not the only ones facing us. Additional risks not presently known to us, or that we currently deem immaterial, individually or in the aggregate, may also impair our business operations.

RISKS RELATING TO US

A downturn in global economic conditions may materially adversely affect our business.

While the global recovery continues, the pace of recovery remains sluggish and uneven geographically. Downside risks remain, including high unemployment, reduced consumer spending, high deficit spending by governments, turbulent financial markets (particularly in the euro area), tighter monetary policies (particularly in emerging markets). In the U.S., the uncertainty regarding government shutdowns and threatened shutdowns, significant mandated tax increases, government debt ceiling limitations, sequestration and government spending cuts and budget negotiations pose a serious risk for the U.S. economy and consumer confidence. In the event that the U.S. federal government is unable to achieve a resolution of these issues there could be an adverse impact on the U.S. economy, which could negatively impact our revenues and earnings

As more fully described under “Management's Discussion and Analysis of Financial Condition and Results of Operations,” we are currently facing a challenging environment for our products, particularly our Industrial Materials products, as a result of global economic conditions.

The International Monetary Fund reported GDP growth figures for 2014 at approximately 3.3%. We believe that in the graphite electrode markets the capacity utilization rate was approximately 69% in 2013 and 74% in 2014. These lower capacity utilization rates may continue to be driven by a challenging environment for our customers which would negatively impact demand for our Industrial Materials products and may adversely affect our results of operations for 2014.

We are dependent on the global steel industry and also sell products used in the transportation, semiconductor, solar, petrochemical, electronics, and other industries which are susceptible to global and regional economic downturns.

We sell our Industrial Materials products, which accounted for about 77% of our total net sales in 2014, primarily to the EAF steel production industry. Many of our other products are sold primarily to the electronics, transportation, alternative energy, and oil and gas exploration industries. These are global basic industries, and they are experiencing various degrees of contraction, growth and consolidation. Customers in these industries are located in every major geographic region. As a result, our customers are affected by changes in global and regional economic conditions. This, in turn, affects overall demand and prices for our products sold to these industries. As a result of changes in economic conditions, demand and pricing for our products sold to these industries has fluctuated and in some cases declined significantly, which could have a material adverse effect on our results of operations.

Demand for our products sold to these industries may be adversely affected by improvements in our products as well as in the manufacturing operations of customers, which reduce the rate of consumption or use of our products. Our customers, including major steel producers, are experiencing and may continue to experience downturns or financial distress that could adversely impact our ability to collect our accounts receivable or to collect them on a timely basis.

Table of Contents

Sales volumes and prices of our products sold to these industries are impacted by the supply/demand balance as well as overall changes in demand, excess capacity and growth of and consolidation within, the end markets for our products. In addition to the factors mentioned above, the supply/demand balance is affected by factors such as business cycles, rationalization, and increases in capacity and productivity initiatives within our industry and the end markets for our products, and certain of such factors are affected by decisions by us. Changes in the supply/demand balance could have a material adverse effect on our results of operations.

The steel industry, in particular, has historically been highly cyclical and is affected significantly by general economic conditions. Significant customers for the steel industry include companies in the automotive, construction, appliance, machinery, equipment and transportation industries, all of which continue to be affected by the general economic downturn and the deterioration in financial markets, including severely restricted liquidity and credit availability.

In addition, a continuation of the current difficult economic conditions may lead current or potential customers of our Engineered Solutions business to delay or reduce technology purchases or slow their adoption of new technologies. This may result in a continued reduction, or slower rate of recovery, of sales of our Engineered Solutions products and increased price competition, which could materially and adversely affect our financial position and results of operations.

Our indebtedness could limit our financial and operating activities, and adversely affect our ability to incur additional debt to fund future needs.

As of December 31, 2014, we had approximately $529.9 million of total indebtedness outstanding, including approximately $40.0 million of secured indebtedness outstanding under the Revolving Facility, $300.0 million of Senior Notes, and approximately $188.0 million ($200 million due at maturity in November 2015) of Senior Subordinated Notes. Additionally, as of December 31, 2014, we had approximately $302.0 million of unused borrowing capacity under the Revolving facility (after considering financial covenants restrictions and the outstanding letters of credit of approximately $5.3 million).

. This substantial amount of indebtedness could:

- require us to dedicate a substantial portion of our cash flow to the payment of principal and interest, thereby reducing the funds available for operations and future business opportunities;
- make it more difficult for us to satisfy our obligations with respect to the Senior Notes, including our repurchase obligations;
- limit our ability to borrow additional money if needed for other purposes, including working capital, capital expenditures, debt service requirements, acquisitions and general corporate or other purposes, on satisfactory terms or at all;
- limit our ability to adjust to changing economic, business and competitive conditions;
- place us at a competitive disadvantage with competitors who may have less indebtedness or greater access to financing;
- make us more vulnerable to an increase in interests rates, a downturn in our operating performance or a decline in general economic conditions; and
- make us more susceptible to changes in credit ratings, which could impact our ability to obtain financing in the future and increase the cost of such financing.

If compliance with our debt obligations under the Revolving Facility materially limits our financial or operating activities, or hinders our ability to adapt to changing industry conditions, we may lose market share, our revenue may decline and our operating results may be negatively affected.

Table of Contents

The terms of the Revolving Facility and the indenture governing the Senior Notes include covenants that could restrict or limit our financial and business operations.

The Revolving Facility and the indenture governing the Senior Notes contain a number of restrictive covenants that, subject to certain exceptions and qualifications, restrict or limit GTI's ability and the ability of GTI's subsidiaries to, among other things:

- incur, repay or refinance indebtedness;
- create liens on or sell our assets;
- engage in certain fundamental corporate changes or changes to our business activities;
- make investments or engage in mergers or acquisitions;
- engage in sale-leaseback transactions;
- pay dividends or repurchase stock;
- engage in certain affiliate transactions;
- enter into agreements or otherwise restrict GTI's subsidiaries from making distributions or paying dividends to the borrowers under the Revolving Facility; and
- repay intercompany indebtedness owed to GTI or make distributions or pay dividends to GTI.

The Revolving Facility also contains certain affirmative covenants and requires us to comply with financial coverage ratios regarding both our cash interest expense and our senior secured debt relative to our EBITDA (as defined in the Revolving Facility).

These covenants and restrictions could affect our ability to operate our business, and may limit our ability to react to market conditions or take advantage of potential business opportunities as they arise. Additionally, our ability to comply with these covenants may be affected by events beyond our control, including general economic and credit conditions and industry downturns.

If we fail to comply with the covenants in the Revolving Facility and are unable to obtain a waiver, or amendment, an event of default would result, and the lenders could, among other things, declare outstanding amounts due and payable, refuse to lend additional amounts to us, require deposit of cash collateral in respect of outstanding letters of credit, or refuse to waive any restrictive covenants in the Revolving Facility, including the restriction which prohibits dividends and distributions from GTI's subsidiaries to GTI to fund payment of indebtedness, including the Senior Notes, during a default or event of default. If we were unable to repay or pay the amounts due, the lenders could, among other things, proceed against the collateral granted to them to secure such indebtedness, which includes substantially all of the assets of GTI and its U.S. subsidiaries and certain assets of certain of GTI's foreign subsidiaries.

Our cash flows may not be sufficient to service our indebtedness, and if we are unable to satisfy our obligations under our indebtedness, we may be required to seek other financing alternatives, which may not be successful.

Our ability to make timely payments of principal and interest on our debt obligations, including the Senior Notes and our obligations under the Revolving Facility, depends on our ability to generate positive cash flows from operations, which is subject to general economic conditions, competitive pressures and certain financial, business and other factors beyond our control. If our cash flows and capital resources are insufficient to make these payments, we may be required to seek additional financing sources, reduce or delay capital expenditures, sell assets or operations or refinance our indebtedness. These actions could have a material adverse effect on our business, financial conditions and results of operations. In addition, we may not be able to take any of these actions, and, even if successful, these actions may not permit us to meet our scheduled debt service obligations. Our ability to restructure or refinance the debt under the Revolving Facility will depend on, among other things, the condition of the capital markets and our financial condition at such time. There can be no assurance that we will be able to restructure or refinance any of our indebtedness on commercially reasonable terms or at all. If we cannot make scheduled payments on our debt, we will be in default and the outstanding principal and interest on our debt could be declared to be due and payable, in which case we could be forced into bankruptcy or liquidation or required to substantially restructure or alter our business operations or debt obligations.

Table of Contents

Borrowings under the Revolving Facility bear interest at a variable rate, which subjects us to interest rate risk, which could cause our debt service obligations to increase significantly.

All of our borrowings under the Revolving Facility are at variable rates of interest and expose us to interest rate risk. If interest rates increase, our debt service obligations on this variable rate indebtedness would increase even though the amount borrowed remained the same.

We may not be able to raise the funds necessary to finance a change of control repurchase.

Upon the occurrence of a change of control repurchase event under the indenture governing the Senior Notes, holders of Senior Notes may require us to purchase their Senior Notes. However, it is possible that we would not have sufficient funds at that time to make the required purchase of Senior Notes. We cannot assure you that we will have sufficient financial resources, or will be able to arrange financing, to pay the repurchase price in cash with respect to any Senior Notes tendered by holders for repurchase upon a change of control. Our failure to repurchase the Senior Notes when required would result in an event of default under the indenture governing the Senior Notes which could, in turn, constitute a default under the terms of our other indebtedness, if any.

The terms of the Revolving Facility include covenants that could restrict or limit our ability to repurchase the Senior Notes in a change of control repurchase event.

Upon the occurrence of a change of control repurchase event under the indenture governing the Senior Notes, holders of Senior Notes may require us to purchase their Senior Notes. The Revolving Facility contains a restrictive covenant on the repurchase or retirement of indebtedness, which could limit or restrict our ability to make the required repurchase of Senior Notes. If the repurchase of Senior Notes does violate covenants in the Revolving Facility and if we are unable to obtain a waiver or amendment, an event of default would occur if we repurchased the Senior Notes, and the lenders under the Revolving Facility could, among other things, declare outstanding amounts thereunder due and payable, refuse to lend additional amounts to us, and require a deposit of cash collateral in respect of outstanding letters of credit. If we were unable to repay or pay the amounts due, the lenders could, among things, proceed against the collateral granted to them to secure such indebtedness, which includes substantially all of the assets of GTI and GTI's U.S. subsidiaries and certain assets of certain of GTI's foreign subsidiaries.

A lowering or withdrawal of the ratings assigned to our debt securities by rating agencies may increase our future borrowing costs and reduce our access to capital.

Any rating assigned to our debt could be lowered or withdrawn entirely by a rating agency if, in that rating agency's judgment, future circumstances relating to the basis of the rating, such as adverse changes, so warrant. Any future lowering of our ratings likely would make it more difficult or more expensive for us to obtain additional debt financing.

Disruptions in the capital and credit markets, which may continue indefinitely or intensify, could adversely affect our results of operations, cash flows and financial condition, or those of our customers and suppliers.

Disruptions in the capital and credit markets may adversely impact our results of operations, cash flows and financial condition, or those of our customers and suppliers. Disruptions in the capital and credit markets as a result of uncertainty, changing or increased regulation, reduced alternatives or failures of significant financial institutions could adversely affect our access to liquidity needed to conduct or expand our businesses or conduct acquisitions or make other discretionary investments, as well as our ability to effectively hedge our currency or interest rate risks and exposures. Such disruptions may also adversely impact the capital needs of our customers and suppliers, which, in turn, could adversely affect our results of operations, cash flows and financial condition.

We are subject to risks associated with operations in multiple countries.

A substantial majority of our net sales are derived from sales outside the U.S., and a majority of our operations and our total property, plant and equipment and other long- lived assets are located outside the U.S. As a result, we are subject to risks associated with operating in multiple countries, including:

- currency devaluations and fluctuations in currency exchange rates, including impacts of transactions in various currencies, impact on translation of various currencies into dollars for U.S. reporting and financial covenant compliance purposes, and impacts on results of operations due to the fact that costs of our foreign subsidiaries are primarily incurred in local currencies while their products are primarily sold in dollars and euros;

21

Table of Contents

- imposition of or increases in customs duties and other tariffs;
- imposition of or increases in currency exchange controls, including imposition of or increases in limitations on conversion of various currencies into dollars, euros, or other currencies, making of intercompany loans by subsidiaries or remittance of dividends, interest or principal payments or other payments by subsidiaries;
- imposition of or increases in revenue, income or earnings taxes and withholding and other taxes on remittances and other payments by subsidiaries;
- imposition of or increases in investment or trade restrictions by the U.S. or by non-U.S. governments or trade sanctions adopted by the U.S.;
- inability to definitively determine or satisfy legal requirements, inability to effectively enforce contract or legal rights and inability to obtain complete financial or other information under local legal, judicial, regulatory, disclosure and other systems; and
- nationalization or expropriation of assets, and other risks which could result from a change in government or government policy, or from other political, social or economic instability.

We cannot assure you that such risks will not have a material adverse effect on us or that we would be able to mitigate such material adverse effects in the future.

In addition to the factors noted above, our results of operations and financial condition are affected by inflation, deflation and stagflation in each country in which we have a manufacturing facility. We cannot assure you that future increases in our costs will not exceed the rate of inflation or the amounts, if any, by which we may be able to increase prices for our products.

Our ability to grow and compete effectively depends on protecting our intellectual property. Failure to protect our intellectual property could adversely affect us.

We believe that our intellectual property, consisting primarily of patents and proprietary know-how and information, is important to our growth. Failure to protect our intellectual property may result in the loss of the exclusive right to use our technologies. We rely on patent, trademark, copyright and trade secret laws and confidentiality and restricted use agreements to protect our intellectual property. Some of our intellectual property is not covered by any patent or patent application or any such agreement.

Patents are subject to complex factual and legal considerations. Accordingly, there can be uncertainty as to the validity, scope and enforceability of any particular patent. Therefore, we cannot assure you that:

- any of the U.S. or foreign patents now or hereafter owned by us, or that third parties have licensed to us or may in the future license to us, will not be circumvented, challenged or invalidated;
- any of the U.S. or foreign patents that third parties have non-exclusively licensed to us, or may non-exclusively license to us in the future, will not be licensed to others; or
- any of the patents for which we have applied or may in the future apply will be issued at all or with the breadth of claim coverage sought by us.

Moreover, patents, even if valid, only provide protection for a specified limited duration.

We cannot assure you that agreements designed to protect our proprietary know-how and information will not be breached, that we will have adequate remedies for any such breach, or that our strategic alliance suppliers and customers, consultants, employees or others will not assert rights to intellectual property arising out of our relationships with them against us.

In addition, effective patent, trademark and trade secret protection may be limited, unavailable or not applied for in the U.S. or in any of the foreign countries in which we operate.

Further, we cannot assure you that the use of our patented technology or proprietary know-how or information does not infringe the intellectual property rights of others.

Intellectual property protection does not protect against technological obsolescence due to developments by others or changes in customer needs.

The protection of our intellectual property rights may be achieved, in part, by prosecuting claims against others whom we believe have misappropriated our technology or have infringed upon our intellectual property rights, as well as by defending against misappropriation or infringement claims brought by others against us. Our involvement in litigation to protect or defend our rights in these areas could result in a significant expense to us, adversely affect the development of sales of the related products, and divert the efforts of our technical and management personnel, regardless of the outcome of such litigation.

If necessary, we may seek licenses to intellectual property of others. However, we can give no assurance to you that we will be able to obtain such licenses or that the terms of any such licenses will be acceptable to us. Our failure to obtain a license from a third party for its intellectual property that is necessary for us to make or sell any of our products could cause us to incur substantial liabilities and to suspend the manufacture or shipment of products or use of processes requiring the use of such intellectual property.

Our current and former manufacturing operations are subject to increasingly stringent health, safety and environmental requirements.

We use and generate hazardous substances in our manufacturing operations. In addition, both the properties on which we currently operate and those on which we have ceased operations are and have been used for industrial purposes. Further, our manufacturing operations involve risks of personal injury or death. We are subject to increasingly stringent environmental, health and safety laws and regulations relating to our current and former properties, neighboring properties, and our current raw materials, products, and operations. These laws and regulations provide for substantial fines and criminal sanctions for violations and sometimes require evaluation and registration or the installation of costly pollution control or safety equipment or costly changes in operations to limit pollution or decrease the likelihood of injuries. It is also possible that the impact of such regulations on our suppliers could affect the availability and cost of our raw materials. In addition, we may become subject to potential material liabilities for the investigation and cleanup of contaminated properties, for claims alleging personal injury or property damage resulting from exposure to or releases of hazardous substances, or for personal injury as a result of an unsafe workplace. Further, alleged noncompliance with or stricter enforcement of, or changes in interpretations of, existing laws and regulations, adoption of more stringent new laws and regulations, discovery of previously unknown contamination or imposition of new or increased requirements could require us to incur costs or become the basis of new or increased liabilities that could be material.

We may face risks related to greenhouse gas emission limitations and climate change.

There is growing scientific, political and public concern that emissions of greenhouse gases (“GHG”) are altering the atmosphere in ways that are affecting, and are expected to continue to affect, the global climate. Legislators, regulators and others, as well as many companies, are considering ways to reduce GHG emissions. GHG emissions are regulated in the European Union via an Emissions Trading Scheme (“ETS”), otherwise known as a “Cap and Trade” program. In the United States, environmental regulations issued in 2009 and 2010 require reporting of GHG emissions by defined industries, activities and suppliers, and regulate GHG as a pollutant covered under the New Source Review, Prevention of Significant Deterioration (“PSD”) and Title V Operating Permit programs of the Clean Air Act Amendments. It is possible that some form of regulation of GHG emissions will also be forthcoming in other countries in which we operate or market our products. Regulation of GHG emissions could impose additional costs, both direct and indirect, on our business, and on the businesses of our customers and suppliers, such as increased energy and insurance rates, higher taxes, new environmental compliance program expenses, including capital improvements, environmental monitoring, and the purchase of emission credits, and other administrative costs necessary to comply with current requirements and potential future requirements or limitations that may be imposed, as well as other unforeseen or unknown costs. To the extent that similar requirements and limitations are not imposed globally, such regulation may impact our ability to compete with companies located in countries that do not have such requirements or do not impose such limitations. The company may also realize a change in competitive position relative to industry peers, changes in prices received for products sold, and changes to profit or loss arising from increased or decreased demand for products produced by the company. The impact of any future GHG regulatory

requirements on our global business will be dependent upon the design of the regulatory schemes that are ultimately adopted and, as a result, we are unable to predict their significance to our operations at this point in time.
The potential physical impacts of climate change on the company's operations are uncertain and will likely be particular to the geographic circumstances. These physical impacts may include changes in rainfall and storm patterns,

Table of Contents

shortages of water or other natural resources, changing sea levels, and changing global average temperatures. For instance, our Seadrift facility and our Calais facility, are located in geographic areas less than 50 feet above sea level. As a result, any future rising sea levels could have an adverse impact on their operations and on their suppliers. Due to these uncertainties, any future physical effects of climate change may or may not adversely affect the operations at each of our production facilities, the availability of raw materials, the transportation of our products, the overall costs of conducting our business, and our financial performance.

We face certain litigation and legal proceedings risks that could harm our business.

We are involved in various product liability, occupational, environmental, and other legal claims, demands, lawsuits and other proceedings arising out of or incidental to the conduct of our business. The results of these proceedings are difficult to predict. Moreover, many of these proceedings do not specify the relief or amount of damages sought. Therefore, as to a number of the proceedings, we are unable to estimate the possible range of liability that might be incurred should these proceedings be resolved against us. Certain of these matters involve types of claims that, if resolved against us, could give rise to substantial liability, which could have a material adverse effect on our financial position, liquidity and results of operations.

We are dependent on supplies of raw materials and energy. Our results of operations could deteriorate if that supply is substantially disrupted for an extended period.

We purchase raw materials and energy from a variety of sources. In many cases, we purchase them under short term contracts or on the spot market, in each case at fluctuating prices. The availability and price of raw materials and energy may be subject to curtailment or change due to:

- limitations which may be imposed under new legislation or regulation;
- supplier's allocations to meet demand of other purchasers during periods of shortage (or, in the case of energy suppliers, extended cold weather);
- interruptions or cessations in production by suppliers, and
- market and other events and conditions.

Petroleum and coal products, including decant oil, petroleum coke and pitch, our principal raw materials, and energy, particularly natural gas, have been subject to significant price fluctuations.

We have in the past entered into, and may continue in the future to enter into, derivative contracts and short duration fixed rate purchase contracts to effectively fix a portion of our exposure to certain products.

A substantial increase in raw material or energy prices which cannot be mitigated or passed on to customers or a continued interruption in supply, particularly in the supply of decant oil, petroleum coke or energy, would have a material adverse effect on us.

Seadrift could be impacted by a reduction in the availability of low sulfur decant oil or an increase in the pricing of needle coke feedstocks.

Seadrift uses low sulfur decant oil in the manufacture of needle coke. There is no assurance that Seadrift will always be able to obtain an adequate quantity of suitable feedstocks or that capital would be available to install equipment to allow for utilization of higher sulfur decant oil, which is more readily available in the United States, in the event that suppliers of lower sulfur decant oil were to become more limited in the future. Seadrift purchases approximately 1.5 million barrels of low sulfur decant oil annually. The prices paid by Seadrift for such feedstocks are governed by the market for heavy fuel oils, which prices can fluctuate widely for various reasons including, among other things, worldwide oil shortages and cold winter weather. Seadrift's needle coke is used in the manufacture of graphite electrodes, the price of which is subject to rigorous industry competition thus restricting Seadrift's ability to pass through raw material price increases.

We engage in acquisitions and may encounter unexpected difficulties identifying, pricing or integrating these businesses.

We have pursued growth, in part, through strategic acquisitions that are intended to complement or expand our businesses, and expect to continue to do so in the future. The success of this strategy will depend on our ability

Table of Contents

to identify, price, finance and complete these transactions. Success will also depend on our ability to integrate the businesses acquired in these transactions. We may encounter unexpected difficulties in completing and integrating acquisitions with our existing operations, and in managing strategic investments. Furthermore, we may not realize the degree, or timing, of benefits we anticipated when we first entered into a transaction. Any of the foregoing could adversely affect our financial position, liquidity and results of operations.

We have significant goodwill on our balance sheet that is sensitive to changes in the market which could result in impairment charges.

Our annual impairment test of goodwill was performed in the fourth quarter. The estimated fair values of our reporting units were based on discounted cash flow models derived from internal earnings forecasts and assumptions. The assumptions and estimates used in these valuations incorporated the current and expected economic environment. This test resulted in a goodwill impairment charge to our needle coke reporting unit of $75.7 million in 2014. Our graphite electrode reporting unit's fair value exceeds its fair value by over 10% (see Note 4 "Goodwill and Other Intangible Assets"). A further deterioration in the global economic environment or in any of the input assumptions in our calculation could adversely affect the fair value of our reporting units and result in further impairment of some or all of the goodwill on the balance sheet. See Item 7 "Management's Discussion and Analysis of Financial Conditions and Results of Operations-Critical Accounting Policies" for further information regarding goodwill.

Our results of operations could deteriorate if our manufacturing operations were substantially disrupted for an extended period.

Our manufacturing operations are subject to disruption due to extreme weather conditions, floods, hurricanes and tropical storms and similar events, major industrial accidents, cybersecurity attacks, strikes and lockouts, adoption of new laws or regulations, changes in interpretations of existing laws or regulations or changes in governmental enforcement policies, civil disruption, riots, terrorist attacks, war, and other events. We cannot assure you that no such events will occur. If such an event occurs, it could have a material adverse effect on us.

We have non-dollar-denominated intercompany loans and have had in the past, and may in the future have, foreign currency financial instruments and interest rate swaps and caps. The related gains and losses have in the past been, and may in the future be, significant.

As part of our cash management, we have non-dollar denominated intercompany loans between our subsidiaries. These loans are deemed to be temporary and, as a result, remeasurement gains and losses on these loans are recorded as currency gains / losses in other income (expense), net, on the Consolidated Statements of Income.

Additionally, we have in the past entered into, and may in the future enter into, interest rate swaps and caps to attempt to manage interest rate expense. We have also in the past entered into, and may in the future enter into, foreign currency financial instruments to attempt to hedge global currency exposures. We may purchase or sell these financial instruments, and open and close hedges or other positions, at any time. Changes in currency exchange rates or interest rates have in the past resulted, and may in the future result, in significant gains or losses with respect thereto. These instruments are marked-to-market monthly and gains and losses thereon are recorded in Other Comprehensive Income in the Consolidated Balance Sheets.

There may be volatility in our results of operations between quarters.

Sales of our products fluctuate from quarter to quarter due to such factors as changes in economic conditions, changes in competitive conditions, scheduled plant shutdowns by customers, national vacation practices, changes in customer production schedules in response to seasonal changes in energy costs, weather conditions, strikes and work stoppages at customer plants and changes in customer order patterns including those in response to the announcement of price increases or price adjustments. We have experienced, and expect to continue to experience, volatility with respect to demand for and prices of our industrial material products, specifically graphite electrodes, both globally and regionally. We have also experienced volatility with respect to prices of raw materials and energy, and we expect to experience volatility in such prices in the future. Accordingly, results of operations for any quarter are not necessarily indicative of the results of operations for a full year.

Table of Contents

The graphite and carbon industry is highly competitive. Our market share, net sales or net income could decline due to vigorous price and other competition.

Competition in the graphite and carbon products industry (other than, generally, with respect to new products) is based primarily on price, product differentiation and quality, delivery reliability, and customer service. Electrodes, in particular, are subject to rigorous price competition. In such a competitive market, changes in market conditions, including customer demand and technological development, could adversely affect our competitiveness, sales and/or profitability.

Competition with respect to new products is, and is expected to be, generally based primarily on product innovation, price, performance and cost effectiveness as well as customer service.

Competition could prevent implementation of price increases, require price reductions or require increased spending on research and development, marketing and sales that could adversely affect us.

We have significant deferred income tax assets in multiple jurisdictions, and we may not be able to realize any benefits from those assets.

As of December 31, 2014 we had $179.8 million of gross deferred income tax assets, of which $95.7 million required a valuation allowance. In addition, we had $74.3 million of gross deferred income tax liabilities. Our valuation allowance means that we do not believe that these assets are more likely than not to be realized. Until we determine that it is more likely than not that we will generate sufficient taxable income to realize our deferred income tax assets, income tax benefits in each current period will be fully reserved.

Our valuation allowance, which is predominantly in the U.S. tax jurisdiction, does not affect our ability and intent to utilize the deferred income tax assets as we generate sufficient future profitability. We are executing current strategies and developing future strategies, to improve sales, reduce costs and improve our capital structure in order to improve U.S. taxable income of the appropriate character to a level sufficient to fully realize these benefits in future years.

RISKS RELATING TO OUR SECURITIES

GTI is a holding company and all of its operations are conducted through its subsidiaries.

GTI is a holding company and derives substantially all of its cash flow from its subsidiaries. Since GTI's operations are conducted through its subsidiaries, its cash flow and its consequent ability to service its indebtedness, including the Senior Notes, is dependent upon the earnings of its subsidiaries and the distribution of those earnings to GTI or upon the payments of funds by those subsidiaries to GTI or the repayment of intercompany indebtedness owed to GTI. GTI's subsidiaries are separate and distinct legal entities with trade payables and other liabilities. In addition to any statutory restrictions, the payment of dividends and the making of distributions and the making of loans and advances to GTI by its subsidiaries are subject to contractual restrictions provided in the Revolving Facility. In addition, any right GTI may have to receive assets of any of its subsidiaries upon their liquidation or reorganization (and the consequent right of the holders of the Senior Notes to participate in those assets) is effectively subordinated to the claims of such subsidiary's creditors, including trade creditors.

The Senior Notes are structurally subordinated to all of the existing and future liabilities, including trade payables, of GTI's subsidiaries that are not, or do not become, guarantors of the Senior Notes.

The Senior Notes are not guaranteed by all of GTI's subsidiaries or any of GTI's foreign subsidiaries. The Senior Notes are therefore structurally subordinated to all of the existing and future liabilities, including trade payables, of any non-guarantor subsidiary such that, in the event of an insolvency, liquidation, reorganization, dissolution or other winding up of any such subsidiary, all of such subsidiary's creditors (including trade creditors and preferred stockholders, if any) would be entitled to payment in full out of such subsidiary's assets before the holders of the Senior Notes would be entitled to any payment.

As of December 31, 2014, GTI's subsidiaries that are not guarantors of the Senior Notes had total liabilities, including trade payables (but excluding intercompany liabilities), of approximately $153.5 million or 19% of our total liabilities, and total assets (excluding intercompany receivables) of approximately $918.0 million, or 50% of our total assets. In addition, for the year ended December 31, 2014, our subsidiaries that are not guarantors of the Senior Notes generated approximately $662.3 million, or 61%, of our consolidated revenues and approximately $46.4 million of our consolidated operating loss of $256.4 million.

26

Table of Contents

Under certain circumstances, subsidiary guarantees may be released.

Those subsidiaries that provide guarantees of the Senior Notes will be released from such guarantees upon the occurrence of certain events, including the following:

- the unconditional release or discharge of any guarantee or indebtedness that resulted in the creation of the guarantee of the Senior Notes by such subsidiary guarantor;
- the sale or other disposition, including by way of merger or consolidation or the sale of its capital stock following which such subsidiary guarantor is no longer a subsidiary of the Company; or
- GTI's exercise of its legal defeasance option or its covenant defeasance option as described in the indenture applicable to the Senior Notes.

If any such subsidiary guarantee is released, no holder of the Senior Notes will have a claim as a creditor against any such subsidiary and the indebtedness and other liabilities, including trade payables and preferred stock, if any, of such subsidiary will be effectively senior to the claim or any holders of the Senior Notes.

We may incur substantially more debt ranking senior or equal in right of payment with the Senior Notes, including secured debt, which would increase the risks described herein.

The agreements relating to our debt, including the Revolving Facility, limit but do not prohibit our ability to incur additional debt, and the amount of debt that we could incur could be substantial. Accordingly, we could incur significant additional debt in the future, including additional debt under the Revolving Facility. Much of this additional debt could constitute secured debt, to which the Senior Notes would be effectively subordinated to the extent of the value of the collateral securing such debt (the collateral securing the Revolving Facility consists of substantially all of the assets of GTI and its U.S. subsidiaries and certain assets of certain of GTI's foreign subsidiaries). At December 31, 2013, approximately $302.0 million of unused borrowing capacity under the Revolving facility (after considering financial covenants restrictions and the outstanding letters of credit of approximately $5.3 million). In addition, if we form or acquire any subsidiaries in the future, those subsidiaries also could incur debt, which debt would be effectively senior to the Senior Notes if those subsidiaries are not required to guarantee the Senior Notes. If new debt is added to our current debt levels, the related risks that we now face could intensify.

In addition, certain types of liabilities are not considered “Indebtedness” under the Revolving Facility, and the Revolving Facility does not impose any limitation on the amount of liabilities incurred by the subsidiaries, if any, that might be designated as “unrestricted subsidiaries.”

Additionally, our Senior Subordinated Notes provide that they will be subordinated to certain indebtedness incurred by us so long as, on the date we incur such debt and after giving effect thereto, our leverage ratio (as defined therein) is below 4.00 to 1.00. As a result, our Senior Subordinated Notes will not be subordinated to any indebtedness if, as a result of its incurrence, our leverage ratio exceeds 4.00 to 1.00. In addition, to the extent that we grant a security interest to secure any such indebtedness, our Senior Subordinated Notes must be equally and ratably secured with such indebtedness. After giving effect to the offering of the Senior Notes and the use of proceeds therefrom our leverage ratio was below 4.00 to 1.00. As a result, the Senior Subordinated Notes are subordinated to the Senior Notes. In addition, the indenture governing the Senior Notes provides that neither we, nor any of our subsidiaries, may grant a security interest for the benefit of the holders of the Senior Subordinated Notes unless we or the applicable subsidiary equally and ratably secure the Senior Notes.

The ability of holders of Senior Notes to require us to repurchase Senior Notes as a result of a disposition of “substantially all” of our assets may be uncertain.

The definition of change of control in the indenture governing the Senior Notes includes a phrase relating to the sale of “all or substantially all” of our assets. Although there is a limited body of case law interpreting the phrase “substantially all,” there is no precise established definition of such phrase under applicable law. Accordingly, the ability of a holder of Senior Notes to require us to repurchase its Senior Notes as a result of a sale or other disposition of less than all of our assets to another person or group may be uncertain.

Table of Contents

If we default on our obligations to pay our other indebtedness, we may not be able to make payments on the Senior Notes.

Any default under the agreements governing our indebtedness, including a default under the Revolving Facility, that is not waived by the required lenders, and the remedies sought by the holders of such indebtedness, could prevent us from paying principal, premium, if any, and interest on the Senior Notes and substantially decrease the market value of the Senior Notes. If we are unable to generate sufficient cash flow and are otherwise unable to obtain funds necessary to meet required payments of principal, premium, if any, and interest on our indebtedness, or if we otherwise fail to comply with the various covenants, including financial and operating covenants in the instruments governing our indebtedness (including covenants in the Revolving Facility and the indenture that governs the Senior Notes), we could be in default under the terms of the agreements governing such indebtedness, including the Revolving Facility and the indenture governing the Senior Notes. In the event of such default:

- the holders of such indebtedness may be able to cause all of our available cash flow to be used to pay such indebtedness and, in any event, could elect to declare all the funds borrowed thereunder to be due and payable, together with accrued and unpaid interest;
- the lenders under the Revolving Facility could elect to terminate their commitments thereunder, cease making further loans and institute foreclosure proceedings against our assets; and
- we could be forced into bankruptcy or liquidation.

Upon any such bankruptcy filing, we would be stayed from making any ongoing payments on the Senior Notes, and the holders of the Senior Notes would not be entitled to receive post-petition interest or applicable fees, costs or charges, or any “adequate protection” under Title 11 of the United States Code (the “Bankruptcy Code”). Furthermore, if a bankruptcy case were to be commenced under the Bankruptcy Code, we could be subject to claims, with respect to any payments made within 90 days prior to commencement of such a case, that we were insolvent at the time any such payments were made and that all or a portion of such payments, which could include repayments of amounts due under the Senior Notes, might be deemed to constitute a preference, under the Bankruptcy Code, and that such payments should be voided by the bankruptcy court and recovered from the recipients for the benefit of the entire bankruptcy estate. Also, in the event that we were to become a debtor in a bankruptcy case seeking reorganization or other relief under the Bankruptcy Code, a delay and/or substantial reduction in payment under the Senior Notes may otherwise occur. If our operating performance declines, we may in the future need to obtain waivers from the required lenders under the Revolving Facility to avoid being in default. If we breach our covenants under the Revolving Facility and seek a waiver, we may not be able to obtain a waiver from the required lenders. If this occurs, we would be in default under the Revolving Facility, the lenders could exercise their rights, as described above, and we could be forced into bankruptcy or liquidation.

Federal and state statutes could allow a court to void the Senior Notes or any of our subsidiaries' guarantees of the Senior Notes under fraudulent transfer laws and require noteholders to return payments received by us or the subsidiary guarantors to us or the subsidiary guarantors or to fund for the benefit of their respective creditors or subordinate the Senior Notes or the guarantees to other claims of us or the subsidiary guarantors.

Under the federal bankruptcy laws and comparable provisions of state fraudulent transfer laws, the Senior Notes or any of the guarantees thereof could be voided, or claims with respect to the Senior Notes or any of the guarantees could be subordinated to all other debts of GTI or the subsidiary guarantors. In addition, a bankruptcy court could void (i.e., cancel) any payments by GTI or the subsidiary guarantors pursuant to their guarantees and require those payments to be returned to GTI or the subsidiary guarantors or to a fund for the benefit of us or their respective creditors, or subordinate the Senior Notes or the guarantees to other claims of GTI or the subsidiary guarantors. The bankruptcy court might take these actions if it found, among other things, that GTI or the applicable subsidiary guarantor:

- received less than reasonably equivalent value or fair consideration for the issuance of the Senior Notes or the incurrence of its guarantee; and
- was (or was rendered) insolvent by such issuance or such incurrence;
- was engaged or about to engage in a business or transaction for which its assets constituted unreasonably small capital to carry on its business;

Table of Contents

- intended to incur, or believed that it would incur, obligations beyond its ability to pay as the obligations matured; or
- was a defendant in an action for money damages, or had a judgment for money damages docketed against it and, in either case, after final judgment, the judgment was unsatisfied.

A court would likely find that GTI or a subsidiary guarantor received less than fair consideration or reasonably equivalent value for the Senior Notes or its guarantee to the extent that it did not receive direct or indirect substantial benefit from the issuance of the Senior Notes or the incurrence of the guarantee. A court could also void the Senior Notes or any guarantee if it found that GTI or the subsidiary guarantor issued the Senior Notes or incurred the guarantee with actual intent to hinder, delay, or defraud any present or future creditors. Although courts in different jurisdictions measure solvency differently, in general, an entity would be deemed insolvent if the sum of its debts, including contingent and unliquidated debts, exceeds the fair value of its assets or if the present fair saleable value of its assets is less than the amount that would be required to pay the expected liability on its debts, including contingent and unliquidated debts, as they become due. We cannot predict what standard a court would apply in order to determine whether any of the Issuer or a subsidiary guarantor was insolvent as of the relevant date or whether, regardless of the method of valuation, a court would determine that the subsidiary guarantor was insolvent on that date, or whether a court would determine that the payments thereunder constituted fraudulent transfers or conveyances on other grounds. If the issuance of the Senior Notes or the incurrence of the guarantee is deemed to be a fraudulent transfer, it could be voided altogether, or it could be subordinated to all other debts of GTI or the subsidiary guarantor, as applicable. In such case, any payment by GTI or the applicable subsidiary guarantor pursuant to the Senior Notes or its guarantee could be required to be returned to us or the applicable subsidiary guarantor or to a fund for the benefit of our or their respective creditors. Moreover, in such a case a court could subordinate the Senior Notes or guarantees to other claims of us or the subsidiary guarantor. If a guarantee is voided or held unenforceable for any other reason, holders of the Senior Notes would cease to have a claim against the subsidiary guarantor based on the guarantee and would be creditors only of GTI and any subsidiary guarantor whose guarantee was not similarly voided or otherwise held unenforceable.

Each guarantee will contain a provision intended to limit the subsidiary guarantor's liability to the maximum amount that it could incur without rendering the incurrence of obligations under its guarantee a fraudulent transfer. This provision may not be effective to protect the guarantees from being voided or subordinated under fraudulent transfer or conveyance law.

To the extent that outstanding options to purchase shares of our common stock are exercised or other equity awards are granted under our incentive plans, the ownership interests of our other stockholders will be diluted.

We have issued in the past, and expect to issue in the future, stock options, restricted stock units and performance share award units to directors, executive officers and other key employees under our 2005 Long-Term Equity Incentive Plan and other benefit plans. Other holders of our common stock may experience dilution upon the exercise of options to purchase shares of our common stock, or the issuance of future equity awards, granted under these equity incentive plans. Many of these awards vest upon the occurrence of events constituting a change of control, as defined under the relevant plan documents.

Our stock price may be volatile due to the nature of our business as well as the nature of the securities markets, which could affect the value of an investment in our common stock.

Companies that have experienced volatility in the market price of their stock have been the subject of securities class action litigation which involves substantial costs and a diversion of those companies' management's attention and resources. Many factors may cause the market price for our common stock to decline or fluctuate, perhaps substantially, including:

- failure of net sales, results of operations or cash flows from operations to meet the expectations of securities analysts or investors;
- recording of additional restructuring, impairment or other charges or costs;
- downward revisions in revenue, earnings or cash flow estimates of securities analysts;
- downward revisions or announcements that indicate possible downward revisions in the ratings on debt instruments that we may have outstanding from time to time, if any;

29

Table of Contents

- speculation in the press or investor perception concerning our industry or our prospects; and
- changes in general capital market conditions.

Forward Looking Statements

Forward Looking Statements and Risks. This Report contains forward looking statements. In addition, we or our representatives have made or may make forward looking statements on telephone or conference calls, by webcasts or emails, in person, in presentations or written materials, or otherwise. These include statements about such matters as future, targeted or expected (or the impact of current, future, expected or targeted): operational and financial performance; changes in production capacity in our operations and our competitors' or customers' operations and the utilization rates of that capacity; growth rates for, prices and sales of, and demand for, our products and our customers' products; costs of materials and production, including increases or decreases therein, our ability to pass on any such increases in our product prices or impose surcharges thereon, or customer or market demand to reduce our prices due to such decreases; changes in customer order patterns due to changes in economic conditions; productivity, business process and operational initiatives; our position in markets we serve; financing and refinancing activities; investments and acquisitions and the performance of the businesses underlying such acquisitions and investments; employment and contributions of key personnel; employee relations and collective bargaining agreements covering many of our operations; tax rates; capital expenditures and changes therein; nature and timing of restructuring and rationalization charges and payments; stock repurchase activities; supply chain management; customer and supplier contractual provisions and related opportunities and issues; competitive activities; strategic plans, initiatives and business projects; regional and global economic and industry market conditions, the timing and magnitude of changes in such conditions; interest rate management activities; currency rate management activities; deleveraging activities; rationalization, restructuring, realignment, strategic alliance, raw material and supply chain, technology development and collaboration, investment, acquisition, venture, operational, tax, financial and capital projects; legal proceedings, investigations, contingencies, and environmental compliance including any regulatory initiatives with respect to greenhouse gas emissions; consulting projects; potential offerings, sales and other actions regarding debt or equity securities of us or our subsidiaries; and costs, working capital, revenues, business opportunities, debt levels, cash flows, cost savings and reductions, margins, earnings and growth. The words “will,” “may,” “plan,” “estimate,” “project,” “believe,” “anticipate,” “expect,” “intend,” “should,” “would,” “could,” “target,” “goal,” “continue to,” “positioned to” and sim expressions, or the negatives thereof, identify some of these statements.

Our expectations and targets are not predictors of actual performance and historically our performance has deviated, often significantly, from our expectations and targets. Actual future events and circumstances (including future results and trends) could differ materially, positively or negatively, from those set forth in these statements due to various factors. These factors include:

- the possibility that additions to capacity for producing EAF steel, increases in overall EAF steel production capacity, and increases or other changes in steel production may not occur or may not occur at the rates that we anticipate or may not be as geographically disbursed as we anticipate;
- the possibility that increases or decreases in graphite electrode manufacturing capacity (including growth by producers in developing countries), competitive pressures (including changes in, and the mix, distribution, and pricing of, competitive products), reduction in specific consumption rates, increases or decreases in customer inventory levels, or other changes in the graphite electrode markets may occur, which may impact demand for, prices or unit and dollar volume sales of graphite electrodes and growth or profitability of our graphite electrodes business;
- the possible failure of changes in EAF steel production or graphite electrode production to result in stable or increased, or offset decreases in, graphite electrode demand, prices, or sales volume;
- the possibility that a determination that we have failed to comply with one or more export controls or trade sanctions to which we are subject with respect to products or technology exported from the United States or other jurisdictions could result in civil or criminal penalties, denial of export privileges and loss of revenues from certain customers;
- the possibility that, for all of our product lines, capital improvement and expansion in our customers' operations or increases in demand for their products may not occur or may not occur at the rates that we anticipate or the

Table of Contents

demand for their products may decline, which may affect their demand for the products we sell to them, which could affect our profitability and cash flows as well as the recoverability of our assets;

- the possibility that assumptions related to future expectations of financial performance materially change and impact our goodwill and long-lived asset carrying values;
- the possibility that our financial assumptions and expectations materially change as a result of government or state-owned government subsidies, incentives and trade barriers;
- the possibility that current economic disruptions or other conditions may result in idling or permanent closing of blast furnace capacity or delay of blast furnace capacity additions or replacements which may affect demand and prices for our refractory products;
- the possibility that continued global consolidation of the world's largest steel producers could impact our business or industry;
- the possibility that average graphite electrode revenue per metric ton in the future may be different than current spot or market prices due to changes in product mix, changes in currency exchange rates, changes in competitive market conditions or other factors;
- the possibility that price increases, adjustments or surcharges may not be realized or that price decreases may occur;
- the possibility that current challenging economic conditions and economic demand reduction may continue to impact our revenues and costs;
- the possibility that U.S., European, Chinese, or other governmental monetary or fiscal policy may adversely affect global economic activity and demand for our products;
- the possibility that potential future cuts in defense spending by the United States government as a part of efforts to reduce federal budget deficits could reduce demand for certain of our products and associated revenue;
- the possibility that decreases in prices for energy and raw materials may lead to downward pressure on prices for our products and delays in customer orders for our products as customers anticipate possible future lower prices;
- the possibility that customers may delay or cancel orders;
- the possibility that we may not be able to reduce production costs or delay or cancel raw material purchase commitments;
- the possibility that economic, political and other risks associated with operating globally, including national and international conflicts, terrorist acts, political and economic instability, civil unrest, community activism and natural or nuclear calamities might interfere with our supply chains, customers or activities in a particular location;
- the possibility that reductions in customers' production, increases in competitors' capacity, competitive pressures, or other changes in other markets we serve may occur, which may impact demand for, prices of or unit and dollar volume sales of, our other products, or growth or profitability of our other product lines, or change our position in such markets;
- the possibility that we will not be able to hire and retain key personnel, maintain appropriate relations with unions, associations and employees or to renew or extend our collective bargaining or similar agreements on reasonable terms as they expire or do so without a work stoppage or strike;
- the possibility that an adverse determination in litigation pending in Brazil involving disputes related to the proper interpretation of certain collectively bargained wage increase provisions applicable to both us and other employers in the Bahia region might result in the filing of claims against our Brazilian subsidiary;
- the possibility that a Brazilian graphite electrode antitrust investigation could result in material fines or penalties;

Table of Contents

- the possibility of delays in or failure to achieve successful development and commercialization of new or improved Engineered Solutions products or that such products or solutions could be subsequently displaced by other products or technologies;
- the possibility that we will fail to develop new customers or applications for our Engineered Solutions products or such new product applications will not be adopted by the market place;
- the possibility that our manufacturing capabilities may not be sufficient or that we may experience delays in expanding or fail to expand our manufacturing capacity to meet demand for existing, new or improved products;
- the possibility that we may propose acquisitions or divestitures in the future, that we may not complete the acquisitions or divestitures, and that investments and acquisitions that we may make in the future may not be successfully integrated into our business or provide the performance or returns expected or that divestitures may not generate the proceeds anticipated;
- the possibility that challenging conditions or changes in the capital markets will limit our ability to undertake refinancing activities or obtain financing for growth and other initiatives, on acceptable terms or at all;
- the possibility that conditions or changes in the global equity markets may have a material impact on our future pension funding obligations and liabilities on our balance sheet;
- the possibility that the amount or timing of our anticipated capital expenditures may be limited by our financial resources or financing arrangements or that our ability to complete capital projects may not occur timely enough to adapt to changes in market conditions or changes in regulatory requirements;
- the possibility that the actual outcome of uncertainties associated with assumptions and estimates using judgment when applying critical accounting policies and preparing financial statements may have a material impact on our results of operations or financial position;
- the possibility that we may be unable to protect our intellectual property or may infringe the intellectual property rights of others, resulting in damages, limitations on our ability to produce or sell products or limitations on our ability to prevent others from using that intellectual property to produce or sell products;
- the occurrence of unanticipated events or circumstances or changing interpretations and enforcement agendas relating to legal proceedings or compliance programs;
- the occurrence of unanticipated events or circumstances or changing interpretations and enforcement agendas relating to health, safety or environmental compliance or remediation obligations or liabilities to third parties or relating to labor relations;
- the possibility that new or expanded regulatory initiatives with respect to greenhouse gas emissions could increase the capital intensive nature of our business and add to our costs of production;
- the possibility that our provision for income taxes and effective income tax rate or cash tax rate may fluctuate significantly due to (i) changes in applicable tax rates or laws, (ii) changes in the sources of our income, (iii) changes in tax planning, (iv) new or changing interpretations of applicable regulations, (v) changes in profitability, (vi) changes in our estimate of our future ability to use foreign tax credits or other tax attributes, and (vii) other factors;
- the possibility of changes in interest or currency exchange rates or in inflation or deflation;
- the possibility that our outlook could be significantly impacted by, among other things, developments in North Africa, the Middle East, North Korea, and other areas of concern, the occurrence of further terrorist acts and developments resulting from the war on terrorism;
- the possibility that interruption in our major raw material, energy or utility supplies due to, among other things, natural or nuclear disasters, process interruptions, actions by producers and capacity limitations, may adversely affect our ability to manufacture and supply our products or result in higher costs;

Table of Contents

- the possibility that the magnitude of changes in the cost of major raw materials, energy or utility suppliers by reason of shortages, changes in market pricing, pricing terms in applicable supply contracts, or other events may adversely affect our ability to manufacture and supply our products or result in higher costs;
- the possibility of interruptions in production at our facilities due to, among other things, critical equipment failure, which may adversely affect our ability to manufacture and supply our products or result in higher costs;
- the possibility that we may not achieve the earnings or other financial or operational metrics that we provide as guidance from time to time;
- the possibility that the anticipated benefits from rationalizations and other cost savings initiatives may be delayed or may not occur, may vary in cost or may result in unanticipated disruptions;
- the possibility of security breaches affecting our information technology systems;
- the possibility that our disclosure or internal controls may become inadequate because of changes in conditions or personnel or that those controls may not operate effectively and may not prevent or detect misstatements or errors;
- the amount, prices and timing of purchases, if any, of shares purchased pursuant to our share repurchase program;
- the possibility that severe economic conditions may adversely affect our business, liquidity or capital resources;
- the possibility that delays may occur in the financial statement closing process;
- the possibility of changes in performance that may affect financial covenant compliance or funds available for borrowing; and
- other risks and uncertainties, including those described elsewhere in this Report or our other SEC filings, as well as future decisions by us.

Occurrence of any of the events or circumstance described above could also have a material adverse effect on our business, financial condition, results of operations or cash flows or the market price of our common stock.

No assurance can be given that any future transaction about which forward looking statements may be made will be completed or as to the timing or terms of any such transaction.

All subsequent written and oral forward looking statements by or attributable to us or persons acting on our behalf are expressly qualified in their entirety by these factors. Except as otherwise required to be disclosed in periodic reports required to be filed by public companies with the SEC pursuant to the SEC's rules, we have no duty to update these statements.

Item 1B. Unresolved Staff Comments

- Not applicable.

Table of Contents

Item 2. Properties
We currently operate the following facilities, which are owned or leased as indicated.

Location of Facility	Primary Use	Owned or Leased
U.S.		
Biddeford, Maine (2 facilities)	Advanced Composite Materials Manufacturing (both)	Owned (both)
Presque Isle, Maine	Advanced Composite Materials Manufacturing	Leased
Independence, Ohio	Corporate Headquarters	Leased
Brooklyn Heights, Ohio	Innovation and Technology Center	Leased
Parma, Ohio	Technology Center	Owned
Lakewood, Ohio	Advanced Electronics Technologies Manufacturing Facility and Sales Office	Owned
Sharon Center, Ohio	Advanced Electronics Technologies Manufacturing Facility	Owned
St. Marys, Pennsylvania	Graphite Electrode Manufacturing Facility	Owned
Columbia, Tennessee	Advanced Graphite Materials and Refractory Products Manufacturing, Warehousing Facility and Sales Office	Owned
Lawrenceburg, Tennessee	Refractory Products Manufacturing Facility	Owned
Port Lavaca, Texas	Needle Coke Manufacturing Facility	Owned
Clarksburg, West Virginia	Advanced Graphite Materials Manufacturing Facility, Machine Shop and Sales Office	Owned
Europe		
Calais, France	Graphite Electrode Manufacturing Facility	Owned
Notre Dame, France	Advanced Graphite Materials Machine Shop and Sales Office	Owned
Malonno, Italy	Advanced Graphite Materials Manufacturing and Machine Shop and Sales Office	Owned
Moscow, Russia	Sales Office	Leased
Pamplona, Spain	Graphite Electrode Manufacturing Facility and Sales Office	Owned
Bussigny, Switzerland	Sales Office	Leased

Other International		
Salvador Bahia, Brazil	Graphite Electrode Machine Shop	Owned
Sao Paulo, Brazil	Sales Office	Leased
Beijing, China	Sales Office	Leased
Hong Kong, China	Sales Office	Leased
Shanghai, China	Sales Office	Leased
Monterrey, Mexico	Graphite Electrode Manufacturing Facility and Sales Office	Owned
Meyerton, South Africa	Refractory Machine Shop and Sales Office	Owned

During 2013 and 2014, we announced rationalization plans which will reduce our manufacturing facilities and graphite electrode capacity. These plans ended the manufacturing of graphite electrodes at our facilities in Brazil and South Africa, as well as a machine shop in Russia. We have also announced the closure of our Presque Isle, Maine facility which is expected to cease operations in the first quarter of 2015. See Note 2 to the financial statements for a full discussion of our rationalization plans.

We entered into leases in November 2014 to move our Corporate Headquarters to new leased facilities in Independence, Ohio and our Research and Development team to a new leased facility in Brooklyn Heights, Ohio. We moved into these locations in the first quarter of 2015. We are currently evaluating our options for our former headquarter

Table of Contents

and research and development facility in Parma, Ohio. Other than the assets discussed therein, we believe that our facilities, which are of varying ages and types of construction, are in good condition, are suitable for our operations and generally provide sufficient capacity to meet our requirements for the foreseeable future.

Item 3. Legal Proceedings

We are involved in various investigations, lawsuits, claims, demands, environmental compliance programs, labor disputes and other legal proceedings arising out of or incidental to the conduct of our business. While it is not possible to determine the ultimate disposition of each of these matters and proceedings, we do not believe that their ultimate disposition will have a material adverse effect on our financial position, results of operations or cash flows.

There is litigation pending in Brazil involving disputes arising out of the interpretation of certain collectively bargained wage increase provisions applicable in 1989 and 1990 to employers (including our subsidiary in Brazil) in the Bahia region of Brazil. We are not currently party to any of the litigation involving the interpretation of the wage increase provisions at issue; however, companies in Brazil have recently settled claims arising out of these provisions. While the most recent ruling on the subject by the Supreme Court of Brazil has held that such provisions are not enforceable, and thus employers are not liable for the wage increases claimed on behalf of employees, further proceedings are pending seeking to reverse that ruling and there have been changes in the composition of the Supreme Court in the interim. While we cannot predict the outcome of the pending proceedings, if the Supreme Court reverses its prior decision and declares the wage increase provisions enforceable, claims could be filed against our Brazilian subsidiary which could become substantial.

On October 8, 2014, the General Superintendent of the Administrative Council of Economic Defense in Brazil announced that the agency would be continuing an investigation of anticompetitive activity allegedly affecting the Brazilian market from 1992 to 1998. The investigation was originally commenced in 2002 and has essentially been dormant for many years. There have been no penalties assessed or asserted against us. The investigation purportedly relates to violations of antitrust laws that were previously investigated in from 1997 to 2002 by the U.S. Department of Justice, the European Commission, and other countries in connection with the sale of graphite electrodes. Those antitrust investigations and related lawsuits and claims have long been resolved. Several of the investigations and related lawsuits and claims resulted in fines and settlements, all of which were timely paid many years ago. We have cooperated and plan to cooperate in all of these investigations, including timely responses to requests for information from the Brazilian agency. We believe that we have procedural and substantive defenses to the allegations in the Brazilian matter and that no further investigatory activities are warranted.

Item 4. Mine Safety Disclosures

•Not applicable.

Table of Contents

PART II

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

Market Information

Our common stock is listed on the NYSE under the trading symbol “GTI.” Our common stock is included in the Russell 2000 Index. The closing sale price of our common stock was $5.06 December 31, 2014, the last trading day of our most recent fiscal year. The following table sets forth, for the periods indicated, the high and low closing sales price per share for our common stock as reported by the NYSE.

	High	Low
2013		
First Quarter	$10.10	$6.49
Second Quarter	8.47	6.87
Third Quarter	8.84	6.94
Fourth Quarter	11.56	8.01
2014		
First Quarter	$12.97	$9.38
Second Quarter	11.47	10.15
Third Quarter	10.59	4.45
Fourth Quarter	5.07	3.58

As of December 31, 2014, there were 204 holders of record of our common stock and, we estimate 20,452 beneficial owners.

Dividend Policies and Restrictions

It is the current policy of our Board of Directors to retain earnings to finance strategic and other plans and programs, conduct business operations, fund acquisitions, meet obligations and repay debt. Any declaration and payment of cash dividends or repurchases of common stock will be subject to the discretion of our Board of Directors and will be dependent upon our financial condition, results of operations, cash requirements and future prospects, the limitations contained in the Revolving Facility and other factors deemed relevant by our Board of Directors. We did not pay any cash dividends in 2013 or 2014. We periodically review our dividend policy. At the present time, there are no plans for paying cash dividends in the near future.

GTI is a holding company that derives substantially all of its cash flow from issuances of its securities and the cash flows of its subsidiaries. Accordingly, GTI’s ability to pay dividends or repurchase common stock from cash flow from sources other than issuance of its securities is dependent upon the cash flows of its subsidiaries and the advance or distribution of those cash flows to GTI.

Under the Revolving Facility, in general, GTI is permitted to pay dividends and repurchase our common stock equal to 50% of the consolidated net income in the prior year, plus GTI is permitted to pay dividends or repurchase our common stock up to $75 million aggregate amount (cumulative from October 2011) or up to $500 million, if certain leverage ratio requirements are satisfied.

Repurchases

On July 24, 2012, our Board of Directors authorized a repurchase program for up to ten million shares. Purchases under the program may take place from time to time in the open market, or through privately negotiated transactions, as market, industry and economic conditions warrant. We had not yet made any purchases under this program as of December 31, 2014.

Upon the vesting or payment of stock awards, an employee may elect receipt of the full share amount and either pay the resulting taxes or sell shares in the open market to cover the tax obligation. We sometimes elect to

Table of Contents

purchase these shares rather than allow them to be sold in the open market. These repurchases are in addition to the programs authorized by our Board of Directors described above.

The following table provides information with respect to purchases made by or on behalf of us or any “affiliated purchaser” (as defined in Rule 10b-18(a)(3) under the Securities Exchange Act of 1934) of shares of our common stock during the three months ended December 31, 2014:

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs
October 1 through October 31, 2014	4,205	$3.66	—	10,000,000
November 1 through November 30, 2014	34,640	$4.28	—	10,000,000
December 1 through December 31, 2014	26,309	$4.21	—	10,000,000
Total/Average	65,154	$4.21	—	10,000,000

(1) Purchases of vested restricted stock shares from employees to fund the payment of withholding taxes due upon the vesting or payment of stock awards.

Performance Graph

The following graph compares the 5-year total return provided to shareholders of our common stock to the cumulative total return of the Dow Jones Industrial Average and the Russell 1000 Index. An investment of $100 is assumed to have been made in our common stock and in each of the indexes on December 31, 2009 and its relative performance is tracked through December 31, 2014.

Table of Contents

Item 6. Selected Financial Data

The data set forth below should be read in conjunction with "Part I. Preliminary Notes-Important Terms", "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Consolidated Financial Statements and Notes thereto.

	Year Ended December 31,				
	2010	2011	2012	2013	2014
	(Dollars in thousands)				
Statement of Operations Data:					
Net sales	$1,006,993	$1,320,184	$1,248,264	$1,166,674	$1,085,304
Income (loss) from continuing operations (a)	174,660	153,184	117,641	(27,259)	(285,376)
Basic earnings (loss) per common share:					
Net income (loss) per share	$1.42	$1.06	$0.85	$(0.20)	$(2.10)
Weighted average common shares outstanding (in thousands)	122,621	145,156	138,552	135,067	136,155
Diluted earnings (loss) per common share:					
Net income (loss) per share	$1.41	$1.05	$0.84	$(0.20)	$(2.10)
Weighted average common shares outstanding (in thousands)	123,453	146,402	139,700	135,415	136,155
Balance sheet data (at period end):					
Total assets	$1,913,183	$2,168,366	$2,297,915	$2,217,848	$1,833,805
Other long-term obligations (b)	114,728	131,300	125,005	97,947	107,566
Total long-term debt	275,799	387,624	535,709	541,593	341,615
Other financial data:					
Net cash provided by operating activities	$144,922	$76,597	$101,400	$116,837	$120,903
Net cash used in investing activities	(321,552)	(161,966)	(119,962)	(83,801)	(78,952)
Net cash (used in) provided by financing activities	138,240	85,461	24,112	(37,645)	(35,077)

(a) Income by period includes (items listed are pre-tax in nature unless otherwise noted)

For the Year Ended December 31, 2010 (Seadrift and C/G are included in our Consolidated Financial Statements beginning as of December 1, 2010):

- a $15.2 million expense for Seadrift and C/G acquisition-related costs,
- a $4.9 million benefit from the equity in earnings of our then non-consolidated affiliate,
- a $9.6 million gain from the acquisition of the remaining 81.1% equity interest in our previously non-consolidated affiliate,
- a $16.8 million expense for our incentive compensation program,
- a $4.8 million benefit to our income tax provision for tax holidays, exemptions, and credits in various jurisdictions,
- a $30.3 million deferred tax asset valuation allowance release as a result of the 2010 acquisitions, and
- a $7.4 million loss for the MTM Adjustment for our pension and OPEB benefit plans.

For the Year Ended December 31, 2011 (Micron Research Corporation and Fiber Materials, Inc. are included in our Consolidated Financial Statements beginning as of February 10, 2011 and November 1, 2011, respectively):

- a $26.5 million income tax benefit primarily attributable to the release of valuation allowance for foreign tax credits carryforwards which are expected to be utilized in future years,

38

Table of Contents

- a non-cash interest charge of $10.0 million related to the amortization of the discount on the Senior Subordinated Notes,
- a $2 million charge related to the amortization of acquired intangible assets,
- a $9.0 million charge related to stock-based compensation during 2011, and
- a $22.3 million loss for the MTM Adjustment for our pension and OPEB benefit plans, driven primarily by a decrease in the discount rate due to lower interest rates.

For the Year Ended December 31, 2012:

- a $15.1 million charge related to our incentive compensation plans,
- a non-cash interest charge of $10.7 million related to the amortization of the discount on the Senior Subordinated Notes,
- a $22.3 million charge related to the amortization of acquired intangible assets,
- a $9.6 million charge related to stock-based compensation during 2012, and
- a $8.8 million loss for the MTM Adjustment for our pension and OPEB benefit plans, driven primarily by a decrease in the discount rate due to lower interest rates.

For the Year Ended December 31, 2013:

- a $65.7 million charge for rationalization and rationalization related activities. This includes $19.3 million of severance and related charges, and $28.3 million of accelerated depreciation expense
- a non-cash interest charge of $11.5 million related to the amortization of the discount on the Senior Subordinated Notes,
- a $20.5 million charge related to the amortization of acquired intangible assets,
- a $6.9 million charge related to stock-based compensation during 2013, and
- a $14.4 million gain for the MTM Adjustment for our pension and OPEB benefit plans, driven primarily by a increase in discount rates.

For the Year Ended December 31, 2014:

- impairments of $197.2 million which include a goodwill impairment of $75.7 million related to our needle coke reporting unit and impairment of long-lived assets of $121.6 million related to our isomolded product line and our decision to cease production,
- a $62.8 million charge for rationalization and rationalization related activities. This includes $29.0 million of rationalization related depreciation expense, $11.6 million of severance and contract termination costs,
- a non-cash interest charge of $12.3 million related to the amortization of the discount on the Senior Subordinated Notes,
- a $19.0 million charge related to the amortization of acquired intangible assets,
- a $5.6 million charge related to stock-based compensation during 2014, and
- a $19.0 million loss for the MTM Adjustment for our pension and OPEB benefit plans, driven primarily by a decrease in discount rates and adoption of new mortality tables in 2014.

(b) Represents pension and post-retirement benefits and related costs and miscellaneous other long-term obligations.

Quarterly Data:

The following quarterly selected consolidated financial data have been derived from the Consolidated Financial Statements for the periods indicated which have not been audited. The selected quarterly consolidated financial data set forth below should be read in conjunction with “Part I. Preliminary Notes–Presentation of Financial, Market and Legal Data,” “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the Consolidated Financial Statements and Notes thereto.

Table of Contents

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(Dollars in thousands, except per share data)			
2013				
Net sales	$253,727	$301,361	$303,084	$308,502
Gross profit	48,550	48,921	36,644	4,951
Net income (a)	4,210	4,382	(7,630)	28,221
Basic earnings (loss) per common share	$0.03	$0.03	$(0.06)	$(0.21)
Diluted earnings (loss) per common share	$0.03	$0.03	$(0.06)	$(0.21)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(Dollars in thousands, except per share data)			
2014				
Net sales	$280,791	$284,184	$260,458	$259,871
Gross profit	25,694	17,953	17,644	30,956
Net income (loss) (b)	(11,517)	(155,433)	(34,943)	(83,483)
Basic earnings (loss) per common share	$(0.08)	$(1.14)	$(0.26)	$(0.61)
Diluted earnings (loss) per common share	$(0.08)	$(1.14)	$(0.26)	$(0.61)

(a) Net income by quarter for 2013 includes the following:

First Quarter

- Amortization of acquired intangibles totaling $5.2 million;
- Interest expense of $9.0 million, driven by $4.8 million of expense related to the Senior Notes.

Second Quarter

- Amortization of acquired intangibles totaling $5.2 million, and
- Interest expense of $8.9 million, driven by $4.8 million of expense related to the Senior Notes.

Third Quarter

- Rationalization and related charges of $17.5 million, including $14.6 million of severance and related charges, and
- a benefit for income taxes of $9.2 million, due to the jurisdictional mix of income driven by the rationalization charges recorded and the favorable resolution of uncertain tax positions from prior years.

Fourth Quarter:

- A gain of $14.4 million for the MTM adjustment for our pension and OPEB benefit plans, driven primarily by an increase in discount rates;
- Rationalization and related charges of $48.2 million, including $4.8 million of severance and related charges, and $27.0 million of accelerated depreciation.

(b) Net income by quarter for 2014 includes the following items:

First Quarter

- Rationalization and related charges of $17.9 million, of which $17.4 million related to accelerated depreciation;
- Amortization of acquired intangibles totaling $4.8 million, and
- Interest expense of $9.0 million, driven by $4.8 million of expense related to the Senior Notes.

Second Quarter

- Impairment of long-lived assets of $121.6 million as a result of the company's decision to cease production of isomolded products;

Table of Contents

- Rationalization and related charges of $20.6 million, of which $10.9 million related to inventory losses and$4.2 million related to accelerated depreciation. The majority of the remaining costs related to cleaning, moving and dismantling costs;
- Amortization of acquired intangibles totaling $5.5 million, which included a $0.4 million goodwill impairment charge related to the rationalizations discussed above and
- Interest expense of $9.2 million, driven by $4.8 million of expense related to the Senior Notes.

Third Quarter

- Rationalization and related charges of $19.0 million, including $10.8 million of severance and contract termination costs, $3.7 million of accelerated depreciation and $2.9 million of inventory losses;
- a $4.8 million charge for customer bad debt and related inventory charges in resulting from the bankruptcy of a customer;
- Amortization of acquired intangibles totaling $4.7 million, and
- Interest expense of $9.1 million, driven by $4.8 million of expense related to the Senior Notes.

Fourth Quarter:

- A goodwill impairment charge of $75.7 million related to our needle coke reporting unit:
- A $19.0 million charge for the MTM adjustment for our pension and OPEB benefit plans, driven primarily by a decrease in discount rates and new mortality tables adopted in 2014;
- Rationalization and related charges of $5.4 million, including $3.5 million of accelerated depreciation;
- Amortization of acquired intangibles totaling $4.0 million, and
- Interest expense of $9.8 million, driven by $4.8 million of expense related to the Senior Notes.

Table of Contents

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

General

Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is designed to provide information that is supplemental to, and should be read together with, our Consolidated Financial Statements and the accompanying notes. Information in this Item is intended to assist the reader in obtaining an understanding of our Consolidated Financial Statements, the changes in certain key items in those financial statements from year-to-year, the primary factors that accounted for those changes, any known trends or uncertainties that we are aware of that may have a material effect on our future performance, as well as how certain accounting principles affect our Consolidated Financial Statements. In addition, this Item provides information about our business segments and how the results of those segments impact our financial condition and results of operation as a whole.

Executive Summary

The slow rates of global economic growth experienced in 2013 continued throughout 2014. The year began with the IMF estimating 2014 growth at a rate of 3.7%, which was revised downward throughout the year to 3.3%. The World Steel Association noted that steel production, excluding China, increased 1.3% in 2014. This slow economic growth and stagnation in steel production year over year exerted continued downward pressure on prices for our Industrial Materials products during the year, which negatively impacted our profitability in 2014. Our Industrial Materials rationalization initiatives have begun to yield cost savings which will be further realized in 2015. We anticipate that the price drop in the global oil markets experienced in the second half of 2014 will improve our graphite electrode cost structure in 2015.

Our Engineered Solutions segment had decreased sales and margins in 2014 resulting primarily from our advanced consumer electronics products experiencing pricing pressure and decreased demand throughout 2014. In the second quarter of 2014, we announced that we were ceasing production of our isomolded product group within AGM and undertaking rationalization initiatives to reduce costs and increase our global competitiveness. We experienced growth in one of our AGM product group lines, however, the unexpected bankruptcy of our primary customer in that field gives uncertainty to future sales.

In the third quarter of 2014 we announced rationalization initiatives to the Company's operating and management structure in order to streamline, simplify and decentralize the organization. While the Company incurred costs during 2014 related to these rationalization plans, we believe they will better position us for profitability in the future.

We have seven major product categories: graphite electrodes, refractory products, needle coke products, advanced graphite materials, advanced composite materials, advanced electronics technologies and advanced materials.

Reportable Segments. Our businesses are reported in the following segments:

- Industrial Materials, which consists of graphite electrodes, refractory products and needle coke products.
- Engineered Solutions, which includes advanced graphite materials, advanced composite materials, advanced electronics technologies, and advanced materials.

Reference is made to the information under "Part I" for background information on our businesses, industry and related matters.

Global Economic Conditions and Outlook

2015 Outlook. We are impacted in varying degrees, both positively and negatively, as global, regional or country conditions fluctuate. Our discussions about market data and global economic conditions below are based on or derived from published industry accounts and statistics.

In its January 19, 2015 report, the International Monetary Fund (IMF), reduced its estimate for 2015 global GDP growth to 3.5 percent, 0.3 percentage points lower than its October 2014 forecast. The report states that lower oil prices will likely boost global growth but that negative factors including investment weakness have reduced growth expectations in many advanced and emerging economies. The report goes on to state that the United States is the only major economy for which growth expectations have been raised.

Table of Contents

Steel customer sentiment remains cautiously optimistic in North America, although there are concerns given high import levels, reduced demand from the oil and gas and related service sectors and the instability of global growth. Customers outside of the North America are generally less optimistic as weakness has been observed in basic materials sectors.

The 2015 graphite electrode order book continues to be built, with approximately 60 percent of targeted 2015 order volumes confirmed. Of the completed orders booked, 2015 graphite electrode prices are on average lower than 2014 year-end pricing. Pricing for products in the Engineered Solutions segment are also under pressure. The Company's previously announced cost savings programs remain on track, however will largely be offset by lower pricing. While the Company expects to benefit from falling oil prices in its needle coke and graphite electrode businesses, lower graphite electrode operating rates are expected to largely offset this benefit over the near term as the Company continues its previously announced inventory reductions.
In summary, the Company’s expectations, excluding the impact of special charges, are as follows:

- First half 2015 EBITDA* target of $45 million to $55 million;
- First half 2015 operating cash flow of approximately $40 million to $50 million (after approximately $15 million to $20 million of cash rationalization charges);
- Full year 2015 inventory reduction of approximately $50 million; and
- Full year 2015 capital expenditures of approximately $60 million to $70 million.

Our outlook could be significantly affected by, among other things, factors described under "Item 1A - Risk Factors" and "Item 1A - Forward Looking Statements" in this report.
*NOTE ON EBITDA: EBITDA is a non-GAAP financial measure that we currently calculate using GAAP amounts from the Consolidated Financial Statements. We believe that EBITDA measures are generally accepted as providing useful information regarding a company's ability to incur and service debt. We also believe that EBITDA measures provide useful information about the productivity and cash generation potential of its ongoing businesses. Management uses EBITDA measures as well as other financial measures in connection with its decision-making activities. EBITDA measures should not be considered in isolation or as a substitute for net income (loss), cash flows from operations or other consolidated income or cash flow data prepared in accordance GAAP. Our method for calculating EBITDA measures may not be comparable to methods used by other companies and is not the same as the method for calculating EBITDA measures under our senior secured Revolving Facility.

See below for a reconciliation of first half of 2015 targeted EBITDA to targeted net income attributable to GrafTech International Ltd., the most directly comparable financial measure calculated and reported in accordance with GAAP:

	First Half Target 2015
EBITDA	$45,000 - $55,000
Adjustments	
Depreciation and amortization	(44,000)
Rationalization related depreciation	(4,000)
Rationalizations	(7,000)
Rationalizations related charges	(2,000)
Operating income	(12,000) - (2,000)
Other (expense) income, net	(2,000)
Interest expense	(18,000)
Income taxes	(5,000)
Net loss	$(37,000) - $(27,000)

Financing Transactions

Senior Notes

On November 20, 2012, the Company issued $300 million principal amount of 6.375% Senior Notes due 2020. These Senior Notes are the Company's senior unsecured obligations and rank pari passu with all of the Company's existing and future senior unsecured indebtedness. The Senior Notes are guaranteed on a senior unsecured basis by

Table of Contents

each of the Company's existing and future subsidiaries that guarantee certain other indebtedness of the Company or another guarantor.

The Senior Notes bear interest at a rate of 6.375% per year, payable semi-annually in arrears on May 15 and November 15 of each year. The Senior Notes mature on November 15, 2020.

The Company is entitled to redeem some or all of the Senior Notes at any time on or after November 15, 2016, at the redemption prices set forth in the Indenture. In addition, prior to November 15, 2016, the Company may redeem some or all of the Senior Notes at a price equal to 100% of the principal amount thereof, plus accrued and unpaid interest, if any, plus a “make whole” premium determined as set forth in the Indenture. The Company is also entitled to redeem up to 35% of the aggregate principal amount of the Senior Notes before November 15, 2015 with the net proceeds from certain equity offerings at a redemption price of 106.375% of the principal amount plus accrued and unpaid interest, if any.

If, prior to maturity, a change in control (as defined in the Indenture) of the Company occurs and thereafter certain downgrades of the ratings of the Senior Notes as specified in the Indenture occur, the Company will be required to offer to repurchase any or all of the Senior Notes at a repurchase price equal to 101% of the aggregate principal amount of the Senior Notes, plus any accrued and unpaid interest.

The Senior Notes also contain covenants that, among other things, limit the ability of the Company and certain of its subsidiaries to: (i) create liens or use assets as security in other transactions; (ii) engage in certain sale/leaseback transactions; and (iii) merge, consolidate or sell, transfer, lease or dispose of substantially all of their assets.

The Senior Notes also contain customary events of default, including (i) failure to pay principal or interest on the Senior Notes when due and payable, (ii) failure to comply with covenants or agreements in the Indenture or the Senior Notes which failures are not cured or waived as provided in the Indenture, (iii) failure to pay indebtedness of the Company, any Subsidiary Guarantor or Significant Subsidiary (as defined in the Indenture) within any applicable grace period after maturity or acceleration and the total amount of such indebtedness unpaid or accelerated exceeds $50.0 million, (iv) certain events of bankruptcy, insolvency, or reorganization, (v) failure to pay any judgment or decree for an amount in excess of $50.0 million against the Company, any Subsidiary Guarantor or any Significant Subsidiary that is not discharged, waived or stayed as provided in the Indenture, (vi) cessation of any subsidiary guarantee to be in full force and effect or denial or disaffirmance by any Subsidiary Guarantor of its obligations under its subsidiary guarantee, and (vii) a default under the Company's Senior Subordinated Notes. In the case of an event of default, the principal amount of the Senior Notes plus accrued and unpaid interest may be accelerated.

The Senior Notes are registered under the Securities Act of 1933, as amended.

Revolving Credit Facility

On October 7, 2011, we successfully completed the refinancing of our principal revolving credit facility (“Revolving Facility”). Borrowers under the Revolving Facility were GrafTech Finance Inc. (“GrafTech Finance”) and GrafTech Switzerland S.A. (“Swissco”), both wholly-owned subsidiaries. On April 20, 2012, as permitted by Section 9.19 of the October 7, 2011 Credit Agreement, we entered into an Amended and Restated Credit Agreement pursuant to which, on August 28, 2012, GrafTech Luxembourg II S.à.r.l. (“Luxembourg Holdco”) replaced Swissco as a Borrower. Swissco is no longer entitled to borrow Loans under the Revolving Facility although it is entitled to request letters of credit thereunder only for its own use.

The interest rate applicable to the Revolving Facility is, at GrafTech’s option, either LIBOR plus a margin ranging from 1.50% to 2.25% (depending on our total net leverage ratio and/or senior unsecured rating) or, in the case of dollar denominated loans, the alternate base rate plus a margin ranging from 0.50% to 1.25% (depending upon such ratio). The alternate base rate is the highest of (i) the prime rate announced by JPMorgan Chase Bank, N.A., (ii) the federal fund effective rate plus one-half of 1.0% and (iii) the London interbank offering rate (as adjusted) for a one-month period plus 1.0%. The borrowers pay a per annum fee ranging from 0.25% to 0.40% (depending on such ratio) on the undrawn portion of the commitments under the Revolving Facility.

The financial covenants require us to maintain a minimum cash interest coverage ratio of 3.00 to 1.00 and a maximum senior secured leverage ratio of 2.25 to 1.00, subject to adjustment for certain events. As of December 31, 2014, we were in compliance with all financial and other covenants contained in the Revolving Facility, as applicable.

Table of Contents

Under the Revolving Facility we have additional flexibility for investments, capital expenditures, acquisitions and restricted payments and we can issue letters of credit under the Revolving Credit Facility in an amount not to exceed $50 million. We are permitted to pay dividends and repurchase our common stock in an aggregate amount (cumulative from October 2011) up to $75 million (or $500 million, if certain leverage ratio requirements are satisfied), plus, each year, an aggregate amount equal to 50% of the consolidated net income in the prior year.
On April 23, 2014, GrafTech and certain of its subsidiaries entered into an Amended and Restated Credit Agreement for the Revolving Facility that provides for, among other things, a five-year tenor, reduced borrowing spreads and greater financial flexibility. The Revolving Credit Facility had a maximum borrowing capacity of $470 million principal and matures in April 2019.
On November 19, 2014, we initiated an amendment to our Credit Agreement with the lenders party thereto and JPMorgan Chase Bank, N.A., as Administrative Agent, Collateral Agent, Issuing Bank and Swingline Lender. The amendment includes modification to the definition of EBITDA to exclude certain restructuring costs, increasing availability of borrowings thereunder, and modification of the maximum principal amount to $400 million.
On February 27, 2015, GrafTech and certain of its subsidiaries entered into an Amended and Restated Credit Agreement that provides for, among other things, greater financial flexibility and a new $40 million senior secured delayed draw term loan facility. See Note 18 to the financial statements for additional details.

As of December 31, 2014, we had outstanding borrowings of $40.0 million and outstanding letters of credit of $5.3 million under this Revolving Facility.

Senior Subordinated Notes

On November 30, 2010, in connection with the acquisitions of Seadrift and C/G, we issued Senior Subordinated Notes for an aggregate total face amount of $200 million. These Senior Subordinated Notes are non-interest bearing and mature in 2015. Because the Senior Subordinated Notes are non-interest bearing, we were required to record them at their present value (determined using an interest rate of 7%). The difference between the face amount of the Senior Subordinated Notes and their present value is recorded as debt discount. The debt discount will be amortized to income using the interest method, over the life of the Senior Subordinated Notes. The loan balance, net of unamortized discount, was $188.0 million as of December 31, 2014 and will be $200.0 million at maturity in 2015.
On occasion we have sold accounts receivable without recourse to a third party. We did not sell any receivables during 2013 or 2014. See “Liquidity and Capital Resources” below for further discussion.

Realizability of Net Deferred Tax Assets and Valuation Allowances

As of December 31, 2014 we had $179.8 million of gross deferred income tax assets, of which $95.7 million required a valuation allowance. In addition, we had $74.3 million of gross deferred income tax liabilities. Our valuation allowance means that we do not believe that these assets are more likely than not to be realized. Until we determine that it is more likely than not that we will generate sufficient taxable income to realize our deferred income tax assets, income tax benefits in each current period will be fully reserved.
Our valuation allowance, which is predominately in the U.S. tax jurisdiction, does not affect our ability and intent to utilize the deferred income tax assets as we generate sufficient future profitability. We are executing current strategies and developing future strategies, to improve sales, reduce costs and improve our capital structure in order to improve U.S. taxable income of the appropriate character to a level sufficient to fully realize these benefits in future years.

Table of Contents

Customer Base

We are a global company and sell our products in every major geographic market. Sales of these products to buyers outside the U.S. accounted for about 70% in 2012, 75% in 2013 and 74% in 2014. In 2014, three of our ten largest customers were based in Europe, and one each in the U.S., Korea, Japan, Brazil, Russia, Egypt and India, however, all are multi-national operations.

In 2014, eight of our ten largest customers were purchasers of our Industrial Materials products. No single customer or group of affiliated customers accounted for more than 10% of our net sales in 2014.

Results of Operations and Segment Review

2014. The slow rates of global economic growth continued throughout 2014. The year began with the IMF estimating 2014 growth at a rate of 3.7%, which was revised downward throughout the year to 3.3%. The World Steel Association noted that steel production, excluding China, increased 1.3% in 2014. This slow economic growth and stagnation in steel production year over year exerted continued downward pressure on prices for our Industrial Materials products during the year, which negatively impacted our profitability in 2014. Our Industrial Materials rationalization initiatives have begun to yield cost savings which will be further realized in 2015. We anticipate that the price drop in the global oil markets experienced in the second half of 2014 will improve our graphite electrode cost structure in 2015.

Our Engineered Solutions segment experienced 2014 sales growth in one of our AGM product group lines, however, the unexpected bankruptcy of our primary customer in that field gives uncertainty to future sales. Our advanced consumer electronics products experienced pricing pressure and decreased demand throughout 2014 which decreased margins and sales. In the second quarter of 2014, we announced that we were ceasing production of our isomolded product group within AGM and undertaking rationalization initiatives to reduce costs and increase our global competitiveness.

In the third quarter of 2014 we announced rationalization initiatives to the Company’s operating and management structure in order to streamline, simplify and decentralize the organization. While the Company incurred significant costs during 2014 related to these rationalization plans, we believe they will better position us for profitability in the future.

2013. The slow rates of global economic growth experienced in 2012 continued throughout 2013. The year began with the IMF cautiously estimating growth at a rate of 3.5%, which was adjusted downward three times throughout the year before a modest final increase to 3.0%. The World Steel Association noted that steel production, excluding China, was essentially flat compared to 2012. This slow economic growth and stagnation in steel production year over year exerted significant downward pressure on prices for our Industrial Materials products during the year, which negatively impacted our profitability in 2013. Due to this difficult environment, we announced global initiatives to position our Industrial Materials segment to significantly reduce its cost basis and improve our competitive position. As part of this initiative, we will close our two highest cost graphite electrode plants, which are located in Brazil and South Africa, as well as our machine shop in Russia. These initiatives also included reductions in corporate overhead.

Our Engineered Solutions segment continued to see sales growth throughout 2013, due primarily to further market penetration in sales of our advanced consumer electronics products. Engineered Solutions contributed over 20% of total company sales during the year and achieved the highest net sales for the segment in company history.

2012. While there was cautious optimism for the world economy coming into 2012, the global outlook began to deteriorate during the first quarter, with subsequent reductions to global GDP estimates by the IMF throughout 2012, as a result of the slower than expected economic recovery and continued uncertainty in the European markets. According to the World Steel Association and other published reports, global steel production, excluding China, declined 0.4 percent in 2012. Steel production in the European Union decreased 4.6 percent during the same period. As a result, our Industrial Materials segment saw a decline in sales of 9%, despite increased pricing for graphite electrodes and needle coke products. Our Engineered Solutions segment saw a continuation of the decline in the solar markets that began in 2011. This decline was more than offset, however, by growth in our advanced consumer electronics products line which, along with the incremental revenue from the Micron Research and FMI acquisitions made in 2011, helped propel this segment to achieve the highest net sales to date in our Company's history.

Table of Contents

The tables presented in our year-over-year comparisons summarize our consolidated statements of income and illustrate key financial indicators used to assess the consolidated financial results. Financial information is presented for the years ended December 31, 2012, 2013, and 2014.

Results of Operations for 2014 as Compared to 2013

The tables presented in our period-over-period comparisons summarize our consolidated statements of income and illustrate key financial indicators used to assess the consolidated financial results. Financial information is presented for the year ended December 31, 2013 and 2014. Throughout our MD&A, changes that are less than 5% or less than $1.0 million, may be deemed not meaningful and excluded from the discussion. During 2014, as part of our initiative to decentralize the organization and reduce the costs of the global headquarter functions, the performance measure of our existing segments was changed to reflect our new management and operating structure. All amounts below reflect this change. See Note 3 to the financial statements for further discussion.

	For the Year Ended December 31,			
(in thousands, except per share data and % change)	2013	2014	Increase (Decrease)	% Change
Net sales	$1,166,674	$1,085,304	$(81,370)	(7)%
Cost of sales	1,027,608	993,057	(34,551)	(3)%
Gross profit	139,066	92,247	(46,819)	(34)%
Research and development	10,437	14,844	4,407	42%
Selling and administrative expenses	111,043	124,178	13,135	12%
Impairment of long-lived assets	—	197,220	197,220	N/A
Rationalizations	20,156	11,625	(8,531)	(42)%
Operating loss	(2,570)	(255,620)	(253,050)	9,846%
Other expense (income), net	1,698	2,445	747	44%
Interest expense	36,037	37,057	1,020	3%
Interest income	(203)	(330)	(127)	63%
Loss before provision for income taxes	(40,102)	(294,792)	(254,690)	635%
(Benefit) provision for income taxes	(12,843)	(9,416)	3,427	(27)%
Net income	$(27,259)	$(285,376)	$(258,117)	947%
Basic loss per common share:	$(0.20)	$(2.10)	$(1.90)	
Diluted loss per common share:	$(0.20)	$(2.10)	$(1.90)	

Net sales, by operating segment for the year ended December 31, 2013 and 2014 were:

	For the Year Ended December 31,		Increase	%
(in thousands, except per % change)	2013	2014	(Decrease)	Change
Industrial Materials	$909,448	$840,103	$(69,345)	(8)%
Engineered Solutions	257,226	245,201	(12,025)	(5)%
Total net sales	$1,166,674	$1,085,304	$(81,370)	(7)%

An analysis of the components of change in net sales for Industrial Materials and Engineered Solutions is set forth in the following table:

	Volume	Price/Mix	Currency	Net Change
Industrial Materials	3%	(11)%	—%	(8)%
Engineered Solutions	2%	(7)%	—%	(5)%

Net sales. Net sales for our Industrial Materials segment decreased by $69.3 million in 2014 compared to 2013. Net sales were impacted by a deterioration in the realized selling price of electrodes in 2014. The weighted average

selling price of electrodes, excluding currency impacts, decreased approximately 10% compared to 2013. We also experienced lower third party sales and pricing in our needle coke business as we have sourced a greater percentage of needle coke internally. Partially offsetting these decreases in electrode pricing and needle coke was an increase in segment volumes of 3%, driven primarily by a 4% increase in graphite electrode volumes from 181.8 thousand metric tons to 187.9 thousand metric tons.

Net sales for our Engineered Solutions segment decreased $12.0 million in 2014 compared to 2013. This decrease was primarily driven by lower advanced electronics technologies product sales of $27.7 million due to pricing and volume declines in products serving the advanced consumer electronics markets. Offsetting this decrease were increased sales of $22.6 million of our AGM products. The increase in revenue was primarily driven by $17.6 million of new product sales of high temperature furnace systems servicing a single customer that filed for bankruptcy in October 2014, which has created uncertainty related to future high temperature furnace systems sales.

Cost of sales. We experienced decreases in cost of sales of $34.6 million compared to 2013 due to a $44.6 million benefit of an improved cost structure resulting from our rationalization initiatives. Additionally, the increased use of internally sourced needle coke has decreased our cost of sales. Offsetting these decreases was increased variable costs of $18.7 million driven by a 3 percent increase in graphite electrode volumes. Additionally, we incurred a year over year increase in pension mark to market charges of $15.9 million.

Research and Development. Research and development expenses were $14.8 million in 2014 which represented a $4.4 million increase over 2013. This increase was primarily driven by a negative MTM adjustment of $2.0 million in 2014 compared to a benefit of $1.4 million in 2013 and rationalization related accelerated depreciation totaling $2.3 million. Excluding these charges, research and development expense decreased $1.3 million.

Selling and administrative expenses. Selling and general administrative expenses increased $13.1 million to $124.2 million in 2014. This increase was primarily driven by a negative MTM adjustment of $8.3 million in 2014, compared to a benefit of $5.8 million in 2013. We also recorded in selling and administrative expense rationalization related charges of $1.3 million and proxy contest fees of $2.4 million. Excluding these charges our selling and administrative expenses decreased $4.7 million in 2014 as compared to 2013.

Rationalizations. We recorded an $11.6 million charge for rationalizations in 2014, a decrease of $8.5 million from 2013. The 2014 rationalization charges related primarily to severance and contract termination costs resulting from our Engineered Solutions and corporate and research and development rationalizations initiatives. The Engineered Solutions initiative began in the second quarter of 2014 and will wind down through the first half of 2015. The corporate and research and development initiative was announced in the third quarter of 2014 and resulted in changes to our operating and management structure in order to streamline, simplify and decentralize the organization. The related rationalization costs will be substantially completed by the third quarter of 2015.

We recorded $20.2 million of rationalization charges in 2013 related primarily to our Industrial Materials rationalization initiatives. These charges were due to the closures of our South Africa and Brazil graphite electrode plants and our machine shop in Russia, as well as headcount reductions throughout our Industrial Materials segment and at our corporate facility in Parma, Ohio. See Note 2 to the financial statements for further discussion of rationalization activities.

Impairments. As a result of our annual goodwill impairment testing and our routine monitoring of triggering events, we recorded a goodwill impairment charge in our needle coke reporting unit totaling $75.7 million during the fourth quarter of 2014. This charge was driven by the margin contraction for petroleum needle coke. See Note 4 to the financial statements for a full discussion of our goodwill impairment testing and results.

Additionally, in the second quarter of 2014, we announced rationalization initiatives in our Engineered Solutions segment resulting from deteriorated pricing and competitor responses for certain products. As a result, we recorded long-lived asset impairment charges of $121.6 million.

Interest expense. Interest expense increased $1.0 million in 2014 as compared to 2013 due to costs incurred while amending our revolving credit facility in April and November of 2014.

Table of Contents

Segment operating income (loss). The following table represents our operating income (loss) by segment for 2013 and 2014:

	For the Year Ended December 31,	
	2013	2014
	(Dollars in thousands)	
Industrial Materials	$20,007	$(50,260)
Engineered Solutions	28,392	(138,271)
Corporate, Research and Development, and Other	$(50,969)	$(67,089)
Total segment operating income (loss)	$(2,570)	$(255,620)

The percentage relationship of cost of operations to sales for Industrial Materials and Engineered Solutions is set forth in the following table:

	For the Year Ended December 31, (Percentage of sales)		
	2013	2014	Change
Industrial Materials	98 %	106 %	8 %
Engineered Solutions	89 %	156 %	67 %

Segment operating costs and expenses as a percentage of sales for Industrial Materials increased to 106% in 2014, primarily caused by the goodwill impairment charge of $75.7 million in the Needle coke reporting unit. Additionally, the segment was charged $3.5 million of pension MTM costs in 2014 versus a credit of $4.2 million in 2013. Offsetting these unfavorable impacts, rationalization and related charges for Industrial materials decreased $25.8 million to $34.5 million, or 4% of total costs in 2014. Excluding those non-recurring items, segment operating costs and expenses as a percentage of sales increased marginally versus prior year despite the increased variable costs resulting from a 3 percent volume increase and a 10% price decline in graphite electrodes. This was achieved through $39.9 million of cost reductions resulting from our rationalization initiatives.

Segment operating costs and expenses as a percentage of sales for Engineered Solutions increased to 156% in 2014, primarily caused by the second quarter long-lived asset impairment charge of $121.6 million associated with the decision to discontinue the manufacturing of the isomolded products. Additionally, rationalization and related charges increased by $18.4 million to $22.0 million in 2014. The Engineered Solutions segment also incurred a $9.2 million pension MTM charge in 2014 versus a credit of $5.8 million in 2013. The bankruptcy of an Advanced Graphite Materials customer triggered an inventory write-off and bad debt reserve of $4.8 million in the third quarter 2014. Excluding these non-recurring charges, segment operating costs and expenses would have increased to 94% of sales. This increase was due to the decreased prices and volumes in our consumer electronics business and higher costs related to the manufacturing of new products.

Operating costs and expense as a percentage of sales for our Corporate, Research and Development, and Other increased $16.1 million in 2014 as compared to 2013. This increase was driven primarily by a MTM charge of $6.3 million in 2014 versus a MTM gain of $4.2 million in 2013. We also incurred additional fees related to our proxy filings of $2.4 million in 2014. Excluding these MTM and proxy charges, expenses decreased $1.3 million in 2014 when compared to 2013.

Provision for income taxes. The following table summarizes the expense for income taxes in 2013 and 2014:

	For the Twelve Months Ended December 31,	
	2013	2014
	(Dollars in thousands)	
Tax (benefit) expense	$(12,843)	$(9,416)
Pretax loss	$(40,102)	$(294,792)
Effective tax rates	32.0 %	3.2 %

Table of Contents

During the twelve months ended December 31, 2014, the effective tax rate differs from the U.S. statutory rate of 35% primarily due to the recording of a valuation allowance against our U.S. deferred tax assets. During 2014, GrafTech impaired certain long-lived assets and announced the exit of certain product lines within our AGM product group as well as impaired goodwill on the needle coke reporting unit. See Note 2 and Note 4 to the financial statements. The impairment charges and other rationalization related charges were incurred primarily in the U.S. Therefore, it is no longer assured that it is more likely than not that we will generate sufficient future U.S. taxable income to realize our U.S. net deferred tax assets. As a result of recent losses, we recognized a $73.4 million non-cash charge in 2014 to increase the valuation allowance against these U.S. deferred tax assets, which adversely impacted our effective tax rate. The recognition of the valuation allowance does not result in or limit our ability to utilize these tax assets in the future.

On October 31, 2013, we announced a global initiative to reduce our Industrial Materials' cost base and improve our competitive position. These actions resulted in $65.7 million of rationalization and related charges for the year ended December 31, 2013. See Note 2 to the financial statements for more information. The effective tax rate for the twelve months ended December 31, 2013 differs from the U.S. statutory rate of 35% due to the jurisdictional mix of income driven by the rationalization charges. In addition, our tax rate for the year ended December 31, 2013 was favorably impacted by the effective resolution of uncertain tax positions from prior years and by tax credits that were recognized in support of the research and development efforts of our Engineered Solutions products.

Results of Operations for 2013 as Compared to 2012

(in thousands, except per share data and % change)	2012	2013	Increase (Decrease)	% Change
Net sales	$1,248,264	$1,166,674	$(81,590)	(7)%
Cost of sales	932,460	1,027,608	95,148	10 %
Gross profit	315,804	139,066	(176,738)	(56)%
Research and development	13,796	10,437	(3,359)	(24)%
Selling and administrative expenses	145,540	111,043	(34,497)	(24)%
Rationalizations	—	20,156	20,156	N/A
Operating income (loss)	156,468	(2,570)	(159,038)	(102)%
Other (income) expense, net	(1,005)	1,698	2,703	(269)%
Interest expense	23,247	36,037	12,790	55 %
Interest income	(261)	(203)	58	(22)%
Income (loss) before provision for income taxes	134,487	(40,102)	(174,589)	(130)%
Provision (benefit) for income taxes	16,846	(12,843)	(29,689)	(176)%
Net income (loss)	$117,641	$(27,259)	$(144,900)	(123)%
Basic income (loss) per common share	$0.85	$(0.20)	$(1.05)	
Diluted income (loss) per common share	$0.84	$(0.20)	$(1.04)	

Net sales. Net sales by operating segment for the years ended December 31, 2012 and 2013 were:

(in thousands, except per share data and % change)	2012	2013	Increase (Decrease)	% Change
Industrial Materials	$1,025,571	$909,448	$(116,123)	(11)%
Engineered Solutions	222,693	257,226	34,533	16 %
Total net sales	$1,248,264	$1,166,674	$(81,590)	(7)%

Our analysis of the percentage change in net sales from 2012 to 2013 for Industrial Materials and Engineered Solutions is set forth in the following table:

	Volume	Price/Mix	Currency	Net Change
Industrial Materials	2 %	(13)%	— %	(11)%
Engineered Solutions	11 %	5 %	— %	16 %

Net sales. Net sales for our Industrial Materials segment decreased to $909.4 million in 2013 compared to net sales of $1,025.6 million in 2012. Graphite electrode volumes increased by 9 percent from 167.0 thousand metric

Table of Contents

tons in 2012 to 181.1 thousand metric tons in 2013. However, this increase was more than offset by a deterioration in the selling price of electrodes throughout 2013. The weighted average selling price, excluding currency impacts, of electrodes in 2013 decreased approximately 14% compared to the 2012. We also experienced third party needle coke volume declines 2013 compared to the same period of 2012, as we sourced more needle coke internally. Additionally, our needle coke business experienced third-party price declines in 2013. Unfavorable foreign currency adjustments impacted net sales by $2.2 million in 2013, compared to the same period of 2012.

Net sales for our Engineered Solutions segment increased to $257.2 million in 2013, compared to net sales of $222.7 million in 2012. This increase was primarily driven by continued growth in sales of our advanced consumer electronics products and a more favorable product mix, as we continue to penetrate high-growth end markets with attractive margin profiles. This increase was partially offset by the continued decline in sales of advanced graphite materials to industrial sectors.

Cost of sales. During 2013, we experienced increases in cost of sales of $95.1 million primarily driven by $45.5 million of rationalization related charges (see discussion of rationalizations below and Note 2 to the financial statements), $39.0 million associated with input costs and increased volumes in our industrial materials segment. Higher advanced consumer electronic volumes accounted for $18.3 million of the increase in cost. Additionally, despite solid sales and margin growth in our advanced consumer electronics product line, costs of sales were negatively impacted by continued weaknesses in advanced graphite materials products serving industrial sectors and start-up costs as we add production capabilities to serve growing markets. Cost of sales in 2013 benefited from a favorable pension and OPEB MTM adjustment of $7.2 million, resulting from a change in discount rate and improved market performance. This compares to a charge of $6.3 million in 2012.

Research and development. Research and development expenses decreased $3.4 million in 2013 as compared to 2012. This was driven by a favorable pension and OPEB MTM adjustment of $1.4 million in 2013, compared to a charge of $0.7 million in 2012.

Selling and administrative expenses. Selling and administrative expenses decreased $34.5 million in 2013 compared to 2012. This was driven by a favorable pension and OPEB MTM adjustment of $5.8 million in 2013, compared to a charge of $3.5 million in 2012. Additionally, stock-based and incentive compensation expense in 2013 declined by $1.8 million compared to 2012. Continued cost control measures established in response to the difficult operating environment experienced also contributed to the decline in selling and administrative expenses in 2013, including reductions in employee travel, reduced consulting expenses, and discretionary spending. Depreciation and amortization expense recorded in selling and administrative expense increased slightly to $1.9 million in 2013, compared to $1.7 million in 2012.

Rationalizations. During 2013, we recorded a $20.2 million charge for rationalizations, primarily related to severance and contract termination costs for our Industrial Materials segment. These charges were due to the closures of our South Africa and Brazil graphite electrode plants, and our machine shop in Russia, as well as overhead headcount reductions throughout our Industrial Materials segment and at our corporate facility in Parma, Ohio. Going forward, we anticipate that these actions will result in annual savings of $75 million, with approximately $50 million to be realized in 2014. See Note 2 to the financial statements for futher discussion on these programs.

Other expense (income), net. Other expense was $1.7 million in 2013, compared to other income of $1.0 in 2012. The remeasurement of intercompany loans and transactions resulted in $1.5 million of expense in 2013, compared to income of $2.6 million in 2012. Additionally, during 2012, we received $4.0 million of insurance reimbursements for claims made related to flood damages incurred at our Clarksburg, West Virginia facility during 2011.

Interest expense. Interest expense increased by $12.8 million in 2013, primarily as a result of the $300 million Senior Notes that were issued in November 2012. These Senior Notes bear interest at 6.375% per year.

Segment operating income. The following table represents our operating income by segment for 2012 and 2013:

Table of Contents

	For the Year ended December 31, 2012	2013
	(Dollars in thousands)	
Industrial Materials	$197,335	$20,007
Engineered Solutions	22,374	28,392
Corporate, Research and Development, and Other Expenses	(63,241)	(50,969)
Total segment operating income	$156,468	$(2,570)

The percentage relationship of operating expenses to sales for Industrial Materials and Engineered Solutions is set forth in the following table:

	Operating Expenses (Percentage of sales) 2012	2013	Change
Industrial Materials	81 %	98 %	17 %
Engineered Solutions	90 %	89 %	(1)%

Segment operating costs and expenses as a percentage of sales for Industrial Materials increased to 98% in 2013. Rationalization and related charges for Industrial Materials were $60.3 million in 2013, and represented approximately 7% of the total operating costs of the segment. In addition, operating costs and expenses as a percentage of sales increased as a result of margin contraction for our Industrial Materials products. This margin contraction was driven primarily by lower sales prices for graphite electrodes and needle coke, which more than offset the year over year MTM benefit and overhead cost control measures in place. We expect the rationalization initiatives announced in 2013 to positively impact operating income in 2014, even with continued downward price pressure in the near term.

Segment operating costs and expenses as a percentage of sales for Engineered Solutions remained relatively flat, at 90% in 2012 and 89% in 2013. Operating margin improvements for our advanced consumer electronics products and favorable MTM adjustments were offset by continued weaknesses in advanced graphite materials products serving industrial sectors and start-up costs as we added production capabilities to serve growing markets.

Operating costs and expenses in our Corporate, Research and Development, and Other decreased by $12.3 million from 2012 to 2013, due primarily to a MTM gain of $4.2 million recognized in 2013 as opposed to a 2012 charge of $1.8 million. Additionally our Research and Development expenses decreased by $3.4 million compared to 2012.

Provision for income taxes. The following table summarizes the expense for income taxes in 2012 and 2013:

	For the Year Ended December 31 2012	2013
	(Dollars in thousands)	
Tax (benefit)	$16,846	$(12,843)
Pretax Income (loss)	$134,487	$(40,102)
Effective Tax Rates	12.5 %	32.0 %

On October 31, 2013, we announced a global initiative to reduce our Industrial Materials' cost base and improve our competitive position. These actions resulted in $65.7 million of rationalization and related charges for the year ended December 31, 2013. See Note 2 to the financial statements for more information. The effective tax rate for the twelve months ended December 31, 2013 differs from the U.S. statutory rate of 35% due to the jurisdictional mix of income driven by the rationalization charges. In addition, our tax rate for the year ended December 31, 2013 was favorably impacted by the effective resolution of uncertain tax positions from prior years and by tax credits that were recognized in support of the research and development efforts of our Engineered Solutions products.

During the twelve months ended December 31, 2012 our net unrecognized tax benefits decreased by $8.1 million, primarily related to the resolution of uncertain tax positions from prior years, which had a favorable impact on our effective tax rate. We also recorded tax credits relating to prior years in support of our research and development

Table of Contents

efforts of high-tech Engineered Solutions products, which positively impacted the tax rate for the year. In addition, the year-to-date effective tax rate differs from the U.S statutory rate of 35% due to jurisdictional mix of income.

Effects of Inflation

We incur costs in the U.S. and each of the non-U.S. countries in which we have a manufacturing facility. In general, our results of operations, cash flows and financial condition are affected by the effects of inflation on our costs incurred in each of these countries.

Currency Translation and Transactions

We translate the assets and liabilities of our non-U.S. subsidiaries into U.S. dollars for consolidation and reporting purposes in accordance with FASB ASC 830, Foreign Currency Matters. Foreign currency translation adjustments are generally recorded as part of stockholders' equity and identified as part of accumulated other comprehensive loss on the Consolidated Balance Sheets until such time as their operations are sold or substantially or completely liquidated. We account for our Russian, Swiss, Luxembourg and Mexican subsidiaries using the dollar as the functional currency, as sales and purchases are predominantly dollar-denominated. Our remaining subsidiaries use their local currency as their functional currency.

We also record foreign currency transaction gains and losses from non-permanent intercompany balances as part of other (income) expense, net.

Significant changes in currency exchange rates impacting us are described under "Effects of Changes in Currency Exchange Rates" and "Results of Operations."

Effects of Changes in Currency Exchange Rates

When the currencies of non-U.S. countries in which we have a manufacturing facility decline (or increase) in value relative to the U.S. dollar, this has the effect of reducing (or increasing) the U.S. dollar equivalent cost of sales and other expenses with respect to those facilities. In certain countries where we have manufacturing facilities, and in certain instances where we price our products for sale in export markets, we sell in currencies other than the dollar. Accordingly, when these currencies increase (or decline) in value relative to the dollar, this has the effect of increasing (or reducing) net sales. The result of these effects is to increase (or decrease) operating profit and net income.

Many of the non-U.S. countries in which we have a manufacturing facility have been subject to economic and political changes, which have impacted currency exchange rates. We cannot predict changes in currency exchange rates in the future or whether those changes will have net positive or negative impacts on our net sales, cost of sales or net income. The fourth quarter decline of the Euro began to negatively affect our sales in 2014 and we expect this trend to continue as long as the Euro is near or below current rates. These declines in price will be mostly offset by decreased costs incurred in the Euro region, however the cost decreases will not be realized as timely as the sales decreases.

For net sales of Industrial Materials, the impact of these events was an increase of $15.2 million in 2012, a decrease of $2.2 million in 2013, and a increase of $1.2 million in 2014. For the cost of Industrial Materials, the impact of these events was a decrease of $28.5 million in 2012 and a decrease of $7.6 million in 2013 and a decrease of $4.8 million in 2014.

As part of our cash management, we have intercompany loans between some of our subsidiaries. These loans are deemed to be temporary and, as a result, remeasurement gains and losses on these loans are recorded as currency gains / losses in other income (expense), net, on the Consolidated Statements of Income.

We had a net total currency gain of $2.6 million in 2012, a net currency loss of $1.5 million in 2013 and a net currency gain of $2.2 million in 2014 due to the remeasurement of intercompany loans and the effect of transaction gains and losses on intercompany activities.

We have in the past and may in the future use various financial instruments to manage certain exposures to specific financial market risks caused by changes in currency exchange rates, as described under "Item 7A–Quantitative and Qualitative Disclosures about Market Risks."

Liquidity and Capital Resources

We believe that we have adequate liquidity to meet all of our present needs. Disruptions in the U.S. and international financial markets, however, could adversely affect our liquidity and the cost and availability of financing to us in the future. As of December 31, 2014, we had cash and cash equivalents of $17.6 million, long-term debt of $341.6 million, short-term debt of $188.1 million and stockholders' equity of $1,005 million. We also had $302.0 million of unused borrowing capacity under the Revolving facility (after considering financial covenants restrictions and the outstanding letters of credit of approximately $5.3 million). As a part of our cash management activities, we manage accounts receivable credit risk, collections, and accounts payable vendor terms to maximize our free cash at any given time and minimize accounts receivable losses.

Our sources of funds have consisted principally of cash flow from operations and debt including our Revolving Facility. Our uses of those funds (other than for operations) have consisted principally of capital expenditures, the repurchase of common shares outstanding, cash paid for acquisitions and associated expenses and debt reduction payments and other obligations.

In the event that operating cash flows fail to provide sufficient liquidity to meet our business needs, including capital expenditures, any such shortfall would need to be made up by increased borrowings under our Revolving Facility.

We use cash flow from operations and funds available under the Revolving Facility (subject to continued compliance with the financial covenants and representations under the Revolving Facility) as well as cash on hand as our primary sources of liquidity. The Revolving Facility is secured, and provides for maximum borrowings of up to $400 million including a letter of credit sub-facility of up to $50 million and is subject to certain conditions (including a maximum

Table of Contents

senior secured leverage ratio test). The Revolving Facility matures in April 2019. As of December 31, 2014, we had outstanding borrowings drawn from the Revolving Facility of $40 million and outstanding letters of credit of $5.3 million. On October 29, 2012, we amended the Revolving Facility to permit the issuance and guarantee of the Senior Notes, as well as to permit us to loan the proceeds of the Senior Notes to GrafTech Finance and Luxembourg Holdco so that they can repay amounts outstanding under the Revolving Facility, and to permit those entities to repay the intercompany loans to us in order to fund payments on the Senior Notes and certain other indebtedness. In addition, we amended the Revolving Facility to permit acquisitions (and related intercompany loans to fund such acquisitions) in the aggregate amount of $400.0 million, in addition to those already permitted by the Revolving Facility and to increase to $400.0 million the amount of debt we incur under our general debt basket, to the extent we meet certain financial ratios.

The interest rate applicable to the Revolving Facility is, at GrafTech's option, either LIBOR plus a margin ranging from 1.50% to 2.25% (depending on our total net leverage ratio) or, in the case of dollar denominated loans, the alternate base rate plus a margin ranging from 0.50% to 1.25% (depending upon such ratio). The alternate base rate is the highest of (i) the prime rate announced by JPMorgan Chase Bank, N.A., (ii) the federal fund effective rate plus $^1/_2$ of 1% and (iii) the London interbank offering rate (as adjusted) for a one-month interest period plus 1.00%. The borrowers pay a per annum fee ranging from 0.25% to 0.40% (depending on such ratio) on the undrawn portion of the commitments under the Revolving Facility.

The financial covenants require us to maintain a minimum cash interest coverage ratio of 3.00 to 1.00 and a maximum senior secured leverage ratio of 2.25 to 1.00, subject to adjustment for certain events. As of December 31, 2014, we were in compliance with all financial and other covenants contained in the Revolving Facility, as applicable.

Under the Revolving Facility we have additional flexibility for investments, capital expenditures, acquisitions and restricted payments and we can issue letters of credit under the Revolving Credit Facility in an amount not to exceed $50 million. We are permitted to pay dividends and repurchase our common stock in an aggregate amount (cumulative from October 2011) up to $75 million (or $500 million, if certain leverage ratio requirements are satisfied), plus, each year, an aggregate amount equal to 50% of the consolidated net income in the prior year.

On April 23, 2014, GrafTech and certain of its subsidiaries entered into an Amended and Restated Credit Agreement for the Revolving Facility that provides for, among other things, a five-year tenor, reduced borrowing spreads and greater financial flexibility. The Revolving Credit Facility had a maximum borrowing capacity of $470 million principal and matures in April 2019.

On November 19, 2014, we initiated an amendment to our Credit Agreement with the lenders party thereto and JPMorgan Chase Bank, N.A., as Administrative Agent, Collateral Agent, Issuing Bank and Swingline Lender. The amendment includes modification to the definition of EBITDA to exclude certain restructuring costs, increasing availability of borrowings thereunder, and modification of the maximum principal amount to $400 million.

As of December 31, 2014, we were in compliance with all financial and other covenants contained in the Revolving Facility, as applicable. These covenants include maintaining a cash minimum interest coverage ratio of at least 3.00 to 1.00 and a maximum senior secured leverage ratio of 2.25 to 1.00, which are measured based on a rolling average of the prior four quarters. Based on expected operating results and expected cash flows, we expect to be in compliance with these covenants through 2015. If we were to believe that we would not continue to comply with these covenants, we would seek an appropriate waiver or amendment from the lenders thereunder. We cannot assure you that we would be able to obtain such waiver or amendment on acceptable terms or at all.

Our Credit Agreement provides that if GrafTech has not repaid or refinanced the Senior Subordinated Notes by August 30, 2015, then GrafTech must maintain Liquidity (as defined) of at least $300 million until the Senior Subordinated Notes are repaid or refinanced. For this purpose, Liquidity is defined as the aggregate commitments under the Credit Agreement of $400 million, less drawn borrowings on the Credit Agreement, plus unrestricted cash. As of December 31, 2014, the Liquidity (as defined) was approximately $372 million.

On February 27, 2015, GrafTech and certain of its subsidiaries entered into an Amended and Restated Credit Agreement that provides for, among other things, greater financial flexibility and a new $40 million senior secured delayed draw term loan facility. See Note 18 to the financial statements for additional details.

As of December 31, 2014, and December 31, 2013 approximately 92% of our debt consists of fixed rate or zero interest rate obligations.

Long-Term Contractual, Commercial and Other Obligations and Commitments. The following tables summarize our long-term contractual obligations and other commercial commitments as of December 31, 2014.

Table of Contents

	Payments Due by Year Ending December 31,				
	Total 5	2015	2016-2017	2018-2019	2020+
Contractual and Other Obligations					
Long-term debt	$514,095	$212,838	$252	$252	$300,753
Leases	15,624	5,411	5,745	4,468	—
Purchase obligations (a)	21,933	21,933	—	—	—
Total contractual obligations	551,652	240,182	5,997	4,720	300,753
Postretirement, pension and related benefits (b)	86,779	14,924	30,229	30,720	10,906
Other long-term obligations	9,301	7,616	724	961	—
Uncertain income tax provisions	3,710	1,990	1,460	260	—
Total contractual and other obligations (a)(b)	$651,442	$264,712	$38,410	$36,661	$311,659
Other Commercial Commitments					
Letters of credit (c)	$2,317	$755	$1,562	$—	$—
Guarantees	1,332	1,142	—	—	190
Total other commercial commitments	$3,649	$1,897	$1,562	$—	$190

(a) Based on the estimated timing of deliveries under supply contracts.
(b) Represents estimated postretirement, pension and related benefits obligations based on actuarial calculations.
(c) Additional letters of credit of $5.3 million are issued under the Revolving Facility.

Cash Flow and Plans to Manage Liquidity. Typically, our cash flow fluctuates significantly between quarters due to various factors. These factors include customer order patterns, fluctuations in working capital requirements, timing of capital expenditures, acquisitions, stock repurchases and other factors.

Certain of our obligations could have material impact on our liquidity. Cash flow from operations and from financing activities services payment of our obligations, thereby reducing funds available to us for other purposes. As of December 31, 2014, we had $302.0 million of unused borrowing capacity under the Revolving facility (after considering financial covenants restrictions and the outstanding letters of credit of approximately $5.3 million). Continued volatility in the global economy may require additional borrowings under our Revolving Facility. An improving economy, while resulting in improved results of operations, could increase our cash requirements to purchase inventories, make capital expenditures and fund payables and other obligations until increased accounts receivable are converted into cash. A downturn could significantly negatively impact our results of operations and cash flows, which, coupled with increased borrowings, could negatively impact our credit ratings, our ability to comply with debt covenants, our ability to secure additional financing and the cost of such financing, if available. Based on expected operating results and expected cash flows, we expect to be in compliance with our existing financial covenants in 2015.

In order to seek to minimize our credit risks, we reduce our sales of, or refuse to sell (except for cash on delivery or under letters of credit) our products to some customers and potential customers. In the current economic environment, our customers may experience liquidity shortages or difficulties in obtaining credit, including letters of credit. Our unrecovered trade receivables worldwide have not been material during the last 3 years individually or in the aggregate. We cannot assure you that we will not be materially adversely affected by accounts receivable losses in the future.

We manage our capital expenditures taking into account quality, plant reliability, safety, environmental and regulatory requirements, prudent or essential maintenance requirements, global economic conditions, available capital resources, liquidity, long-term business strategy and return on invested capital for the relevant expenditures, cost of capital and return on invested capital of the relevant segment and the Company as a whole, and other factors. We focus on growth capital expenditures which exceed our weighted average cost of capital. We prioritize projects with superior returns, which are often associated with high growth markets.

We had positive cash flow from operating activities during 2012, 2013 and 2014. Although the global economic environment experienced significant swings in these periods, our working capital management and cost-control initiatives allowed us to remain operating cash flow positive in both times of declining and improving operating results.

Table of Contents

At year end 2011 and continuing through 2012, we experienced increases in inventory levels resulting from lower sales volumes driven by reduced demand for our products as well as from contractually obligated raw material purchases. We have since closed two graphite electrode manufacturing facilities to better align our production with customer demand and we reduced inventories in 2013 and 2014. We expect to continue to reduce inventory levels over the next 12 months which will provide positive cash flows and increase our liquidity.

On July 24, 2012, our Board of Directors authorized a repurchase program for up to ten million shares. Purchases under the program may take place from time to time in the open market, or through privately negotiated transactions, as market, industry and economic conditions warrant. No shares have been purchased through this purchase program. In addition to the programs described above, upon the vesting or payment of stock awards, an employee may elect receipt of the full share amount and either pay the resulting taxes or have shares sold in the open market to cover the tax obligation. We sometimes elect to purchase these shares rather than have them sold in the open market.

Off-Balance Sheet Arrangements and Commitments. We have not undertaken or been a party to any material off-balance-sheet financing arrangements or other commitments (including non-exchange traded contracts), other than:

- Notional amount of foreign exchange and commodity contracts.
- Commitments under non-cancelable operating leases that, as of December 31, 2014, totaled no more than $5.4 million in each year and $15.6 million in the aggregate and as of December 31, 2014.
- Letters of credit outstanding under our Revolving Facility of $5.3 million as of December 31, 2014.
- Surety bonds and letters of credit with other banks totaling $6.8 million.

We are not affiliated with or related to any special purpose entity other than GrafTech Finance, our wholly-owned and consolidated finance subsidiary.

Cash Flows.

The following is a discussion of our cash flow activities:

	Years Ended December 31,		
	2012	2013	2014
	(Dollars in millions)		
Cash flow provided by (used in):			
Operating activities	$101.4	$116.8	$120.9
Investing activities	(120.0)	(83.8)	(79.0)
Financing activities	24.1	(37.6)	(35.1)

Operating Activities

Cash flow from operating activities represents cash receipts and cash disbursements related to all our activities other than to investing and financing activities. Operating cash flow is derived by adjusting net income for:

- Non-cash items such as depreciation and amortization; write-down of our investment in our non-consolidated affiliate; stock-based compensation charges; equity in losses of our previously non-consolidated affiliate
- Gains and losses attributed to investing and financing activities such as gains and losses on the sale of assets and currency (gains) and losses
- Changes in operating short and long-term assets and liabilities which reflect timing differences between the receipt and payment of cash associated with transactions and when they are recognized in results of operations

During 2013, operating cash flow increased by $15.4 million, driven primarily by reductions to working capital, and in particular, reductions in inventory levels that were built up in 2011 and 2012.

56

Table of Contents

During 2014, operating cashflow increased by $4.1 million, driven by reductions in inventory and accounts receivables, offset by decreases to accounts payable and rationalization liabilities and increases to other current assets. We expect continued reductions in inventory in 2015.
The net impact of the changes in working capital (operating assets and liabilities), which are discussed in more detail below, include the impact of changes in: receivables, inventories, prepaid expenses, accounts payable, accrued liabilities, interest payable, and payments of other current liabilities. We continue to maximize our operating cash flows by focusing on those working capital items that are most directly affected by changes in sales volume, such as accounts receivable, inventories and accounts payable.
In 2012, changes in working capital resulted in a net use of funds of $106.2 million which was impacted by:

- use of funds of $5.6 million from the increase in accounts receivable, which was due primarily to increased sales volumes at the end of the period;
- use of funds for inventories of $67.3 million primarily due to increased volumes on hand resulting from lower sales volumes driven by reduced demand for our products coupled with contractually obligated raw material purchases; and
- use of funds of $32.8 million from a decrease in accounts payable and accruals, primarily tax driven, through normal operations.

In 2013, changes in working capital resulted in a net source of funds of $32.0 million which was impacted by:

- source of funds of $37.4 million from the decrease in accounts receivable, which was due primarily to the timing of sales and collections during the year;
- source of funds from inventory reductions of $14.3 million primarily due to the planned reduction of inventory levels built up in prior years and the reduction in contractually obligated raw material purchases during 2013; and
- use of funds of $38.2 million from a decrease in accounts payable and accruals, primarily due to payments made for contractually obligated raw material purchases made in 2012 and 2013

In 2014, changes in working capital resulted in a net source of funds of $56.8 million which was impacted by:

- source of funds of $28.5 million from the decrease in accounts receivable, which was due primarily to the timing of sales and collections during the year;
- source of funds from inventory reductions of $77.9 million primarily due to the planned reduction of inventory levels built up in prior years ; and
- use of funds of $33.5 million from a decreases in accounts payable and rationalization liabilities.

Operating cash flow also included cash outflows of $15.0 million, $12.4 million and $14.5 million for contributions to pension and post retirement plans in 2012, 2013 and 2014, respectively.
Investing Activities.
Net cash used in investing activities was $120.0 million in 2012 and included:

- capital expenditures of $127.7 million; and
- cash inflows of $7.6 million related to proceeds from derivative instruments.

Net cash used in investing activities was $83.8 million in 2013 and included:

- capital expenditures of $86.3 million; and
- cash inflows of $0.1 million related to proceeds from derivative instruments
- cash inflows of $1.5 million related to insurance recoveries

Net cash used in investing activities was $79.0 million in 2014 and included:

- capital expenditures of $85.0 million; and
- cash outflows of $2.0 million related to derivative instruments.
- cash inflows of $2.8 million related to insurance recoveries
- cash inflows of $5.0 million related to the sale of fixed assets

lion.

Table of Contents

Financing Activities.

Net cash flow provided by financing activities was $24.1 million in 2012 and included:

- proceeds from our Senior Note issuance of $300.0 million;
- net payments on our Revolving Facility of $162.5 million;
- cash outflows of $103.4 million related to the repurchase of treasury shares; and
- cash paid for refinancing fees and debt issuance costs of $6.4 million

Net cash flow used by financing activities was $37.6 million in 2013 and included:

- net payments on our Revolving Facility of $5.5 million;
- cash outflows of $17.5 million related to our supply chain financing agreement
- cash outflows of $1.8 million related to the repurchase of treasury shares; and
- cash paid for refinancing fees and debt issuance costs of $0.6 million.

Net cash flow used by financing activities was $35.1 million in 2014 and included:

- net payments on our Revolving Facility of $24.0 million;
- cash outflows of $9.5 million related to our supply chain financing agreement
- cash paid for refinancing fees and debt issuance costs of $3.3 million

Costs Relating to Protection of the Environment

We have been and are subject to increasingly stringent environmental protection laws and regulations. In addition, we have an on-going commitment to rigorous internal environmental protection standards. Environmental considerations are part of all significant capital expenditure decisions. The following table sets forth certain information regarding environmental expenses and capital expenditures.

	Years Ended December 31,		
	2012	2013	2014
	(Dollars in thousands)		
Expenses relating to environmental protection	$15,836	$14,612	$17,027
Capital expenditures related to environmental protection	8,286	22,128	14,314

Critical Accounting Policies

Critical accounting policies are those that require difficult, subjective or complex judgments by management, often as a result of the need to make estimates about the effect of matters that are inherently uncertain and may change in subsequent periods. Our significant accounting policies are described in Note 1 “Business and Summary of Significant Accounting Policies” of the Notes to the Consolidated Financial Statements. The following accounting policies are deemed to be critical.

Business Combinations and Goodwill. The application of the purchase method of accounting for business combinations requires the use of significant estimates and assumptions in the determination of the fair value of assets acquired and liabilities assumed in order to properly allocate purchase price consideration between goodwill and assets that are depreciated and amortized. Our estimates of the fair values of assets and liabilities acquired are based on assumptions believed to be reasonable and, when appropriate, include assistance from independent third-party appraisal firms.

As a result of our 2010 acquisitions of Seadrift Coke L.P. and C/G Electrodes LLC, we have a significant amount of goodwill. Goodwill is tested for impairment annually or more frequently if an event or circumstance indicates that an impairment loss may have been incurred. Application of the goodwill impairment test requires judgment, including the identification of reporting units, assignment of assets and liabilities to reporting units, assignment of goodwill to reporting units and determination of the fair value of each reporting unit. We estimate the fair value of each reporting unit using a discounted cash flow methodology. This requires us to use significant judgment including estimation of future cash flows, which is based upon relevant market data, internal forecasts, estimation of the long-term growth for our business, the useful life over which cash flows will occur, determination of the weighted average cost of capital

for purposes of establishing discount rate.
Refer to Note 1 “Business and Summary of Significant Accounting Policies” of the Notes to the Consolidated Financial Statements for information regarding our goodwill impairment testing.
Reliance on Estimates. In preparing the Consolidated Financial Statements, we use and rely on estimates in determining the economic useful lives of our assets, obligations under our employee benefit plans, provisions for doubtful accounts, provisions for restructuring charges and contingencies, tax valuation allowances, evaluation of goodwill, our investment in our previously non-consolidated affiliate and other intangible assets, pension and postretirement benefit obligations and various other recorded or disclosed amounts, including inventory valuations. Estimates require us to use our judgment. While we believe that our estimates for these matters are reasonable, if the actual amount is significantly different than the estimated amount, our assets, liabilities or results of operations may be overstated or understated.
Employee Benefit Plans. We sponsor various retirement and pension plans, including defined benefit and defined contribution plans and postretirement benefit plans that cover most employees worldwide. Excluding the defined contribution plans, accounting for these plans requires assumptions as to the discount rate, expected return on plan assets, expected salary increases and health care cost trend rate. See Note 12 “Retirement Plans and Postretirement Benefits” of the Notes to the Consolidated Financial Statements for further details.
Contingencies. We account for contingencies by recording an estimated loss when information available prior to issuance of the Consolidated Financial Statements indicates that it is probable that an asset has been impaired or a liability has been incurred at the date of the Consolidated Financial Statements and the amount of the loss can be reasonably estimated. Accounting for contingencies such as those relating to environmental, legal and income tax matters requires us to use our judgment. While we believe that our accruals for these matters are adequate, if the actual loss is significantly different from the estimated loss, our results of operations may be overstated or understated. Legal costs expected to be incurred in connection with a loss contingency are expensed as incurred.
Impairments of Long-Lived Assets. We record impairment losses on long-lived assets used in operations when events and circumstances indicate that the assets might be impaired and the future undiscounted cash flows estimated to be generated by those assets are less than the carrying amount of those assets. Assets to be disposed are reported at the lower of the carrying amount or fair value less estimated costs to sell. Estimates of the future cash flows are subject to significant uncertainties and assumptions. If the actual value is significantly less than the estimated fair value, our assets may be overstated. Future events and circumstances, some of which are described below, may result in an impairment charge:

- new technological developments that provide significantly enhanced benefits over our current technology;
- significant negative economic or industry trends;
- changes in our business strategy that alter the expected usage of the related assets; and
- future economic results that are below our expectations used in the current assessments.

Accounting for Income Taxes. When we prepare the Consolidated Financial Statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. This process requires us to make the following assessments:

- estimate our actual current tax liability in each jurisdiction;
- estimate our temporary differences resulting from differing treatment of items for tax and accounting purposes (which result in deferred tax assets and liabilities that we include within the Consolidated Balance Sheets); and
- assess the likelihood that our deferred tax assets will be recovered from future taxable income and, if we believe that recovery is not more likely than not, a valuation allowance is established

If our estimates are incorrect, our deferred tax assets or liabilities may be overstated or understated.
Revenue Recognition. Revenue from sales of our commercial products is recognized when persuasive evidence of an arrangement exists, delivery has occurred, title has passed, the amount is determinable and collection is reasonably assured. Sales are recognized when both title and the risks and rewards of ownership are transferred to the customer or services have been rendered and fees have been earned in accordance with the contract.

Table of Contents

Volume discounts and rebates are recorded as a reduction of revenue in conjunction with the sale of the related products. Changes to estimates are recorded when they become probable. Shipping and handling revenues relating to products sold are included as an increase to revenue. Shipping and handling costs related to products sold are included as an increase to cost of sales.

Stock-Based Compensation Plans. Stock-based compensation expense is measured at the grant date, based on the fair market value of the award and recognized over the requisite service period. The fair value of restricted stock is based on the trading price of our common stock on the date of grant, less required adjustments to reflect dividends paid and expected forfeitures or cancellations of awards throughout the vesting period, which ranges between one and three years. Our stock option compensation expense calculated under the fair value method, using a Black Scholes model, is recognized over the vesting period, which ranges between one and three years.

Recent Accounting Pronouncements

We discuss recently adopted and issued accounting standards in Note 1 “Business and Summary of Significant Accounting Policies” of the Notes to the Consolidated Financial Statements.

Description of Our Financing Structure

We discuss our financing structure in more detail in Note 6 “Long-Term Debt and Liquidity” of the Notes to the Consolidated Financial Statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risks primarily from changes in interest rates, currency exchange rates, energy commodity prices and commercial energy rates. We, from time to time, routinely enter into various transactions that have been authorized according to documented policies and procedures to manage these well-defined risks. These transactions relate primarily to financial instruments described below. Since the counterparties to these financial instruments are large commercial banks and similar financial institutions, we do not believe that we are exposed to material counterparty credit risk. We do not use financial instruments for trading purposes.

Our exposure to changes in interest rates results primarily from floating rate long-term debt tied to LIBOR or Euro LIBOR. Our exposure to changes in currency exchange rates results primarily from:

- sales made by our subsidiaries in currencies other than local currencies;
- raw material purchases made by our foreign subsidiaries in currencies other than local currencies; and
- investments in and intercompany loans to our foreign subsidiaries and our share of the earnings of those subsidiaries, to the extent denominated in currencies other than the dollar.

Our exposure to changes in energy commodity prices and commercial energy rates results primarily from the purchase or sale of refined oil products and the purchase of natural gas and electricity for use in our manufacturing operations.

Currency Rate Management. We enter into foreign currency derivatives from time to time to attempt to manage exposure to changes in currency exchange rates. These foreign currency derivatives, which include, but are not limited to, forward exchange contracts and purchased currency options, attempt to hedge global currency exposures. Forward exchange contracts are agreements to exchange different currencies at a specified future date and at a specified rate. Purchased foreign currency options are instruments which give the holder the right, but not the obligation, to exchange different currencies at a specified rate at a specified date or over a range of specified dates. Forward exchange contracts and purchased currency options are carried at market value.

The outstanding foreign currency derivatives as of December 31, 2013 and December 31, 2014 represented a net unrealized losses of $0.1 million and $0.9 million, respectively.

Energy Commodity Management. We periodically enter into commodity derivative contracts and short duration fixed rate purchase contracts to effectively fix some or all of our natural gas and refined oil product exposure. The outstanding contracts represented a net unrealized gain of $0.8 million as of December 31, 2013 and a net unrealized loss of $7.1 million as of December 31, 2014.

Interest Rate Risk Management. We periodically implement interest rate management initiatives to seek to minimize our interest expense and the risk in our portfolio of fixed and variable interest rate obligations.

We periodically enter into agreements with financial institutions that are intended to limit, or cap, our exposure to incurrence of additional interest expense due to increases in variable interest rates. These instruments effectively cap our interest rate exposure. We currently do not have any such instruments outstanding.

Sensitivity Analysis. We use sensitivity analysis to quantify potential impacts that market rate changes may have on the fair values of our foreign currency derivatives and our commodity derivatives. The sensitivity analysis represents the hypothetical changes in value of the hedge position and does not reflect the related gain or loss on the forecasted underlying transaction. As of December 31, 2014, a 10% appreciation or depreciation in the value of the U.S. dollar against foreign currencies from the prevailing market rates would result in a corresponding decrease of $1.7 million or a corresponding increase of $1.4 million, respectively, in the fair value of the foreign currency hedge portfolio. A 10% increase or decrease in the value of the underlying commodity prices that we hedge would result in a corresponding increase or decrease of $1.1 million as of December 31, 2014 in the fair value of the commodity hedge portfolio. Because of the high correlation between the hedging instrument and the underlying exposure, fluctuations in the value of the instruments are generally offset by reciprocal changes in the value of the underlying exposure.

We had no interest rate derivative instruments outstanding as of December 31, 2014. A hypothetical increase in interest rates of 100 basis points (1%) would have increased our interest expense by $0.8 million for the twelve months ended December 31, 2014.

Table of Contents

Item 8. Financial Statements and Supplementary Data

(Unless otherwise noted, all dollars are presented in thousands)

See the Table of Contents located at the beginning of this Report for more detailed page references to information contained in this Item.

Table of Contents

Management’s Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act as a process, designed by, or under the supervision of, the chief executive officer and chief financial officer and effected by the board of directors, management and other personnel of a company, 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, and includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of assets of the company;
- 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 the board of directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of assets of the company that could have a material effect on its financial statements.

Internal control over financial reporting has inherent limitations which 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 because the level of compliance with related policies or procedures may deteriorate.

Management has conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2014 using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013). Based on that assessment, management concluded that our internal control over financial reporting was effective as of December 31, 2014. The effectiveness of the Company’s internal control over financial reporting has been audited by PricewaterhouseCoopers LLP, our independent registered public accounting firm, as stated in their report which is presented in this Annual Report on Form 10-K.

Date: March 2, 2015

/S/ Joel L. Hawthorne
Joel L. Hawthorne,
President and Chief Executive Officer

/S/ Erick R. Asmussen
Erick R. Asmussen,
Vice President and Chief Financial Officer

Table of Contents

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of GrafTech International Ltd.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations and comprehensive income, of stockholders' equity and of cash flows present fairly, in all material respects, the financial position of GrafTech International Ltd. and its subsidiaries at December 31, 2014 and December 31, 2013, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2014 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2014, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated 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 audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As noted in Note 18 to the consolidated financial statements, the Company amended its revolving agreement and entered into a new senior secured delayed draw term loan.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

/s/ PRICEWATERHOUSECOOPERS LLP

PRICEWATERHOUSECOOPERS LLP
Cleveland, Ohio
March 2, 2015

Table of Contents

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Dollars in thousands, except share data)

	December 31, 2013	December 31, 2014
ASSETS		
Current assets:		
Cash and cash equivalents	$11,888	$17,550
Accounts and notes receivable, net of allowance for doubtful accounts of $6,718 as of December 31, 2013 and $7,471 as of December 31, 2014	199,566	162,919
Inventories	490,414	382,903
Prepaid expenses and other current assets	73,790	81,623
Total current assets	775,658	644,995
Property, plant and equipment	1,588,880	1,500,821
Less: accumulated depreciation	767,895	846,781
Net property, plant and equipment	820,985	654,040
Deferred income taxes	10,334	16,819
Goodwill	496,810	420,129
Other assets	114,061	97,822
Total assets	$2,217,848	$1,833,805
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$115,212	$86,409
Short-term debt	1,161	188,104
Accrued income and other taxes	30,687	24,506
Rationalizations	18,421	9,563
Supply chain financing liability	9,455	—
Other accrued liabilities	40,939	43,319
Total current liabilities	215,875	351,901
Long-term debt	541,593	341,615
Other long-term obligations	97,947	107,566
Deferred income taxes	41,684	28,197
Contingencies – Note 14		
Stockholders' equity:		
Preferred stock, par value $.01, 10,000,000 shares authorized, none issued	—	—
Common stock, par value $.01, 225,000,000 shares authorized, 151,929,565 shares issued as of December 31, 2013 and 152,821,011 shares issued as of December 31, 2014	1,519	1,528
Additional paid – in capital	1,820,451	1,825,880
Accumulated other comprehensive loss	(292,624)	(336,524)
Retained earnings	39,625	(245,751)
Less: cost of common stock held in treasury, 16,341,311 shares as of December 31, 2013 and 15,922,729 as of December 31, 2014	(247,190)	(239,811)
Less: common stock held in employee benefit and compensation trusts, 87,206 shares as of December 31, 2013 and 80,967 shares as of December 31, 2014	(1,032)	(796)
Total stockholders' equity	1,320,749	1,004,526
Total liabilities and stockholders' equity	$2,217,848	$1,833,805

See accompanying Notes to the Consolidated Financial Statements

64

Table of Contents

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME
(Dollars in thousands, except per share data)

	For the year ended December 31,		
	2012	2013	2014
Net sales	$1,248,264	$1,166,674	$1,085,304
Cost of sales	932,460	1,027,608	993,057
Gross profit	315,804	139,066	92,247
Research and development	13,796	10,437	14,844
Selling and administrative expenses	145,540	111,043	124,178
Impairment of long-lived assets and goodwill	—	—	197,220
Rationalizations	—	20,156	11,625
Operating income (loss)	156,468	(2,570)	(255,620)
Other (income) expense, net	(1,005)	1,698	2,445
Interest expense	23,247	36,037	37,057
Interest income	(261)	(203)	(330)
Income before income taxes	134,487	(40,102)	(294,792)
Provision (benefit) for income taxes	16,846	(12,843)	(9,416)
Net income (loss)	$117,641	$(27,259)	$(285,376)
Basic income (loss) per common share:			
Net income (loss) per share	$0.85	$(0.20)	$(2.10)
Weighted average common shares outstanding	138,552	135,067	136,155
Diluted income (loss) per common share:			
Net income (loss) per share	$0.84	$(0.20)	$(2.10)
Weighted average common shares outstanding	139,700	135,067	136,155
STATEMENTS OF COMPREHENSIVE INCOME (LOSS)			
Net income (loss)	$117,641	$(27,259)	$(285,376)
Other comprehensive income:			
Foreign currency translation adjustments	(9,929)	(13,981)	(33,041)
Commodities and foreign currency derivatives and other, net of tax of $2,327, ($300) and $(63), respectively	(8,812)	2,035	(10,859)
Other comprehensive loss, net of tax:	(18,741)	(11,946)	(43,900)
Comprehensive income (loss)	$98,900	$(39,205)	$(329,276)

See accompanying Notes to the Consolidated Financial Statements

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Dollars in thousands)

	For the year ended December 31, 2012	2013	2014
Cash flow from operating activities:			
Net income (loss)	$117,641	$(27,259)	$(285,376)
Adjustments to reconcile net income to cash provided by operations:			
Depreciation and amortization	81,660	123,397	119,708
Impairment of long-lived assets and goodwill	—	—	197,220
Rationalization related fixed asset write offs	—	8,010	926
Inventory write-downs	—	—	19,600
Deferred income tax benefit	8,130	(22,369)	(16,003)
Post-retirement and pension plan changes	13,349	(10,544)	23,047
Stock-based compensation	9,601	8,035	5,577
Interest expense	12,500	14,052	15,693
Insurance recoveries	4,007	—	—
Other charges, net	(20,001)	7,162	1,441
(Increase) decrease in working capital*	(106,220)	31,980	56,846
Increase in long-term assets and liabilities	(19,267)	(15,627)	(17,776)
Net cash provided by operating activities	101,400	116,837	120,903
Cash flow from investing activities:			
Capital expenditures	(127,728)	(86,344)	(84,981)
Insurance recoveries	—	1,500	2,834
Proceeds from derivative instruments	7,572	114	(2,025)
Proceeds from the sale of fixed assets	—	—	5,042
Other	194	929	178
Net cash used in investing activities	(119,962)	(83,801)	(78,952)
Cash flow from financing activities:			
Short-term debt (reductions) borrowings, net	(5,738)	(7,265)	(1,021)
Revolving Facility borrowings	425,000	166,000	269,000
Revolving Facility reductions	(587,500)	(171,500)	(293,000)
Proceeds from long-term debt	300,000	—	—
Principal payments on long-term debt	(225)	(225)	(192)
Supply chain financing	(2,967)	(17,508)	(9,455)
Proceeds from exercise of stock options	157	448	2,813
Purchase of treasury shares	(103,445)	(1,825)	(894)
Refinancing fees and debt issuance costs	(6,385)	(560)	(3,279)
Other	5,215	(5,210)	951
Net cash provided by (used in) financing activities	24,112	(37,645)	(35,077)
Net increase (decrease) in cash and cash equivalents	5,550	(4,609)	6,874
Effect of exchange rate changes on cash and cash equivalents	(662)	(820)	(1,212)
Cash and cash equivalents at beginning of period	12,429	17,317	11,888
Cash and cash equivalents at end of period	$17,317	$11,888	$17,550

See accompanying Notes to the Consolidated Financial Statements

Table of Contents

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS (Continued)
(Dollars in thousands)

	For the year ended December 31,		
	2012	2013	2014
Supplemental disclosures of cash flow information:			
Net cash paid during the periods for:			
Interest	$9,279	$21,825	$21,549
Income taxes	26,209	8,357	10,611
Non-cash operating, investing and financing activities:			
Common stock issued to savings and pension plan trusts	4,593	4,561	4,381
* Net change in working capital due to the following components:			
(Increase) decrease in current assets:			
Accounts and notes receivable, net	$(5,563)	$37,366	$28,466
Inventories	(67,314)	14,324	77,875
Prepaid expenses and other current assets	(2,281)	(209)	(14,898)
Increase (decrease) in accounts payables and accruals	(32,759)	(38,198)	(25,849)
Rationalizations	—	18,421	(8,732)
Increase in interest payable	1,697	276	(16)
(Increase) decrease in working capital	$(106,220)	$31,980	$56,846

See accompanying Notes to the Consolidated Financial Statements

Table of Contents

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Dollars in thousands, except share data)

	Issued Shares of Common Stock	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Retained Earnings (Accumulated Deficit)	Treasury Stock	Common Stock Held in Employee Benefit & Compensation Trust	Total Stockholders' Equity
Balance at January 1, 2012	149,861,081	$ 1,499	$ 1,798,161	$ (261,937)	$ (50,757)	$ (146,041)	$ (981)	$ 1,339,944
Comprehensive income (loss):								
Net income	—	—	—	—	117,641	—	—	117,641
Other comprehensive income:								
Commodity and foreign currency derivatives and other, net of tax of $2,327	—	—	(11)	(8,812)	—	—	—	(8,823)
Foreign currency translation adjustments	—	—	—	(9,929)	—	—	—	(9,929)
Total other comprehensive income	—	—	(11)	(18,741)	—	—	—	(18,752)
Treasury stock	—	—	—	—	—	(101,697)	—	(101,697)
Stock-based compensation	553,614	6	9,720	—	—	(1,762)	—	7,964
Common stock issued to savings and pension plan trusts	433,061	4	4,565	—	—	13	12	4,594
Sale of common stock under stock options	21,471	—	157	—	—	—	—	157
Balance at December 31, 2012	150,869,227	$ 1,509	$ 1,812,592	$ (280,678)	$ 66,884	$ (249,487)	$ (969)	$ 1,349,851
Comprehensive income (loss):								
Net income	—	—	—	—	(27,259)	—	—	(27,259)
Other comprehensive income:								
Commodity and foreign currency	—	—	—	2,035	—	—	—	2,035

derivatives and other, net of tax of ($300)								
Foreign currency translation adjustments	—	—	—	(13,981)	—	—	—	(13,981)
Total other comprehensive income	—	—	—	(11,946)	—	—	—	(11,946)
Stock-based compensation	405,168	4	2,850	—	—	2,297	—	5,151
Common stock issued to savings and pension plan trusts	564,435	6	4,561	—	—	—	(63)	4,504
Sale of common stock under stock options	90,735	—	448	—	—	—	—	448
Balance at December 31, 2013	151,929,565	$1,519	$1,820,451	$(292,624)	$39,625	$(247,190)	$(1,032)	$1,320,749

See accompanying Notes to the Consolidated Financial Statements

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Continued)

Table of Contents

(Dollars in thousands, except share data)

	Issued Shares of Common Stock	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Retained Earnings (Accumulated Deficit)	Treasury Stock	Common Stock Held in Employee Benefit & Compensation Trust	Total Stockholders' Equity
Balance at December 31, 2013	151,929,565	1,519	1,820,451	(292,624)	39,625	(247,190)	(1,032)	1,320,749
Comprehensive income (loss):								
Net income	—	—	—	—	(285,376)	—	—	(285,376)
Other comprehensive income:								
Commodity and foreign currency derivatives and other, net of tax of ($63)	—	—	—	(10,859)	—	—	—	(10,859)
Foreign currency translation adjustments	—	—	—	(33,041)	—	—	—	(33,041)
Total other comprehensive income	—	—	—	(43,900)	—	—	—	(43,900)
Stock-based compensation	322	—	(1,765)	—	—	7,379	—	5,614
Common stock issued to savings and pension plan trusts	574,973	6	4,381	—	—	—	236	4,623
Sale of common stock under stock options	316,151	3	2,813	—	—	—	—	2,816
Balance at December 31, 2014	152,821,011	$ 1,528	$ 1,825,880	$ (336,524)	$ (245,751)	$ (239,811)	$ (796)	$ 1,004,526

See accompanying Notes to the Consolidated Financial Statements

Table of Contents

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in thousands, except as otherwise noted)

(1) Business and Summary of Significant Accounting Policies

Discussion of Business and Structure

GrafTech International Ltd. is one of the world's largest manufacturers and providers of high quality synthetic and natural graphite and carbon based products. References herein to "GTI," "we," "our," or "us" refer collectively to GrafTech International Ltd. and its subsidiaries. We have seven major product categories: graphite electrodes, refractory products, needle coke products, advanced graphite materials, advanced composite materials, advanced electronics technologies, and advanced materials, which are reported in the following segments:

- Industrial Materials includes graphite electrodes, refractory products and needle coke products, and primarily serves the steel industry.
- Engineered Solutions includes advanced graphite materials, advanced composite materials, advanced electronics technologies, and advanced materials and provides primary and specialty products to the advanced electronics, industrial, energy, transportation and defense markets.

Summary of Significant Accounting Policies

The Consolidated Financial Statements include the financial statements of GrafTech International Ltd. and its wholly-owned subsidiaries. All significant intercompany transactions have been eliminated in consolidation.

Cash Equivalents

We consider all highly liquid financial instruments with original maturities of three months or less to be cash equivalents. Cash equivalents consist of certificates of deposit, money market funds and commercial paper.

Revenue Recognition

Revenue from sales of our commercial products is recognized when they meet four basic criteria (1) persuasive evidence of an arrangement exists, (2) delivery has occurred, (3) the amount is determinable and (4) collection is reasonably assured. Sales are recognized when both title and the risks and rewards of ownership are transferred to the customer or services have been rendered and fees have been earned in accordance with the contract.

Volume discounts and rebates are estimated and are recorded as a reduction of revenue in conjunction with the sale of the related products. Changes to estimates are recorded when they become probable. Shipping and handling revenues billed to our customers are included in net sales and the related shipping and handling costs are included as an increase to cost of sales.

Earnings per Share

The calculation of basic earnings per share is based on the weighted-average number of our common shares outstanding during the applicable period. We use the two-class method of computing earnings per share for our instruments granted in share-based payment transactions that are determined to be participating securities prior to vesting.

Diluted earnings per share recognizes the dilution that would occur if outstanding stock options and restricted stock awards were exercised or converted into common shares. We use the treasury stock method to compute the dilutive effect of our stock options and restricted stock awards (using the average market price for the period).

Inventories

Inventories are stated at the lower of cost or market. Cost is principally determined using the "first-in first-out" ("FIFO") and average cost, which approximates FIFO, methods. Elements of cost in inventory include raw materials, direct labor and manufacturing overhead.

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Property, Plant and Equipment
Expenditures for property, plant and equipment are recorded at cost. Maintenance and repairs of property and equipment are expensed as incurred. Expenditures for replacements and betterments are capitalized and the replaced assets are retired. Gains and losses from the sale of property are included in cost of goods sold or other (income) expense, net. We depreciate our assets using the straight-line method over the estimated useful lives of the assets. The ranges of estimated useful lives are as follows:

	Years
Buildings	25-40
Land improvements	20
Machinery and equipment	5-20
Furniture and fixtures	5-10

The carrying value of fixed assets is assessed when events and circumstances indicating impairment are present. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of the assets to future undiscounted net cash flows expected to be generated by the assets. If the assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell.
Depreciation expense was $59.6 million for 2012, $102.9 million for 2013 (including $28.3 million of rationalization related accelerated depreciation) and $100.4 million for 2014 (including $26.0 million of rationalization related accelerated depreciation).
Accounts Receivable
Trade accounts receivable primarily arise from sales of goods to customers and distributors in the normal course of business.
Sales of trade accounts receivable
We have in the past sold certain trade accounts receivable to a bank under a factoring arrangement. The receivables were sold at a discount on a nonrecourse basis and we did not retain interests in the receivables sold. We also acted as a servicer of the sold receivables for a fee. The servicing duties included collecting payments on receivables and remitting them to the bank. While servicing the receivables, we applied the same servicing policies and procedures that are applied to our owned accounts receivable.
Allowance for Doubtful Accounts
Considerable judgment is required in assessing the realizability of receivables, including the current creditworthiness of each customer, related aging of the past due balances and the facts and circumstances surrounding any non-payment. We evaluate specific accounts when we become aware of a situation where a customer may not be able to meet its financial obligations. The reserve requirements are based on the best facts available to us and are reevaluated and adjusted as additional information is received. Receivables are charged off when amounts are determined to be uncollectible.
Capitalized Bank Fees
We capitalize bank fees upon the incurrence of debt. As of December 31, 2013 and December 31, 2014, capitalized bank fees amounted to $9.8 million and $9.7 million, respectively. We amortize such amounts over the life of the respective debt instrument using the effective interest method. The estimated life may be adjusted upon the occurrence of a triggering event. Amortization of capitalized bank fees amounted to $1.7 million in 2012, $2.5 million in 2013, and $3.3 million in 2014, respectively, and is included in interest expense.
Derivative Financial Instruments
We do not use derivative financial instruments for trading purposes. They are used to manage well-defined commercial risks associated with commodity contracts and currency exchange rate risks.

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Foreign Currency Derivatives
We enter into foreign currency derivatives from time to time to manage exposure to changes in currency exchange rates. These instruments, which include, but are not limited to, forward exchange contracts and purchased currency options, attempt to hedge global currency exposures, relating to non-dollar denominated debt and identifiable foreign currency receivables, payables and commitments held by our foreign and domestic subsidiaries. Forward exchange contracts are agreements to exchange different currencies at a specified future date and at a specified rate. Purchased foreign currency options are instruments which give the holder the right, but not the obligation, to exchange different currencies at a specified rate at a specified date or over a range of specified dates. The result is the creation of a range in which a best and worst price is defined, while minimizing option cost. Forward exchange contracts and purchased currency options are carried at fair value. These contracts are treated as hedges to the extent they are effective. Changes in fair values related to these contracts are recognized in other comprehensive income in the Consolidated Balance Sheets until settlement. At the time of settlement, realized gains and losses are recognized in revenue or cost of goods sold on the Consolidated Statements of Income. For derivatives that are not designated as a hedge, any gain or loss is immediately recognized in Cost of Goods Sold or Other (Income) Expense on the the Consolidated Statements of Operations. Derivatives used in this manner relate to risks resulting from assets or liabilities denominated in a foreign currency.
Commodity Derivative Contracts
We periodically enter into derivative contracts for natural gas and certain refined oil products. These contracts are entered into to protect against the risk that eventual cash flows related to these products will be adversely affected by future changes in prices. All commodity contracts are carried at fair value and are treated as hedges to the extent they are effective. Changes in their fair values are included in other comprehensive income in the Consolidated Balance Sheets until settlement. At the time of settlement of these hedge contracts, realized gains and losses are recognized as part of cost of goods sold on the Consolidated Statements of Income.
Research and Development
Expenditures relating to the development of new products and processes, including significant improvements to existing products, are expensed as incurred.
Income Taxes
We file a consolidated United States ("U.S.") federal income tax return for GTI and its eligible domestic subsidiaries. Our non-U.S. subsidiaries file income tax returns in their respective local jurisdictions. We account for income taxes under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and tax benefit carry forwards. Deferred tax assets and liabilities at the end of each period are determined using enacted tax rates. A valuation allowance is 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.
Under the guidance on accounting for uncertainty in income taxes, we recognize the benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement. The guidance on accounting for uncertainty in income taxes also provides guidance on derecognition, classification, interest and penalties on income taxes, and accounting in interim periods.
Stock-Based Compensation Plans
We have various plans that provide for the granting of stock-based compensation to employees and, in certain instances, to non-employee directors, which are described more fully in Note 13, "Management Compensation and Incentive Plans." Shares are issued upon vesting or option exercise from authorized, unissued shares or treasury shares. We account for those plans under the applicable standards on accounting for share-based payment. For transactions in which we obtain employee services in exchange for an award of equity instruments, we measure the cost of the

services based on the grant date fair value of the award. We recognize the cost over the period during which an employee is required to provide services in exchange for the award, known as the requisite service period (usually the vesting period). Costs related to plans with graded vesting are generally recognized using a straight-line method. Cash flows resulting from tax benefits for deductions in excess of compensation cost recognized are included in financing cash flows.

Retirement Plans and Postretirement Benefits

We use actuarial methods and assumptions to account for our defined benefit pension plans and our postretirement benefits. We immediately recognize the change in the fair value of plan assets and net actuarial gains and losses annually in the fourth quarter of each year (MTM Adjustment) and whenever a plan is remeasured (e.g. due to a significant curtailment, settlement, etc.). Pension and postretirement benefits expense includes the MTM adjustment, actuarially computed cost of benefits earned during the current service period, the interest cost on accrued obligations, the expected return on plan assets based on fair market values, and adjustments due to plan settlements and curtailments. Contributions to the qualified U.S. retirement plan are made in accordance with the requirements of the Employee Retirement Income Security Act of 1974.

Postretirement benefits and benefits under the non-qualified retirement plan have been accrued, but not funded. The estimated cost of future postretirement life insurance benefits is determined by the Company with assistance from independent actuarial firms using the “projected unit credit” actuarial cost method. Such costs are recognized as employees render the service necessary to earn the postretirement benefits. We record our balance sheet position based on the funded status of the plan.

We exclude the inactive participant portion of our pension and other postretirement benefit costs as a component of inventoriable costs. Additional information with respect to benefits plans is set forth in Note 12, “Retirement Plans and Postretirement Benefits.”

Environmental, Health and Safety Matters

Our operations are governed by laws addressing protection of the environment and worker safety and health. These laws provide for civil and criminal penalties and fines, as well as injunctive and remedial relief, for noncompliance and require remediation at sites where hazardous substances have been released into the environment.

We have been in the past, and may become in the future, the subject of formal or informal enforcement actions or proceedings regarding noncompliance with these laws or the remediation of company-related substances released into the environment. Historically, such matters have been resolved by negotiation with regulatory authorities resulting in commitments to compliance, abatement or remediation programs and in some cases payment of penalties. Historically, neither the commitments undertaken nor the penalties imposed on us have been material.

Environmental considerations are part of all significant capital expenditure decisions. Environmental remediation, compliance and management expenses were approximately $15.8 million in 2012, $14.6 million in 2013, and $17.0 million in 2014. The accrued liability relating to environmental remediation was $7.0 million as of December 31, 2013 and $6.9 million as of December 31, 2014. A charge to income is recorded when it is probable that a liability has been incurred and the cost can be reasonably estimated. When payments are fixed or determinable, the liability is discounted using a rate at which the payments could be effectively settled.

Our environmental liabilities do not take into consideration possible recoveries of insurance proceeds. Because of the uncertainties associated with environmental remediation activities at sites where we may be potentially liable, future expenses to remediate sites could be considerably higher than the accrued liability.

Foreign Currency Translation

We translate the financial statements of foreign subsidiaries, whose local currency is their functional currency, to U.S. dollars using period-end exchange rates for assets and liabilities and weighted average exchange rates for each period for revenues, expenses, gains and losses. Differences arising from exchange rate changes are included in accumulated other comprehensive loss on the Consolidated Balance Sheets until such time as the operations of such non-U.S. subsidiaries are sold or substantially or completely liquidated.

For our Mexican, Swiss and Russian subsidiaries, whose functional currency is the U.S. dollar, we remeasure non-monetary balance sheet accounts and the related income statement accounts at historical exchange rates.

Resulting gains and losses arising from the fluctuations in currency for monetary accounts are recognized in other (income) expense, net, in the Consolidated Statements of Income. Gains and losses arising from fluctuations in currency

Table of Contents

exchange rates on transactions denominated in currencies other than the functional currency are recognized in earnings as incurred.

We have non-dollar denominated intercompany loans between some of our foreign subsidiaries. These loans are subject to remeasurement gains and losses due to changes in currency exchange rates. Certain of these loans had been deemed to be essentially permanent prior to settlement and, as a result, remeasurement gains and losses on these loans were recorded as a component of accumulated other comprehensive loss in the stockholders' equity section of the Consolidated Balance Sheets. The remaining loans are deemed to be temporary and, as a result, remeasurement gains and losses on these loans are recorded as currency (gains/losses) in other (income) expense, net, on the Consolidated Statements of Income.

Software Development Costs

In connection with our development and implementation of global enterprise resource planning systems with advanced manufacturing, planning and scheduling software, we capitalize certain computer software costs after technological feasibility is established. These costs are capitalized within property, plant and equipment and are amortized utilizing the straight-line method over the economic lives of the related products. Total costs capitalized as of December 31, 2013 and 2014 amounted to $17.8 million and $15.6 million, respectively. Amortization expense for capitalized software was $1.4 million for 2012 , $1.0 million for 2013 and $0.5 million for 2014.

Rationalizations

We record costs for rationalization actions implemented to reduce excess and high-cost manufacturing capacity and operating and administrative costs. For ongoing post-employment benefit arrangements, a liability is recognized when it is probable that employees will be entitled to benefits and the amount can be reasonably estimated. These conditions are generally met when the rationalization plan is approved by management. For one-time benefit arrangements, a liability is incurred and must be accrued at the date the plan is communicated to employees, unless they will be retained beyond a minimum retention period. In this case, the liability is calculated at the date the plan is communicated to employees and is accrued ratably over the future service period. Other costs reported under Rationalization include contract termination costs.

In connection with rationalization initiatives, the company incurs additional costs such as inventory losses, fixed assets write-offs, impairment and accelerated depreciation as well as various non-recurring costs for dismantling, transferring or disposing of equipment and inventory. These rationalization related costs are measured and recorded based on the appropriate accounting guidance. Inventory losses are recorded in cost of sales. Fixed assets write-offs and accelerated depreciation are recorded in cost of sales, R&D and SG&A based upon the asset utilization. Other non-recurring costs are recorded in cost of sales and SG&A.

Goodwill and Other Intangible Assets

Goodwill is the excess of the acquisition cost of businesses over the fair value of the identifiable net assets acquired. We do not recognize deferred income taxes for the difference between the assigned value and the tax basis related to nondeductible goodwill. Goodwill is not amortized; however, impairment testing is performed annually or more frequently if circumstances indicate that impairment may have occurred. We perform the goodwill impairment test annually at December 31.

The impairment test for goodwill uses a two-step approach, which is performed at the reporting unit level. Step one compares the fair value of the reporting unit (using a discounted cash flow method) to its carrying value. The fair value for each reporting unit with goodwill is determined in accordance with accounting guidance on determining fair value, which requires consideration of the income, market, and cost approaches as applicable. If the carrying value exceeds the fair value, there is potential impairment and step two must be performed. Step two compares the carrying value of the reporting unit's goodwill to implied fair value (i.e., fair value of the reporting unit less the fair value of the unit's assets and liabilities, including identifiable intangible assets). If the fair value of goodwill is less than the carrying amount of goodwill, an impairment is recognized.

Other amortizable intangible assets, which consist primarily of trademarks and trade names, customer-related intangibles, and technological know-how, are amortized over their estimated useful lives using the straight line or sum-of-the-years digits method. The estimated useful lives for each major category of amortizable intangible assets are:

74

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

	Years
Trade name	5-10
Technology and know-how	5-9
Customer related intangible	5-14

Additional information about goodwill and other intangibles is set forth in Note 4 “Goodwill and Other Intangible Assets.”

Major Maintenance and Repair Costs

We perform scheduled major maintenance of the storage and processing units at our Seadrift plant (referred to as “overhaul”). Time periods between overhauls vary by unit. We also perform an annual scheduled significant maintenance and repair shutdown of the plant (referred to as “turnaround”).

Costs of overhauls and turnarounds include plant personnel, contract services, materials, and rental equipment. We defer these costs when incurred and use the straight-line method to amortize them over the period of time estimated to lapse until the next scheduled overhaul of the applicable storage or processing unit or over one year for our turnaround. Under this policy in 2013, costs deferred were $7.5 million and costs amortized were $7.8 million. Costs deferred in 2014 were $13.3 million and costs amortized were $6.6 million.

Our turnaround, normally scheduled during the spring or early summer of each year, was completed during June 2014.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (“GAAP”) requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the Consolidated Financial Statements and the reported amounts of revenue and expenses. Significant estimates and assumptions are used for, but are not limited to, pension and other post-retirement benefits, allowance for doubtful accounts, accruals and valuation allowances, asset impairment, and environmental-related accruals. Actual results could differ from our estimates.

Subsequent Events

We evaluate events that occur after the balance sheet date but before financial statements are issued to determine if a material event requires our amending the financial statements or disclosing the event.

Basis of Presentation

During 2013, the Company recorded additional depreciation expense of $2.7 million ($1.8 million net of tax), to correct certain errors related to prior periods. These charges were recorded primarily to release to cost of sales depreciation expenses that were previously incorrectly deferred to inventory. These adjustments were not material to 2013 or any previously issued financial statements.

Recent Accounting Standards

In May 2014, FASB issued ASU No. 2014-09, Revenue from Contracts with Customers. This ASU supersedes the revenue recognition requirements in Accounting Standards Codification 605—Revenue Recognition and most industry-specific guidance throughout the Codification. This ASU requires that an entity recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This ASU is effective for fiscal years beginning after December 15, 2016, and for interim periods within those fiscal years. We are in the process of assessing the impact of the adoption of ASU 2014-09 on the Company's financial position, results of operations and cash flows.

In July 2013, the Financial Accounting Standards Board ("FASB") issued guidance on Income Taxes for “Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists.” This guidance requires that financial statements reflect a deferred tax asset for a net operating loss carryforward, a similar tax loss, or a tax credit carryforward as reduced by any unrecognized tax benefit, or a portion of an unrecognized tax benefit. The updated guidance is effective for the Company's interim and annual periods beginning after December 15, 2013, which will be effective for us beginning fiscal 2014. We do not expect the adoption of this guidance to have a significant impact on our consolidated financial statements.

75

Table of Contents

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(2) Rationalizations

Throughout 2013 and 2014 the Company undertook rationalization plans in order to streamline our organization and lower our production costs. The following tables summarize the total rationalization and related charges incurred during 2013 and 2014 followed by the details of each plan.

	For the Year Ended December 31, 2013			
	Industrial Materials Segment	Engineered Solutions Segment	Corporate, R&D and Other	Total
	(Dollars in thousands)			
Accelerated depreciation (recorded in Cost of sales)	$28,326	$—	$—	$28,326
Inventory loss (recorded in Cost of sales)	7,886	896	—	8,782
Fixed asset write-offs and other(recorded in Cost of sales)	6,104	2,274	—	8,378
Other (recorded in Selling and administrative)	59	—	—	59
Severance and related costs (recorded in Rationalizations)	17,072	458	1,816	19,346
Contract terminations (recorded in Rationalizations)	810	—	—	810
Total 2013 rationalization and related charges	$60,257	$3,628	$1,816	$65,701

	For the Year Ended December 31, 2014			
	Industrial Materials Segment	Engineered Solutions Segment	Corporate, R&D and Other	Total
	(Dollars in thousands)			
Accelerated depreciation (recorded in Cost of sales)	$22,388	$3,649	$—	$26,037
Inventory loss (recorded in Cost of sales)	961	13,711	—	14,672
Fixed asset write-offs and other(recorded in Cost of sales)	5,552	1,278	—	6,830
Accelerated depreciation (recorded in Research and development)	—	—	2,312	2,312
Accelerated depreciation (recorded in Selling and administrative)	—	—	608	608
Other (recorded in Selling and administrative)	89	121	515	725
Severance and related costs (recorded in Rationalizations)	5,040	3,113	2,845	10,998
Contract terminations (recorded in Rationalizations)	469	146	11	626
Impairment of long-lived assets		121,570	—	121,570
Total 2014 rationalization and related charges	$34,499	$143,588	$6,291	$184,378

2013 Industrial Materials Rationalization

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

On October 31, 2013, we announced a global initiative to reduce our Industrial Materials segment's cost base and improve our competitive position. As part of this initiative, we ceased production at our two highest cost graphite electrode plants, located in Brazil and South Africa, as well as a machine shop in Russia. Our graphite electrode capacity was reduced by approximately 60,000 metric tons as a result of these actions. In parallel, we adopted measures for reductions in overhead and related corporate operations. These actions and measures reduced global headcount by approximately 600 people, or approximately 20 percent of our global workforce. These actions were substantially completed during the first half of 2014.

2013 Engineered Solutions Rationalization

In order to optimize our Engineered Solutions platform and improve our cost structure, we also initiated actions to centralize certain operations and reduce overhead in our Engineered Solutions segment. These actions reduced global headcount by approximately 40 people and were substantially completed during 2014.

Total 2013 Rationalization Initiatives Impact to Financial Results

During 2013 and 2014, as a result of the 2013 rationalization initiatives we incurred rationalization charges of $20.2 million and $0.9 million, respectively, related to severance and contract termination costs. We also incurred non-cash accelerated depreciation charges of $28.3 million and $23.2 million in 2013 and 2014, respectively. Other rationalization-related charges recorded in cost of sales in 2013 were $17.2 million, representing fixed asset write offs and other charges, including cleaning and dismantling costs and loss reserves for inventory. Other rationalization-related charges recorded in cost of sales in 2014 were $7.1 million, and primarily comprised of inventory write-offs.

Charges incurred related to the 2013 rationalization initiatives for the twelve months ended December 31, 2013 and December 31, 2014 are as follows:

	For the Year Ended December 31, 2013			
	Industrial Materials Segment	Engineered Solutions Segment	Corporate, R&D and Other	Total
	(Dollars in thousands)			
Accelerated depreciation (recorded in Cost of sales)	$28,326	$—	$—	$28,326
Inventory loss (recorded in Cost of sales)	7,886	896	—	8,782
Fixed asset write-offs and other(recorded in Cost of sales)	6,104	2,274	—	8,378
Other (recorded in Selling and administrative)	59	—	—	59
Severance and related costs (recorded in Rationalizations)	17,072	458	1,816	19,346
Contract terminations (recorded in Rationalizations)	810	—	—	810
Total 2013 rationalization plan and related charges	$60,257	$3,628	$1,816	$65,701

Table of Contents

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

	For the Year Ended December 31, 2014			
	Industrial Materials Segment	Engineered Solutions Segment	Corporate, R&D and Other	Total
	(Dollars in thousands)			
Accelerated depreciation (recorded in Cost of sales)	$22,388	$827	$—	$23,215
Inventory loss (recorded in Cost of sales)	961	485	—	1,446
Fixed asset write-offs and other(recorded in Cost of sales)	5,374	233	—	5,607
Other (recorded in Selling and administrative)	89	—	—	89
Severance and related costs (recorded in Rationalizations)	433	(28)	—	405
Contract terminations (recorded in Rationalizations)	469	—	—	469
Total 2014 rationalization plan and related charges	$29,714	$1,517	$—	$31,231

The following table represents the roll-forward of the liability incurred for employee termination benefits and contract termination costs incurred in connection with the the rationalization initiatives described above. This liability is recorded as a current liability on the Consolidated Balance Sheet.

	(Dollars in thousands)
Balance as of December 31, 2012	$—
Charges incurred	16,159
Change in estimates	3,997
Payments and settlements	(1,506)
Effect of change in currency exchange rates	(229)
Balance as of December 31, 2013	18,421
Charges incurred	613
Change in estimates	153
Payments and settlements	(16,494)
Effect of change in currency exchange rates	(1,658)
Balance as of December 31, 2014	$1,035

2014 Engineered Solutions Rationalization

On July 29, 2014, we announced additional rationalization initiatives to increase profitability, reduce cost and improve global competitiveness in our Engineered Solutions segment. During the second quarter of 2014, worldwide pricing of our isomolded graphite products ("isomolded") within our Advanced Graphite Material ("AGM") product group, as well as our expectation of future pricing, significantly eroded, driven by significant over-capacity and recent competitor responses. In addition, solar product demand continued to erode, with polysilicon, silicon and silicon wafer production migrating to China. New competitors servicing this industry commenced production in China at pricing levels making the market now unprofitable. As a result of these conditions, the Company decided to cease isomolded production and pursue alternative supply chain relationships in our isomolded product line.

As a result of the above, we tested our long-lived assets used to produce advanced graphite materials for recovery, based on undiscounted cash flows from the use and eventual disposition of these assets. The carrying value of the assets exceeded these undiscounted cash flow and, accordingly, we estimated the fair-value of these long-lived assets based on a market participant view. This resulted in an impairment charge totaling 121.6 million during 2014, and included the impairment of certain acquired customer relationship and technology intangible assets. Goodwill

Table of Contents

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

associated with this line of business of $0.4 million was fully impaired, and included in the 121.6 million charge. Other impairment related charges, primarily inventory write-downs, were $19.8 million in 2014. If business conditions and plans do not achieve our expected returns in the Engineered Solutions segment, we may undertake additional restructurings, rationalizations or similar actions which could result in additional charges, write-offs and impairments.

Charges incurred related to the 2014 Engineered Solutions rationalization initiatives in 2014 are as follows:

	For the Year Ended December 31, 2014
Accelerated depreciation (recorded in Cost of sales)	$ 2,802
Inventory losses (recorded in Cost of sales)	13,225
Fixed asset write-offs and other (recorded in Cost of sales)	1,046
Severance and related charges (recorded in Rationalizations)	2,498
Contract terminations and other (recorded in Rationalizations)	195
Impairments (recorded in Impairments)	121,570
Total Engineered Solutions rationalization and related charges	$ 141,336

The 2014 Engineered Solutions rationalization will result in approximately $25 million of pre-tax charges (excluding impairments of $121.6 million). During 2014 we have incurred $19.8 million related to this program.

The following table represents the roll-forward of the liability incurred for employee termination benefits and contract termination costs incurred in connection with the 2014 Engineered Solutions rationalization initiatives described above. This liability is recorded as a current liability on the Consolidated Balance Sheet.

	(Dollars in thousands)
Balance as of December 31, 2013	$ —
Charges incurred	2,611
Change in estimates	(40)
Payments and settlements	(916)
Effect of change in currency exchange rates	—
Balance as of December 31, 2014	$ 1,655

2014 Corporate and Research & Development Rationalization

During the third quarter of 2014, we announced the conclusion of another phase of our on-going company-wide cost savings assessment. This resulted in changes to the Company’s operating and management structure in order to streamline, simplify and decentralize the organization. These actions will reduce costs by a combination of reduced contractor costs, attrition, early retirements and layoffs. Additionally, the Company will downsize its corporate functions by approximately 25 percent, relocate to a smaller, more cost effective corporate headquarters and establish a new Technology and Innovation Center.

Table of Contents

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Charges incurred related to the 2014 Corporate and Research & Development rationalization initiatives for 2014 are as follows:

	For the Year Ended December 31, 2014 (dollars in thousands)
Accelerated depreciation (recorded in Cost of sales)	$ 20
Fixed asset write offs (recorded in Cost of sales)	178
Accelerated depreciation (recorded in R&D)	2,312
Accelerated depreciation (recorded in Selling and administrative)	608
Other charges (recorded in Selling and administrative)	515
Severance and related costs (recorded in Rationalizations)	8,096
Contract terminations (recorded in Rationalizations)	84
Total 2014 corporate rationalization and related charges	$ 11,813

The 2014 Corporate and Research and Development rationalization plan will result in approximately $20 million of charges consisting of severance, accelerated depreciation and other related costs. Approximately $12 million of these costs will be cash outlays, the majority of which are expected to be disbursed in 2015.

The following table represents the roll-forward of the liability incurred for employee termination benefits and contract termination costs incurred in connection with the 2014 Corporate and Research & Development rationalization initiatives described above. This liability is recorded as a current liability on the Consolidated Balance Sheet.

	(Dollars in thousands)	
Balance as of December 31, 2013	$ —	
Charges incurred	8,159	
Change in estimates	21	
Payments and settlements	(1,155	)
Effect of change in currency exchange rates	(152	)
Balance as of December 31, 2014	$ 6,873	

(3) Segment Reporting

We operate in two reportable segments: Industrial Materials and Engineered Solutions.

Industrial Materials. Our Industrial Materials segment manufactures and delivers high quality graphite electrodes, refractory products and needle coke products. Electrodes are key components of the conductive power systems used to produce steel and other non-ferrous metals. Refractory products are used in blast furnaces and submerged arc furnaces due to their high thermal conductivity and the ease with which they can be machined to large or complex shapes. Needle coke, a crystalline form of carbon derived from decant oil, is the key ingredient in, and is used primarily in, the production of graphite electrodes.

Engineered Solutions. The Engineered Solutions segment includes advanced electronics technologies, advanced graphite materials, advanced composite materials and advanced materials. Advanced electronics technologies products consist of electronic thermal management solutions, and sealing materials. Advanced graphite materials are highly engineered synthetic graphite products used in many areas due to their unique properties and the ability to tailor them to specific solutions. These products are used in transportation, alternative energy, metallurgical, chemical, oil and gas exploration and various other industries. Advanced composite materials are highly engineered carbon products that are woven into various shapes to primarily support the aerospace and defense industries. Advanced materials use carbon and graphite powders as components or additives in a variety of industries, including metallurgical processing, battery and fuel cell components, and polymer additives.

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

We continue to evaluate the performance of our segments based on segment operating income. Intersegment sales and transfers are not material and the accounting policies of the reportable segments are the same as those for our Consolidated Financial Statements as a whole. Prior to 2014, certain global expenses such as research and development, shared IT and accounting services as well as corporate headquarter's finance, HR, legal and executive management were allocated to the segments mostly based on each segment's contribution to consolidated sales. During 2014, as part of our initiative to decentralize the organization and reduce the costs of the global headquarter functions, the performance measure of our existing segments was changed to reflect our new management and operating structure. We currently exclude such expenses from the segment operating income measure and report them under "Corporate, R&D and Other Expenses" in order to reconcile to the consolidated operating income of the Company.
The following tables summarize financial information concerning our reportable segments and all prior periods have been recast to reflect our new methodology:

	For the year Ended December 31,		
	2012	2013	2014
	(Dollars in thousands)		
Net sales to external customers:			
Industrial Materials	$1,025,571	$909,448	$840,103
Engineered Solutions	222,693	257,226	245,201
Total net sales	$1,248,264	$1,166,674	$1,085,304
Segment operating income (loss):			
Industrial Materials	$197,335	$20,007	$(50,260)
Engineered Solutions	22,374	28,392	(138,271)
Corporate, R&D and Other expenses	$(63,241)	$(50,969)	$(67,089)
Total segment operating income (loss)	$156,468	$(2,570)	$(255,620)
Reconciliation of segment operating income to income from continuing operations before provision for income taxes			
Other expense (income), net	(1,005)	1,698	2,445
Interest expense	23,247	36,037	37,057
Interest income	(261)	(203)	(330)
Income (loss) before provision for income taxes	$134,487	$(40,102)	$(294,792)

Operating income (loss) for the year ended December 31, 2014 also includes for Industrial Materials $75.7 million of goodwill impairment charge and for Engineered Solutions $121.6 million of impairment charge for long-lived assets. Operating income (loss) noted above for the year ended December 31, 2014 includes rationalization related charges of $34.5 million in Industrial materials, $22.0 million in Engineered Solutions, and $6.3 million in Corporate, R&D and Other expenses as well as a pension mark-to-market loss of $3.5 million in Industrial materials, $9.2 million in Engineered solutions and $6.3 million in Corporate, R&D and Other expenses. We incurred a $4.8 million charge for losses related to the bankruptcy of a major customer in the Advanced Graphite Materials business. Corporate, R&D and Other expenses include $2.4 million of fees associated with proxy contest costs in 2014.

Operating income (loss) for the year ended December 31, 2013 includes rationalization-related charges of $60.3 million for Industrial materials, $3.6 million for Engineered solutions and $1.8 million for Corporate, R&D and Other as well as Pension mark-to-market gain of $4.2 million in Industrial Materials, $5.9 million in Engineered Solutions and $4.2 million in All Other.
Assets are managed based on geographic location because certain reportable segments share certain facilities. Assets by reportable segment are estimated based on the value of long-lived assets at each location and the activities performed at the location.

81

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

	At December 31,	
	2013	2014
	(Dollars in thousands)	
Long-lived assets (a):		
Industrial Materials.	$601,322	$552,155
Engineered Solutions	219,663	101,885
Total long-lived assets	$820,985	$654,040

The following tables summarize information as to our operations in different geographic areas.

	For the year Ended December 31,		
	2012	2013	2014
	(Dollars in thousands)		
Net sales:			
U.S.	$372,014	$289,866	$284,209
Americas	195,748	177,602	180,070
Asia Pacific	235,658	220,945	192,230
Europe, Middle East, Africa	444,844	478,261	428,795
Total	$1,248,264	$1,166,674	$1,085,304

	At December 31,	
	2013	2014
	(Dollars in thousands)	
Long-lived assets (a):		
U.S. and Canada	$540,274	$431,601
Mexico	83,428	89,731
Brazil	26,008	9,492
France	61,264	49,602
Spain	82,051	70,648
South Africa	16,408	2,064
Switzerland	4,618	287
Other countries	6,934	615
Total	$820,985	$654,040

(a) Long-lived assets represent fixed assets, net of accumulated depreciation.

(4) Goodwill and Other Intangible Assets

Goodwill represents, for the business that we have acquired, the excess of the purchase consideration over the fair value of acquired identifiable tangible and intangible assets, net of liabilities assumed. As of December 31, 2013, goodwill of $496.4 million was assigned to the Graphite Electrode and the Needle coke Reporting units within the Industrial Materials segment, while $0.4 million was assigned to the Advanced Graphite Materials Reporting unit within the Engineered Solutions segment.

As a result of the deteriorating market conditions impacting our AGM product group, as discussed in Note 2, goodwill assigned to our AGM reporting unit of $0.4 million was written off in the second quarter of 2014.

Goodwill is tested for impairment at the reporting unit level on an annual basis and between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value. During our annual testing of goodwill as of December 31, 2014, we determined that the needle coke

reporting unit failed the first step of the goodwill impairment test. The second step of the goodwill impairment analysis resulted in an impairment charge of $75.7 million of the goodwill assigned to the Needle Coke reporting unit.
In the first step of the analysis, we compared the estimated fair value of each reporting unit to their carrying value, including goodwill. The fair value of the reporting units was determined based on an income approach, using discounted cash flow ("DCF") models from a market participant's perspective, as required by the fair value guidance. These DCF models included twelve or more years of forecasted cash flows, plus an estimated terminal value. For the first several years in the models, the cash flows were based upon the current operating and capital plans as prepared by management and approved by executive management, adjusted to reflect the perspective of potential market participants. These adjustments include the use of observed and forecast market prices for needle coke when determining both the revenue for the Needle Coke reporting unit and the input costs for the Graphite Electrode reporting unit. Beyond the first several years, the DCF model reflects known trends of cycles in the industry and incorporates them in the terminal value. Actual results may differ from those assumed in the Company's forecast. Discount rates applied to the forecasted cash-flows are based on appropriately weighted average cost of capital ("WACC"). Company specific beta and mix of debt to equity are inputs into the determination of the discount rate, which is then qualitatively assessed from the standpoint of potential market participants. A discount rate of 10.5% was used for both reporting units.
As a result of the first step described above, the fair value of the Graphite Electrode reporting unit exceeded its carrying value by over 10%. The DCF model for Graphite Electrode is based on existing operating performance, as adjusted for current trends, as well as known or expected near-term changes in product mix, operating costs, operating configuration and system-wide capacity. These plans also incorporated required or anticipated near-term capital projects and working capital changes. In a DCF model, the earlier years have a more pronounced impact on the calculated value as compared to later periods. As such, if economic conditions were to deteriorate or events were to occur resulting in the ultimate operating results for these initial years being significantly lower than what is reflected in the DCF, that would have an unfavorable effect on the estimated fair value of the Graphite Electrode reporting unit.
As a result of the first step of the analysis described earlier, the fair value of the Needle Coke reporting unit was less than its carrying value. Consequently, we performed the second step of the impairment analysis in order to determine the implied fair value of the goodwill associated with the reporting unit. The implied fair value of goodwill represents the excess of the fair value of the reporting unit over the sum of the fair value amounts assigned to all of the assets and liabilities of the reporting unit as if it were to be acquired in a business combination and the current fair value of the reporting unit (as calculated in the first step) was the purchase consideration. The implied fair value of goodwill was then compared to the carrying value of the goodwill to determine the impairment of $75.7 million.
The impairment of the Needle Coke reporting unit's goodwill was a result of our reassessment of the estimated future cash-flows, triggered by pricing declines in the needle coke market in the fourth quarter of 2014. Additionally the market capitalization of the Company has been below its book value since last quarter-end and led us to reconsider the previous long-term views of the cash-flows of the reporting units. Due to these factors, we decreased the long-term estimates of the cash-flows of the Needle Coke reporting unit that are utilized in assessing goodwill for impairment.
As an additional corroboration, the aggregate of the fair value of all reporting units, after deduction of the corporate debt, was compared to the Company's market capitalization. The implied control premium resulting from this comparison was found to be within a reasonable range. As such it corroborated the estimated fair value of the reporting units utilized in the goodwill impairment test.

Table of Contents

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

The changes in the Company's carrying value of goodwill during the years ended December 31, 2013 and 2014 are as follows:

	Total (Dollars in Thousands)
Balance as of December 31, 2012	$498,261
Translation effect	(1,451)
Balance as of December 31, 2013	496,810
Impairment	(76,063)
Translation effect	(618)
Balance as of December 31, 2014	$420,129

The following table summarizes acquired intangible assets with determinable useful lives by major category as of December 31, 2013 and 2014:

	2013 Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	2014 Gross Carrying Amount	Accumulated Amortization / Impairment	Net Carrying Amount
	(Dollars in Thousands)			(Dollars in Thousands)		
Trade name	7,900	(3,944)	3,956	7,900	(4,817)	3,083
Technology and know-how	43,349	(18,582)	24,767	43,349	(24,940)	18,409
Customer related intangible	110,798	(44,664)	66,134	110,798	(57,192)	53,606
Total finite-lived intangible assets	$162,047	$(67,190)	$94,857	$162,047	$(86,949)	$75,098

Amortization expense of intangible assets in 2012, 2013 and 2014 was $22.3 million, $20.5 million and $19.0 million, respectively. Additionally, approximately $0.8 million of intangibles were written off in the second quarter of 2014 in connection with the Engineered Solutions rationalization program. Estimated annual amortization expense for the next five years will approximate $17.1 million in 2015, $13.1 million in 2016, $11.8 million in 2017, $10.7 million in 2018 and $9.2 million in 2019.

(5) Debt and Liquidity

The following table presents our long-term debt:

	As of December 31, 2013	2014
	(Dollars in thousands)	
Revolving Facility	$64,000	$40,000
Senior Notes	300,000	300,000
Senior Subordinated Notes	175,675	—
Other debt	1,918	1,615
Total Long-Term Debt	$541,593	$341,615

The following table presents our short-term debt:

	As of December 31, 2013	2014
	(Dollars in thousands)	
Senior Subordinated Notes	—	187,973
Other debt	1,161	131
Total Short-Term Debt	$1,161	$188,104

Revolving Facility

On October 7, 2011, we completed the refinancing of our principal revolving credit facility ("Revolving Facility"). Borrowers under the Revolving Facility were GrafTech Finance Inc. ("GrafTech Finance") and GrafTech Switzerland

S.A. (“Swissco”), both wholly-owned subsidiaries. On April 20, 2012, as permitted by Section 9.19 of the October 7,

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

2011 Credit Agreement, we entered into an Amended and Restated Credit Agreement pursuant to which, on August 28, 2012, GrafTech Luxembourg II S.à.r.l. (“Luxembourg Holdco”) replaced Swissco as a Borrower. Swissco is no longer entitled to borrow Loans under the Revolving Facility although it is entitled to request letters of credit thereunder only for its own use.
The interest rate applicable to the Revolving Facility is, at GrafTech’s option, either LIBOR plus a margin ranging from 1.5% to 2.25% (depending on our total net leverage ratio) or, in the case of dollar denominated loans, the alternate base rate plus a margin ranging from 0.50% to 1.25% (depending upon such ratio or rating). The alternate base rate is the highest of (i) the prime rate announced by JPMorgan Chase Bank, N.A., (ii) the federal fund effective rate plus one-half of 1.0% and (iii) the London interbank offering rate (as adjusted) for a one-month period plus 1.0%. The borrowers pay a per annum fee ranging from 0.25% to 0.40% (depending on such ratio) on the undrawn portion of the commitments under the Revolving Facility.
The financial covenants require us to maintain a minimum cash interest coverage ratio of 3.00 to 1.00 and a maximum senior secured leverage ratio of 2.25 to 1.00, subject to adjustment for certain events. As of December 31, 2014, we were in compliance with all financial and other covenants contained in the Revolving Facility, as applicable.
On November 19, 2014, we initiated an amendment to our Credit Agreement with the lenders party thereto and JPMorgan Chase Bank, N.A., as Administrative Agent, Collateral Agent, Issuing Bank and Swingline Lender. The amendment includes modification to the definition of EBITDA to exclude certain restructuring costs, increasing availability of borrowings thereunder, and modification of the maximum principal amount to $400 million.
On February 27, 2015, GrafTech and certain of its subsidiaries entered into an Amended and Restated Credit Agreement that provides for, among other things, greater financial flexibility and a new $40 million senior secured delayed draw term loan facility. See Note 18 to the financial statements for additional details.
Senior Notes
On November 20, 2012, GrafTech International Ltd. issued $300 million principal amount of 6.375% Senior Notes due 2020. These Senior Notes are the Company's senior unsecured obligations and rank pari passu with all of the Company's existing and future senior unsecured indebtedness. The Senior Notes are guaranteed on a senior unsecured basis by each of the Company's existing and future subsidiaries that guarantee certain other indebtedness of the Company or another guarantor.

The Senior Notes bear interest at a rate of 6.375% per year, payable semi-annually in arrears on May 15 and November 15 of each year, commencing on May 15, 2013. The Senior Notes mature on November 15, 2020.

The Company is entitled to redeem some or all of the Senior Notes at any time on or after November 15, 2016, at the redemption prices set forth in the Indenture. In addition, prior to November 15, 2016, the Company may redeem some or all of the Senior Notes at a price equal to 100% of the principal amount thereof, plus accrued and unpaid interest, if any, plus a “make whole” premium determined as set forth in the Indenture. The Company is also entitled to redeem up to 35% of the aggregate principal amount of the Senior Notes before November 15, 2015 with the net proceeds from certain equity offerings at a redemption price of 106.375% of the principal amount plus accrued and unpaid interest, if any.

If, prior to maturity, a change in control (as defined in the Indenture) of the Company occurs and thereafter certain downgrades of the ratings of the Senior Notes as specified in the Indenture occur, the Company will be required to offer to repurchase any or all of the Senior Notes at a repurchase price equal to 101% of the aggregate principal amount of the Senior Notes, plus any accrued and unpaid interest.

The Senior Notes are subject to covenants that, among other things, limit the ability of the Company and certain of its subsidiaries to: (i) create liens or use assets as security in other transactions; (ii) engage in certain sale/leaseback transactions; and (iii) merge, consolidate or sell, transfer, lease or dispose of substantially all of their assets.

The Senior Notes are subject to customary events of default, including (i) failure to pay principal or interest on the Senior Notes when due and payable, (ii) failure to comply with covenants or agreements in the Indenture or the Senior Notes which failures are not cured or waived as provided in the Indenture, (iii) failure to pay indebtedness of the Company, any Subsidiary Guarantor or Significant Subsidiary (as defined in the Indenture) within any applicable grace period after maturity or acceleration and the total amount of such indebtedness unpaid or accelerated exceeds $50.0 million, (iv) certain events of bankruptcy, insolvency, or reorganization, (v) failure to pay any judgment or decree for an amount in excess of $50.0 million against the Company, any Subsidiary Guarantor or any Significant Subsidiary that is not discharged, waived or stayed as provided in the Indenture, (vi) cessation of any subsidiary guarantee to be in full force and effect or denial or disaffirmance by any Subsidiary Guarantor of its obligations under its subsidiary guarantee, and (vii) a default under the Company's Senior Subordinated Notes. In the case of an event of default, the principal amount of the Senior Notes plus accrued and unpaid interest may be accelerated.

The Senior Notes are registered under the Securities Act of 1933, as amended.

Senior Subordinated Notes

On November 30, 2010, in connection with the Acquisitions, we issued Senior Subordinated Notes for an aggregate total face amount of $200 million. These Senior Subordinated Notes are non-interest bearing and mature in 2015. Because the promissory notes are non-interest bearing, we were required to record them at their present value (determined using an interest rate of 7%). The difference between the face amount of the promissory notes and their present value is recorded as debt discount. The debt discount will be amortized to income using the interest method, over the life of the promissory notes. The loan balance, net of unamortized discount, was $188.0 million as of December 31, 2014. This balance was reclassified in November 2014 to short-term debt on our balance sheet as the maturity date is within one year.

(6) Interest Expense

The following table presents an analysis of interest expense:

	For the year Ended December 31,		
	2012	2013	2014
	(Dollars in thousands)		
Interest incurred on debt	$10,172	$21,589	$21,373
Amortization of discount on Senior Subordinated Notes	10,742	11,493	12,298
Amortization of debt issuance costs	1,712	2,504	3,339
Supply Chain Financing mark-up	621	451	47
Total interest expense	$23,247	$36,037	$37,057

Interest rates

The Revolving Facility had an effective interest rate of 2.42% and 2.17% as of December 31, 2013 and 2014, respectively. The Senior Notes carry an interest rate of 6.375%. The Senior Subordinated Notes have an implied rate of 7.00%.

(7) Fair Value Measurements and Derivative Instruments

Fair Market Value Measurements

Depending on the inputs, we classify each fair value measurement as follows:

- Level 1 – based upon quoted prices for identical instruments in active markets,
- Level 2 – based upon quoted prices for similar instruments, prices for identical or similar instruments in markets that are not active, or model-derived valuations of all of whose significant inputs are observable, and
- Level 3 – based upon one or more significant unobservable inputs.

The following section describes key inputs and assumptions used in valuation methodologies of our assets and liabilities measured at fair value on a recurring basis:

Cash and cash equivalents, short-term notes and accounts receivable, accounts payable and other current payables – The carrying amount approximates fair value because of the short maturity of these instruments.

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Debt – Fair value of debt, which was determined using Level 2 inputs, as of December 31, 2013 was $549.8 million versus a book value of $541.6 million. As of December 31, 2014 the fair value was $473.3 million, versus a book value of $529.7 million.
Foreign currency derivatives – Foreign currency derivatives are carried at market value using Level 2 inputs. The outstanding contracts as of December 31, 2013 and 2014 represented unrealized losses of $0.1 million and $0.9 million, respectively.
Commodity derivative contracts – Commodity derivative contracts are carried at fair value. We determine the fair value using observable, quoted natural gas and refined oil product prices that are determined by active markets and therefore classify the commodity derivative contracts as Level 2. The outstanding commodity derivative contracts represented an unrealized gain of $0.8 million as of December 31, 2013 and an unrealized loss of $7.1 million as of December 31, 2014.
Derivative Instruments
We use derivative instruments as part of our overall foreign currency and commodity risk management strategies to manage the risk of exchange rate movements that would reduce the value of our foreign cash flows and to minimize commodity price volatility. Foreign currency exchange rate movements create a degree of risk by affecting the value of sales made and costs incurred in currencies other than the US Dollar.
Certain of our derivative contracts contain provisions that require us to provide collateral. Since the counterparties to these financial instruments are large commercial banks and similar financial institutions, we do not believe that we are exposed to material counterparty credit risk. We do not anticipate nonperformance by any of the counter-parties to our instruments.
Foreign currency derivatives
We enter into foreign currency derivatives from time to time to attempt to manage exposure to changes in currency exchange rates. These foreign currency instruments, which include, but are not limited to, forward exchange contracts and purchased currency options, attempt to hedge global currency exposures such as foreign currency denominated debt, sales, receivables, payables, and purchases. Forward exchange contracts are agreements to exchange different currencies at a specified future date and at a specified rate. There was no ineffectiveness on these contracts during the twelve months ended December 31, 2013 or 2014.
In 2013 and 2014, we entered into foreign forward currency derivatives as hedges of anticipated cash flows denominated in the Mexican peso, Brazilian real, South African rand, euro and Japanese yen. These derivatives were entered into to protect the risk that the eventual cash flows resulting from such transactions will be adversely affected by changes in exchange rates between the US dollar and the Mexican peso, Brazilian real, South African rand, euro and Japanese yen. As of December 31, 2013, we had outstanding Mexican peso, Brazilian real, South African rand, euro, and Japanese yen currency contracts, with aggregate notional amounts of $138.6 million. As of December 31, 2014, we had outstanding Mexican peso, Brazilian real, South African rand, euro and Japanese yen currency contracts, with aggregate notional amounts of $95.2 million. The foreign currency derivatives outstanding as of December 31, 2014 have several maturity dates ranging from January 2015 to October 2015.
Commodity derivative contracts
We periodically enter into derivative contracts for natural gas and certain refined oil products. These contracts are entered into to protect against the risk that eventual cash flows related to these products will be adversely affected by future changes in prices. There was no ineffectiveness on these contracts during the twelve months ended December 31, 2013 or 2014. As of December 31, 2013 and 2014, we had outstanding derivative swap contracts for refined oil products with aggregate notional amounts of $45.8 million and $17.8 million, respectively. The outstanding 2014 contracts have maturity dates ranging from January 2015 to March 2015.
Net Investment Hedges
We use certain intercompany debt to hedge a portion of our net investment in our foreign operations against currency exposure (net investment hedge). Intercompany debt designated in foreign currency and designated as a non-derivative net investment hedging instrument was $25.2 million and $15.8 million as of December 31, 2013 and

December 31, 2014, respectively. Within our currency translation adjustment portion of other comprehensive income,

Table of Contents

we recorded gains of $4.7 million and $0.2 million in the year ended December 31, 2013 and December 31, 2014, respectively, resulting from these net investment hedges.
The fair value of all derivatives is recorded as assets or liabilities on a gross basis in our Consolidated Balance Sheets. At December 31, 2013 and 2014, the fair value of our derivatives and their respective balance sheet locations are presented in the following table:

	Asset Derivatives		Liability Derivatives	
	Location	Fair Value	Location	Fair Value
As of December 31, 2013	(Dollars in Thousands)			
Derivatives designated as cash flow hedges:				
Foreign currency derivatives	Prepaid and other current assets	$772	Other current liabilities	$1,185
Commodity derivative contracts	Prepaid and other current assets	834	Other current liabilities	—
Total fair value		$1,606		$1,185
As of December 31, 2014				
Derivatives designated as cash flow hedges:				
Foreign currency derivatives	Prepaid and other current assets	$722	Other current liabilities	$1,234
Commodity derivative contracts	Prepaid and other current assets	—	Other current liabilities	7,067
Total fair value		$722		$8,301

	Asset Derivatives		Liability Derivatives	
	Location	Fair Value	Location	Fair Value
As of December 31, 2013	(Dollars in Thousands)			
Derivatives not designated as hedges:				
Foreign currency derivatives	Prepaid and other current assets	$328	Other current liabilities	$24
Total fair value		$328		$24
As of December 31, 2014				
Derivatives not designated as hedges:				
Foreign currency derivatives	Prepaid and other current assets	$80	Other current liabilities	$428
Total fair value		$80		$428

The location and amount of realized (gains) losses on derivatives are recognized in the Statements of Income when the hedged item impacts earnings and are as follows for the years ended 2013 and 2014:

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

	Location of (Gain)/Loss Reclassified from Other Comprehensive Income (Effective Portion)	Amount of (Gain)/Loss Recognized (Effective Portion) 2013	2014
		(Dollars in Thousands)	
Derivatives designated as cash flow hedges:			
Foreign currency derivatives, excluding tax of $(145) and $85, respectively	Cost of goods sold/Other expense / (income) / Revenue	$1,445	$(849)
Commodity forward derivatives, excluding tax of $(25) and $(120), respectively	Cost of goods sold / Revenue	$70	$328

	Location of (Gain)/Loss Recognized in the Consolidated Statement of Income	Amount of (Gain)/Loss Recognized 2013	2014
		(Dollars in thousands)	
Derivatives not designated as hedges:			
Foreign currency derivatives	Cost of goods sold/Other expense (income)	$(1,123)	$1,020

Our foreign currency and commodity derivatives are treated as hedges and are required to be measured at fair value on a recurring basis. With respect to the inputs used to determine the fair value, we use observable, quoted rates that are determined by active markets and, therefore, classify the contracts as “Level 2”.

(8) Other Expense (Income), Net

As part of our cash management, we have intercompany loans between our subsidiaries. These loans are deemed to be temporary and, as a result, remeasurement gains/losses are recorded in other expense(income), net, on the Consolidated Statements of Income. We had a net currency loss in 2013 of $1.5 million and a net currency gain of of $2.2 million in 2014, mainly due to the remeasurement of intercompany loans and the effect of transaction gains and losses on intercompany activities.

Other income in 2012, also includes $4.0 million of insurance reimbursements for claims made related to flood damages incurred at our Clarksburg, West Virginia facility during 2011. Additionally, during 2013 we recorded a $2 million recovery for the favorable resolution of a previously recorded loss contingency.

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(9) Supplementary Balance Sheet Detail

The following tables present supplementary balance sheet details:

	At December 31,	
	2013	2014
	(Dollars in thousands)	
Inventories:		
Raw materials and supplies	$175,192	$122,218
Work in process	239,114	176,141
Finished goods	76,108	84,544
	490,414	382,903
Prepaid expenses and other current assets:		
Prepaid expenses	$9,554	$9,923
Current portion of deferred taxes	37,058	28,426
Value added tax and other indirect taxes receivable	25,061	39,837
Other current assets	2,117	3,437
	$73,790	$81,623
Property, plant and equipment:		
Land and improvements	$37,416	$36,375
Buildings	196,802	193,427
Machinery and equipment and other	1,278,655	1,212,120
Construction in progress	76,007	58,899
	$1,588,880	$1,500,821
Other accrued liabilities:		
Payrolls (including incentive programs)	$9,330	$6,151
Customer prepayments	9,599	5,534
Employee compensation and benefits	10,136	8,932
Other	11,874	22,702
	$40,939	$43,319
Other long term obligations:		
Postretirement benefits	$24,852	$24,833
Pension and related benefits	54,173	65,882
Other	18,922	16,851
	$97,947	$107,566

The following table presents an analysis of the allowance for doubtful accounts:

	At December 31,		
	2012	2013	2014
	(Dollars in thousands)		
Balance at beginning of year	$4,153	$7,573	$6,718
Additions	5,161	2,914	8,675
Deductions	(1,741)	(3,769)	(7,922)
Balance at end of year	$7,573	$6,718	$7,471

Inventories

We allocate fixed production overheads to the costs of conversion based on normal capacity of the production facilities. We recognize abnormal amounts of idle facility expense, freight, handling costs, and wasted materials

(spoilage) as current period charges. During 2012, costs in excess of normal absorption were $3.5 million. During 2013 and 2014, there were no costs in excess of normal absorption.

(10) Commitments

Lease commitments under non-cancelable operating leases extending for one year or more will require the following future payments:

	(Dollars in thousands)
2015	$5,411
2016	3,138
2017	2,607
2018	1,450
2019	1,256
After 2019	1,762

Total lease and rental expenses under non-cancelable operating leases extending one year or more approximated $3.2 million in 2012, $2.6 million in 2013 and $7.1 million in 2014.

(11) Retirement Plans and Postretirement Benefits

Retirement Plans

On February 26, 1991, we formed our own retirement plan covering substantially all our U.S. employees. Under our plan, covered employees earned benefit payments based primarily on their service credits and wages subsequent to February 26, 1991.

Prior to that date, substantially all our U.S. employees were participants in the U.S. retirement plan of Union Carbide Corporation (“Union Carbide”). While service credit was frozen, covered employees continued to earn benefits under the Union Carbide plan based on their final average wages through February 26, 1991, adjusted for salary increases (not to exceed six percent per annum) through January 26, 1995, the date Union Carbide ceased to own a minimum 50% of the equity of GTI. The Union Carbide plan is responsible for paying retirement and death benefits earned as of February 26, 1991.

Effective January 1, 2002, we established a defined contribution plan for U.S. employees. Certain employees had the option to remain in our defined benefit plan for an additional period of up to five years. Employees not covered by this option had their benefits under our defined benefit plan frozen as of December 31, 2001, and began participating in the defined contribution plan.

Effective March 31, 2003, we curtailed our qualified benefit plan and the benefits were frozen as of that date for the U.S. employees who had the option to remain in our defined benefit plan. We also closed our non-qualified U.S. defined benefit plan for the participating salaried workforce. The employees began participating in the defined contribution plan as of April 1, 2003.

We make quarterly contributions equal to 1% of each employee’s total eligible pay. The expense recorded for contributions to this plan was $1.0 million in 2012, $0.9 million in 2013 and $0.8 million in 2014. All such contributions were made using company stock.

Pension coverage for employees of foreign subsidiaries is provided, to the extent deemed appropriate, through separate plans. Obligations under such plans are systematically provided for by depositing funds with trustees, under insurance policies or by book reserves.

The components of our consolidated net pension costs are set forth in the following table.

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

	For the Year Ended December 31,					
	2012		2013		2014	
	U.S.	Foreign	U.S.	Foreign	U.S.	Foreign
	(Dollars in thousands)					
Service cost	$610	$1,095	$870	$1,177	$750	$1,107
Interest cost	6,114	2,532	5,438	2,542	5,983	2,669
Expected return on assets	(6,520)	(2,299)	(4,505)	(2,339)	(5,215)	(2,516)
Amortization of prior service cost	—	24	—	25	—	2
Curtailment gain	—	—	—	—	—	(28)
Mark-to-market loss (gain)	6,572	1,662	(11,907)	(393)	18,431	(534)
	$6,776	$3,014	$(10,104)	$1,012	$19,949	$700

The primary driver of the mark-to-market losses in 2012 and gains in 2013 were changes in the discount rate due to interest rate fluctuations. The mark-to-market loss in 2014 was caused by changes in discount rates and mortality tables.

Amounts recognized in other comprehensive income:

	For the Year Ended December 31,					
	2012		2013		2014	
	U.S.	Foreign	U.S.	Foreign	U.S.	Foreign
	(Dollars in thousands)					
Amortization of prior service cost	$—	$(24)	$—	$(25)	$—	$(26)
Addition to prior service cost	—	—	—	(246)	—	—
Effect of exchange rates	—	3	—	11	—	8
Total recognized in other comprehensive loss	$—	$(21)	$—	$(260)	$—	$(18)
Total recognized in pension costs and other comprehensive loss	$6,776	$2,993	$(10,104)	$752	$19,949	$682

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

The reconciliation of the beginning and ending balances of our pension plans' benefit obligations, fair value of assets, and funded status at December 31, 2013 and 2014 are:

	At December 31,			
	2013		2014	
	U.S.	Foreign	U.S.	Foreign
	(Dollars in thousands)			
Changes in Benefit Obligation:				
Net benefit obligation at beginning of year	$151,469	$80,311	$134,787	$78,421
Service cost	870	1,177	750	1,107
Interest cost	5,438	2,542	5,983	2,669
Participant contributions	—	342	—	288
Plan amendments / curtailments	—	(246)	—	
Foreign currency exchange changes	—	1,549	—	(6,171)
Actuarial loss (gain)	(14,433)	(3,257)	21,456	11,935
Benefits paid	(8,557)	(3,997)	(8,608)	(5,646)
Net benefit obligation at end of year	$134,787	$78,421	$154,368	$82,603
Changes in Plan Assets:				
Fair value of plan assets at beginning of year	$91,319	$71,750	$90,875	$72,685
Actual return on plan assets	1,979	(517)	8,240	14,971
Foreign currency exchange rate changes	—	1,404	—	(5,479)
Employer contributions	6,134	3,703	8,947	909
Participant contributions	—	342	—	288
Actuarial loss	—	—	—	—
Benefits paid	(8,557)	(3,997)	(8,608)	(5,646)
Fair value of plan assets at end of year	$90,875	$72,685	$99,454	$77,728
Funded status (underfunded):	$(43,912)	$(5,736)	$(54,914)	$(4,875)
Amounts recognized in accumulated other comprehensive loss:				
Prior service credit	$—	$(6)	$—	$(25)
Amounts recognized in the statement of financial position:				
Non-current assets	$—	$—	$—	$1,365
Current liabilities	(440)	(524)	(439)	(324)
Non-current liabilities	(43,472)	(5,214)	(54,475)	(5,916)
Net amount recognized	$(43,912)	$(5,738)	$(54,914)	$(4,875)

The accumulated benefit obligation for all defined benefit pension plans was $213.2 million and $237.0 million at December 31, 2013 and 2014, respectively.

Plan Assets

The accounting guidance on fair value measurements specifies a hierarchy based on the observability of inputs used in valuation techniques (Level 1, 2 and 3). See Note 7, "Fair Value Measurements and Derivative Instruments," for a discussion of the fair value hierarchy.

The following describes the methods and significant assumptions used to estimate the fair value of the investments:

Cash and cash equivalents – Valued at cost. Cash equivalents are valued at net asset value as provided by the administrator of the fund.

Foreign government bonds – Valued by the trustees using various pricing services of financial institutions.

Debt securities – Valued by the trustee at year-end using various pricing services of financial institutions, including Interactive Data Corporation, Standard & Poor's and Telekurs.
Equity securities – Valued at the closing price reported on the active market on which the security is traded.
Fixed insurance contract – Valued at the present value of the guaranteed payment streams.
Investment contracts – Valued at the total cost of annuity contracts purchased, adjusted for market differences from the date of purchase to year-end.
Collective trusts – Valued at the net asset value provided by the administrator of the fund. The net asset value is based on the value of the underlying assets owned by the fund, minus its liabilities, divided by the number of units outstanding.

The fair value of the plan assets by category is summarized below (dollars in thousands):

	December 31, 2013				December 31, 2014			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
U.S. Plan Assets								
Cash and cash equivalents	$2,597	—	—	$2,597	$906	—	—	$906
Collective trusts	—	88,278	—	88,278	—	$98,548	—	98,548
Total	$2,597	88,278	—	$90,875	$906	$98,548	—	$99,454
International Plan Assets								
Cash and cash equivalents	$2,549	—	—	$2,549	$1,364	—	—	$1,364
Foreign government bonds	—	$1,142	—	1,142	—	$1,038	—	1,038
Investment contracts	—	—	$58,129	58,129	—	—	$61,990	61,990
Fixed insurance contracts	—	—	10,865	10,865	—	—	13,336	13,336
Total	$2,549	$1,142	$68,994	$72,685	$1,364	$1,038	$75,326	$77,728

The following table presents the changes for those financial instruments classified within Level 3 of the valuation hierarchy for international plan pension assets for the years ended December 31, 2013 and 2014 (dollars in thousands):

	Investment Contracts	Fixed Insurance Contracts
Balance at January 1, 2013	$60,344	$10,051
Gain / contributions / currency impact	9,770	814
Distributions	(11,987)	—
Balance at December 31, 2013	58,127	10,865
Gain / contributions / currency impact	5,585	2,471
Distributions	(1,722)	—
Balance at December 31, 2014	$61,990	$13,336

We annually re-evaluate assumptions and estimates used in projecting pension assets, liabilities and expenses. These assumptions and estimates may affect the carrying value of pension assets, liabilities and expenses in our Consolidated Financial Statements. Assumptions used to determine net pension costs and projected benefit obligations are:

	Pension Benefit Obligations At December 31,	
	2013	2014
Weighted average assumptions to determine benefit obligations:		
Discount rate	4.20 %	3.33 %
Rate of compensation increase	2.42 %	2.08 %

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

	Pension Benefit Obligations At December 31,	
	2013	2014
Weighted average assumptions to determine net cost:		
Discount rate	3.58 %	4.20 %
Expected return on plan assets	4.29 %	4.77 %
Rate of compensation increase	2.44 %	2.42 %

We adjust our discount rate annually in relation to the rate at which the benefits could be effectively settled. Discount rates are set for each plan in reference to the yields available on AA-rated corporate bonds of appropriate currency and duration. The appropriate discount rate is derived by developing an AA-rated corporate bond yield curve in each currency. The discount rate for a given plan is the rate implied by the yield curve for the duration of that plan's liabilities. In certain countries, where little public information is available on which to base discount rate assumptions, the discount rate is based on government bond yields or other indices and approximate adjustments to allow for the differences in weighted durations for the specific plans and/or allowance for assumed credit spreads between government and AA rated corporate bonds.

The expected return on assets assumption represents our best estimate of the long-term return on plan assets and generally was estimated by computing a weighted average return of the underlying long-term expected returns on the different asset classes, based on the target asset allocations. The expected return on assets assumption is a long-term assumption that is expected to remain the same from one year to the next unless there is a significant change in the target asset allocation, the fees and expenses paid by the plan or market conditions.

The rate of compensation increase assumption is generally based on salary increases.

Plan Assets. The following table presents our retirement plan weighted average asset allocations at December 31, 2014, by asset category:

	Percentage of Plan Assets as of December 31, 2014	
	US	Foreign
Equity securities	20 %	— %
Fixed income, debt securities, or cash	80 %	100 %
Total	100 %	100 %

Investment Policy and Strategy. The investment policy and strategy of the U.S. plan is to invest approximately 20% in equities and approximately 80% in fixed income securities. Rebalancing is undertaken monthly. To the extent we maintain plans in other countries, target asset allocation is 100% fixed income investments. For each plan, the investment policy is set within both asset return and local statutory requirements.

Information for our pension plans with an accumulated benefit obligation in excess of plan assets at December 31, 2013 and 2014 follows:

	2013		2014	
	U.S.	Foreign	U.S.	Foreign
	(Dollars in thousands)			
Accumulated benefit obligation	$134,787	$76,915	$154,368	$18,756
Fair value of plan assets	90,875	72,683	99,454	14,374

Information for our pension plans with a projected benefit obligation in excess of plan assets at December 31, 2013 and 2014 follows:

	2013		2014	
	U.S.	Foreign	U.S.	Foreign
	(Dollars in thousands)			
Projected benefit obligation	$134,787	$78,421	$154,368	$20,617

Fair value of plan assets	90,875	72,685	99,454	14,374

95

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Following is our projected future pension plan cash flow by year:

	U.S.	Foreign
	(Dollars in thousands)	
Expected contributions in 2015:		
Expected employer contributions	$9,084	$974
Expected employee contributions	—	—
Estimated future benefit payments reflecting expected future service for the years ending December 31:		
2015	8,941	3,826
2016	9,039	3,835
2017	9,166	3,918
2018	9,278	4,145
2019	9,340	3,904
2020-2024	47,554	22,523

Postretirement Benefit Plans

We provide life insurance benefits for eligible retired employees. These benefits are provided through various insurance companies. We accrue the estimated net postretirement benefit costs during the employees' credited service periods.

In July 2002, we amended our U.S. postretirement medical coverage. In 2003 and 2004, we discontinued the Medicare Supplement Plan (for retirees 65 years or older or those eligible for Medicare benefits). This change applied to all U.S. active employees and retirees. In June 2003, we announced the termination of the existing early retiree medical plan for retirees under age 65, effective December 31, 2005. In addition, we limited the amount of retiree's life insurance after December 31, 2004. These modifications are accounted for prospectively. The impact of these changes is being amortized over the average remaining period to full eligibility of the related postretirement benefits.

During 2009, we amended one of our U.S. plans to eliminate the life insurance benefit for certain non-pooled participants.

The components of our consolidated net postretirement costs are set forth in the following table.

	For the Year Ended December 31,					
	2012		2013		2014	
	U.S.	Foreign	U.S.	Foreign	U.S.	Foreign
	(Dollars in thousands)					
Service cost	$—	$183	$—	$105	—	$71
Interest cost	497	1,024	371	994	396	976
Amortization of prior service credit	—	(199)	—	(193)	—	(180)
Plan amendment / curtailment	—	1,170	—	—	—	(294)
Mark-to-market (gain) loss	60	551	(1,284)	(1,210)	1,151	1,456
	$557	$2,729	$(913)	$(304)	$1,547	$2,029

The primary driver of the mark-to-market losses in 2012 and gains in 2013 were changes in the discount rate due to interest rate fluctuations. The mark-to-market loss in 2014 was caused by changes in discount rates and mortality tables.

Amounts recognized in other comprehensive income are:

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

	For the Year Ended December 31,					
	2012		2013		2014	
	U.S.	Foreign	U.S.	Foreign	U.S.	Foreign
	(Dollars in thousands)					
Amortization of prior service cost	$—	$199	$—	$193	$—	$180
Effect of exchange rates	—	(53)	—	133	—	148
Total recognized in other comprehensive income	$—	$146	$—	$326	$—	$328
Total recognized in net post retirement cost (benefit) and other comprehensive income	$557	$2,875	$(913)	$22	$1,547	$2,357

We estimate that in 2015 our postretirement costs will include amortization of $0.2 million of prior service credit from stockholders' equity.

The reconciliation of beginning and ending balances of benefit obligations under, fair value of assets of, and the funded status of, our postretirement plans is set forth in the following table:

	Postretirement Benefits at December 31,			
	2013		2014	
	U.S.	Foreign	U.S.	Foreign
	(Dollars in thousands)			
Changes in Benefit Obligation:				
Net benefit obligation at beginning of year	$13,506	$19,188	$11,275	$15,645
Service cost	—	105	—	71
Interest cost	371	994	396	976
Foreign currency exchange rates	—	(2,183)	—	(1,437)
Actuarial loss (gain)	(1,284)	(1,365)	1,151	1,511
Gross benefits paid	(1,318)	(1,161)	(1,236)	(1,068)
Plan amendment	—	67	—	(294)
Net benefit obligation at end of year	$11,275	$15,645	$11,586	$15,404
Changes in Plan Assets:				
Fair value of plan assets at beginning of year	$—	$—	$—	$—
Employer contributions	1,318	1,161	1,236	1,068
Gross benefits paid	(1,318)	(1,161)	(1,236)	(1,068)
Fair value of plan assets at end of year	$—	$—	$—	$—
Funded status:	$(11,275)	$(15,645)	$(11,586)	$(15,404)
Amounts recognized in accumulated other comprehensive loss:				
Prior service credit	$—	$1,882	$—	$1,554
Amounts recognized in the statement of financial position:				
Current liabilities	$(1,279)	$(1,035)	$(1,204)	$(953)
Non-current liabilities	(9,996)	(14,610)	(10,382)	(14,451)
Net amount recognized	$(11,275)	$(15,645)	$(11,586)	$(15,404)

We annually re-evaluate assumptions and estimates used in projecting the postretirement liabilities and expenses. These assumptions and estimates may affect the carrying value of postretirement plan liabilities and expenses in our Consolidated Financial Statements. Assumptions used to determine net postretirement benefit costs and postretirement projected benefit obligation are set forth in the following table:

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

	Postretirement Benefit Obligations At December 31,	
	2013	2014
Weighted average assumptions to determine benefit obligations:		
Discount rate	5.41 %	4.82 %
Health care cost trend on covered charges:		
Initial	7.42 %	6.55 %
Ultimate	6.23 %	6.18 %
Years to ultimate	3	1

	Postretirement Benefit Costs At December 31,	
	2013	2014
Weighted average assumptions to determine net cost:		
Discount rate	4.44 %	5.29 %
Health care cost trend on covered charges:		
Initial	7.52 %	7.39 %
Ultimate	5.94 %	6.18 %
Years to ultimate	3	2

Assumed health care cost trend rates have a significant effect on the amounts reported for our postretirement benefits. A one-percentage point change in assumed health care cost trend rates would have the following effects at December 31, 2014:

	One Percentage Point Increase		One Percentage Point Decrease	
	U.S.	Foreign	U.S.	Foreign
	(Dollars in thousands)			
Effect on total service cost and interest cost components	$3	$107	$(3)	$(87)
Effect on benefit obligations	$116	$1,019	$(110)	$(847)

Discount rates are set for each plan in reference to the yields available on AA-rated corporate bonds of appropriate currency and duration. The appropriate discount rate is derived by developing an AA-rated corporate bond yield curve in each currency. The discount rate for a given plan is the rate implied by the yield curve for the duration of that plan's liabilities. In certain countries, where little public information is available on which to base discount rate assumptions, the discount rate is based on government bond yields or other indices and approximate adjustments to allow for the differences in weighted durations for the specific plans and/or allowance for assumed credit spreads between government and AA-rated corporate bonds.

The following table represents projected future postretirement cash flow by year:

Table of Contents

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

	U.S.	Foreign
	(Dollars in thousands)	
Expected contributions in 2015:		
Expected employer contributions	$1,204	$953
Expected employee contributions	—	—
Estimated future benefit payments reflecting expected future service for the years ending December 31:		
2015	1,204	953
2016	1,172	985
2017	1,124	990
2018	1,062	999
2019	985	1,007
2020-2024	3,668	5,258

Other Non-Qualified Benefit Plans

Since January 1, 1995, we have established various unfunded, non-qualified supplemental retirement and deferred compensation plans for certain eligible employees. We established benefits protection trusts (collectively, the "Trust") to partially provide for the benefits of employees participating in these plans. As of December 31, 2013 and December 31, 2014, the Trust had assets of approximately $5.3 million and $5.2 million, respectively, which are included in other assets and treasury stock on the Consolidated Balance Sheets. These assets include 80,967 shares of common stock that we contributed to the Trust. These shares, if later sold, could be used for partial funding of our future obligations under certain of our compensation and benefit plans. The shares held in Trust are not considered outstanding for purposes of calculating earnings per share until they are committed to be sold or otherwise used for funding purposes.

Savings Plan

Our employee savings plan provides eligible employees the opportunity for long-term savings and investment. The plan allows employees to contribute up to 5% of pay as a basic contribution and an additional 45% of pay as supplemental contribution. For 2012, 2013, and 2014 we contributed on behalf of each participating employee, in units of a fund that invests entirely in our common stock, 100% on the first 3% contributed by the employee and 50% on the next 2% contributed by the employee. We contributed 433,496 shares in 2012, resulting in an expense of $4.6 million; 553,298 shares in 2013, resulting in an expense of $4.6 million; and 581,006 shares in 2014, resulting in an expense of $4.4 million.

(12) Management Compensation and Incentive Plans

Stock-Based Compensation

We have historically maintained several stock incentive plans. The plans permitted the granting of options, restricted stock and other awards. As of December 31, 2014, the aggregate number of shares authorized under the plans since their initial adoption was 23,300,000. Shares issued upon vesting of awards or exercise of options are new share issuances or issuances from treasury shares. Upon the vesting or payment of stock awards, an employee may elect receipt of the full share amount and either pay the resulting taxes or sell shares in the open market to cover the tax obligation. We sometimes elect to purchase these shares rather than allow them to be sold in the open market.

Stock-Based Compensation

We recognized $9.6 million, $7.7 million, and $5.6 million in stock-based compensation expense in 2012, 2013 and 2014, respectively. A majority of the expense, $8.7 million, $6.9 million, and $4.8 million, respectively, was recorded as selling and administrative expenses in the Consolidated Statements of Income, with the remainder recorded as cost of sales and research and development. We expect our stock-based compensation expense to approximate $5.6 million in 2015.

As of December 31, 2014, the total compensation expense related to non-vested restricted stock and stock options not yet recognized was $12.3 million which will be recognized over the weighted average life of 2.0 years.

In November 2014, the 2015-2017 grant to senior leadership under our Equity Incentive Plan was approved. We granted 526,900 stock options with an exercise price of $4.24; 395,186 restricted share units; and up to 1,317,266 performance share units, which represent the right to receive shares contingent upon the achievement of one or more performance measures. The options vest as to 1/3 of the grant on December 3rd over the next three years and expire 10 years from the grant date. The restricted share units vest as to 1/3 of the grant on December 3rd over the next three years. Performance shares are earned based on our return on invested capital and our cumulative free cash flow for a three year period beginning January 1, 2015. Compensation for performance shares can fluctuate based on how we perform to the targets. Performance shares earned will vest on March 31, 2018, provided the participant is still employed by us on that date.

Additionally, in December 2014, we granted 195,000 restricted share units to 45 leaders under the Equity Recognition Program. These shares will vest as to 100% of the grant on December 3, 2016.

Accounting for Stock-Based Compensation

Restricted Stock and Performance Shares. Compensation expense for restricted stock and performance share awards is based on the closing price of our common stock on the date of grant, less our assumptions of dividend yield and expected forfeitures or cancellations of awards throughout the vesting period, which generally range between one and three years. The weighted average grant date fair value of restricted stock and performance shares was approximately $11.16 and $5.19 per share at December 31, 2013 and 2014, respectively.

Restricted stock and performance share awards activity under the plans for the year ended December 31, 2014, was:

	Number of Shares	Weighted-Average Grant Date Fair Value
Outstanding unvested at December 31, 2013	1,633,491	$10.98
Granted	1,466,919	5.19
Vested	(411,062)	12.50
Forfeited/canceled/expired	(875,218)	10.25
Outstanding at December 31, 2014	1,814,130	$6.31

During 2014, we granted 1,466,919 shares of restricted stock and performance units to certain directors, officers and employees at prices ranging from $4.24 to $11.90. Of the total shares granted, 519,286 will vest over a three year period, with one-third of the shares vesting on the anniversary date of the grant in each of the next three years. An additional 747,633 shares will vest over a 39 month period, subject to performance multipliers, based on company performance against a peer group. The remaining 200,000 shares vest over a period of one or two years. Unvested shares granted to each employee also vest upon the occurrence of a change in control, as defined. Unvested shares are forfeited based on the terms of the award.

Stock Options. Compensation expense for stock options is based on the estimated fair value of the option on the date of the grant. We calculate the estimated fair value of the option using the Black-Scholes option-pricing model. During 2012, we granted 441,700 options to certain of our directors, officers and employees. The weighted-average fair value of the options granted in 2012 was $9.82. During 2013, we granted 348,106 options to certain of our officers and employees. The weighted-average fair value of the options granted in 2013 was $11.53. During 2014, we granted 671,939 options to certain of our officers and employees.The weighted-average fair value of the options granted in 2014 was $5.82. The weighted average assumptions used in our Black-Scholes option-pricing model for options granted in 2012, 2013 and 2014 are:

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

	For the Year Ended December 31, 2012	For the Year Ended December 31, 2013	For the Year Ended December 31, 2014
Dividend yield	— %	— %	— %
Expected volatility	55.33%-57.32%	55.89%-57.01%	45.42%-55.89%
Risk-free interest rate	0.66% - 0.90%	0.76% - 1.38%	1.38% - 1.66%
Expected term in years	6 years	6 years	6 years

Dividend Yield. A dividend assumption of 0% is used for all grants based on our history of not paying dividends.
Expected Volatility. We estimate the volatility of our common stock at the date of grant based on the historical volatility of our common stock. The volatility factor we use is based on our historical stock prices over the most recent period commensurate with the estimated expected life of the award.
Risk-Free Interest Rate. We base the risk-free interest rate on the implied yield currently available on U.S. Treasury zero-coupon issues with an equivalent remaining term equal to the expected life of the award.
Expected Term In Years. The expected life of awards granted represents the time period that the awards are expected to be outstanding. We determined the expected term of the grants using the “simplified” method as described by the SEC, since we do not have a history of stock option awards to provide a reliable basis for estimating such.
Stock option activity under the plans for the year ended December 31, 2014 was:

	Number of Shares	Weighted-Average Exercise Price
Outstanding at December 31, 2013	1,916,718	$12.47
Granted	671,939	5.82
Exercised	(316,733)	8.88
Forfeited/canceled/expired	(229,850)	11.64
Outstanding at December 31, 2014	2,042,074	$10.93

Options outstanding at December 31, 2014, have a weighted average remaining contractual life of 7.8 years, a weighted average remaining vesting period of 1.5 years, and an aggregate intrinsic value of $0.4 million. The intrinsic value of options exercised for the year ended December 31, 2014 was $0.5 million.

Stock options outstanding and exercisable under our plans at December 31, 2014 are:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted Average Remaining Contractual Life in Years	Weighted Average Exercise Prices	Number Exercisable	Weighted Average Exercise Prices
$4.24 - $22.57	2,042,074	7.8	$10.93	1,187,758	$13.94

At December 31, 2014, we have 1,601,124 options vested and expected to vest in the next year. Options exercisable at December 31, 2014, have a weighted-average contractual life of 6.6 years and an aggregate intrinsic value of zero.
Incentive Compensation Plans
We have a global incentive program for our worldwide salaried and hourly employees, the Incentive Compensation Program (the “ICP”), which includes a shareholder-approved executive incentive compensation plan. The ICP is based primarily on earnings before income taxes and achieving cash flow targets and, to a lesser extent, strategic targets. The

balance of our accrued liability for ICP was $0.4 million at December 31, 2013 and $0.0 million at December 31, 2014.

(13) Contingencies

Legal Proceedings

We are involved in various investigations, lawsuits, claims, demands, environmental compliance programs and other legal proceedings arising out of or incidental to the conduct of our business. While it is not possible to determine the ultimate disposition of each of these matters, we do not believe that their ultimate disposition will have a material adverse effect on our financial position, results of operations or cash flows.

Product Warranties

We generally sell products with a limited warranty. We accrue for known warranty claims if a loss is probable and can be reasonably estimated. We also accrue for estimated warranty claims incurred based on a historical claims charge analysis. Claims accrued but not yet paid and the related activity within the reserve for 2013 and 2014 are as follows:

Table of Contents

	(Dollars in Thousands)
Balance at December 31, 2013	$1,050
Product warranty charges/adjustments	173
Payments and settlements	(300)
Balance at December 31, 2014	$923

(14) Income Taxes

The following table summarizes the U.S. and non-U.S. components of income (loss) before provision (benefit) for income taxes:

	For the Year Ended December 31,		
	2012	2013	2014
	(Dollars in thousands)		
U.S.	$29,422	$8,495	$(255,043)
Non-U.S.	105,065	(48,597)	(39,749)
	$134,487	$(40,102)	$(294,792)

Income tax expense (benefit) consists of the following:

	For the Year Ended December 31,		
	2012	2013	2014
	(Dollars in thousands)		
U.S income taxes:			
Current	$(6,529)	$4,104	$(1,762)
Deferred	4,543	(5,652)	(537)
	(1,986)	(1,548)	(2,299)
Non-U.S. income taxes:			
Current	12,371	5,422	8,349
Deferred	6,461	(16,717)	(15,466)
	18,832	(11,295)	(7,117)
Total income tax expense (benefit)	$16,846	$(12,843)	$(9,416)

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Income tax expense (benefit) differed from the amounts computed by applying the U.S. federal income tax rate of 35% to income before provision (benefit) for income taxes as set forth in the following table:

	For the Year Ended December 31,		
	2012	2013	2014
	(Dollars in thousands)		
Tax at statutory U.S. federal rate	$47,071	$(14,036)	$(103,177)
U.S. valuation allowance, net	(1,800)	(700)	73,350
State taxes, net of federal tax benefit	593	(371)	(4,387)
U.S. tax return adjustments to estimated taxes	588	(1,032)	(368)
Establishment (resolution) of uncertain tax positions	(8,118)	(752)	(513)
Adjustment for foreign income taxed at different rates	(15,553)	6,832	7,376
U.S. tax credits	(2,200)	(2,577)	(1,000)
Non-U.S. tax exemptions, holidays and credits	(4,259)	—	—
Goodwill impairment	—	—	17,161
Capital loss expiration	—	—	2,422
Other	524	(207)	(280)
Total income tax (benefit) expense	$16,846	$(12,843)	$(9,416)

The Company has been granted a tax holiday in Brazil, which expires in 2016. The availability of the tax holiday in Brazil did not have a significant impact on the current tax year.

The tax effects of temporary differences that give rise to significant components of the deferred tax assets and deferred tax liabilities at December 31, 2013, and December 31, 2014 are set forth in the following table:

	At December 31,	
	2013	2014
	(Dollars in thousands)	
Deferred tax assets:		
Postretirement and other employee benefits	$41,604	$43,204
Foreign tax credit and other carryforwards	46,283	64,214
Capitalized research and experimental costs	20,243	23,446
Environmental reserves	3,503	3,366
Inventory adjustments	16,255	19,568
Capital loss	2,697	272
Long-term contract option amortization	—	2,214
Provision for rationalization charges	17,410	17,255
Other	5,889	6,288
Total gross deferred tax assets	153,884	179,827
Less: valuation allowance	(20,411)	(95,721)
Total deferred tax assets	133,473	84,106
Deferred tax liabilities:		
Fixed assets	$109,824	$59,292
Debt discount amortization	6,620	3,301
Inventory	9,212	6,865
Goodwill and acquired intangibles	10,813	1,046
Other	2,204	3,761
Total deferred tax liabilities	138,673	74,265
Net deferred tax (liability) asset	$(5,200)	$9,841

Deferred income tax assets and liabilities are classified on a net current and non-current basis within each tax jurisdiction. Net current deferred income tax assets are included in prepaid expenses and other current assets in the amount of $37.1 million as of December 31, 2013 and $28.4 million as of December 31, 2014. Net non-current deferred tax assets are separately stated as deferred income taxes in the amount of $10.3 million as of December 31, 2013 and $16.8 million as of December 31, 2014. Net current deferred tax liabilities are included in accrued income and other taxes in the amount of $10.9 million as of December 31, 2013 and $7.2 million as of December 31, 2014. Net non-current deferred tax liabilities are separately stated as deferred income taxes in the amount of $41.7 million at December 31, 2013 and $28.2 million at December 31, 2014.

We continue to assess the need for valuation allowances against deferred tax assets based on determinations of whether it is more likely than not that deferred tax benefits will be realized through the generation of future taxable income. Appropriate consideration is given to all available evidence, both positive and negative, in assessing the need for a valuation allowance. Examples of positive evidence would include a strong earnings history, an event or events that would increase our taxable income through a continued reduction of expenses, and tax planning strategies that would indicate an ability to realize deferred tax assets. Examples of negative evidence would include cumulative losses in recent years and history of tax attributes expiring unused.

GrafTech impaired the fixed assets and announced exiting of certain product lines in our Advanced Graphite Material ("AGM") product group, in the Company’s second quarter Form 10-Q. During the third quarter of 2014, we announced the conclusion of another phase of our on-going companywide cost savings assessment. This resulted in changes to the Company’s operating and management structure in order to streamline, simplify and decentralize the organization as described in more detail in Note 2, Rationalizations. The impairment charges and other rationalization related charges were incurred primarily in the U.S. jurisdiction. As a result, we determined that it is no longer “more likely than not” that we will generate sufficient future U.S. taxable income to realize our deferred tax assets related to U.S. foreign tax credits and state net operating loss carryforwards, as well as our net U.S. deferred tax assets. With the additional significant negative evidence of recent losses, the Company recognized a $73.4 million non-cash charge to the P&L in 2014 to reflect a full valuation allowance against these U.S. deferred income tax assets. The recognition of the valuation allowance does not result in or limit the Company's ability to utilize these tax assets in the future.

Valuation allowance activity for the years ended December 31, 2012, 2013 and 2014 is as follows:

	For the year ended December 31,		
	2012	2013	2014
	(Dollars in thousands)		
Balance at January 1	$25,509	$26,312	$20,411
(Credited) / charged to income	(1,800)	(614)	74,157
Translation adjustment	(52)	(746)	(800)
Changes attributable to movement in underlying assets	2,655	(4,541)	1,953
Balance at December 31	$26,312	$20,411	$95,721

We have total foreign tax credit carryforwards of $19.5 million as of December 31, 2014, for which a full valuation allowance is recorded. These tax credit carryforwards expire as of December 31, 2016. In addition, we have a federal net operating loss carryforward of $36.3 million and state net operating losses carryforwards of $191.5 million, which can be carried forward from 5 to 20 years. These net operating losses carryforwards generate a deferred tax asset of $25.6 million as of December 31, 2014. We also have U.S. non-net operating loss related deferred tax assets of $44.3 million as of December 31, 2014.

We have assessed the need for valuation allowances against these deferred tax assets based on determinations of whether it is more likely than not that deferred tax benefits will be realized through the generation of future taxable income. Appropriate consideration is given to all available evidence, both positive and negative, in assessing the need for a valuation allowance, including existing level of profitability and recently available projections of future taxable income, which are comparable with current year results.

Based upon the levels of historical federal and state taxable income and projections of future federal and state taxable income over the periods during which the carryforwards can be utilized, we do not believe it is more likely than not that we will realize the tax benefits of these deferred tax assets. Until we determine that we will generate sufficient

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

jurisdictional taxable income to realize our net operating losses and deferred tax assets, these assets will continue to be fully reserved.

We have non-U.S. loss and tax credit carryforwards on a gross tax effected basis of $23.1 million, which can be carried forward from 7 years to indefinitely.

As of December 31, 2014, we had unrecognized tax benefits of $3.7 million, $2.7 million of which, if recognized, would have a favorable impact on our effective tax rate. We have elected to report interest and penalties related to uncertain tax positions as income tax expense. Accrued interest and penalties were $1.0 million as of December 31, 2012 (a reduction of $0.3 million in from 2011), $0.6 million as of December 31, 2013 and $0.5 million as of December 31, 2014. A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	As of December 31,		
	2012	2013	2014
	(Dollars in thousands)		
Balance at January 1	$16,788	$9,769	$7,203
Additions based on tax positions related to the current year	90	881	268
Additions for tax positions of prior years	4,643	323	232
Reductions for tax positions of prior years	(11,019)	(2,779)	(1,204)
Lapse of statutes of limitations	(163)	—	(1,180)
Settlements	(576)	(988)	(1,503)
Foreign currency impact	6	(3)	(106)
Balance at December 31	$9,769	$7,203	$3,710

It is reasonably possible that a reduction of unrecognized tax benefits of up to $2.0 million may occur within 12 months due to settlements and the expiration of statutes of limitation.

We file income tax returns in the U.S. federal jurisdiction, and various state and foreign jurisdictions. All U.S. federal tax years prior to 2012 are generally closed by statute or have been audited and settled with the applicable domestic tax authorities. All other jurisdictions are still open to examination beginning after 2008.

The Company has not provided for U.S. income taxes or foreign withholding taxes on the differences between the financial reporting basis in our foreign investments, and the tax basis in such investments, estimated to be $1.1 billion, which are considered to be permanently reinvested as of December 31, 2014. Any outside basis difference would be taxable upon the sale or liquidation of the foreign subsidiaries, or upon the remittance of dividends. The measurement of the unrecognized U.S. income taxes, if any, that may be associated with these outside basis differences, is not practicable.

(15) Earnings Per Share

The following table shows the information used in the calculation of our basic and diluted earnings per share as of December 31:

	At December 31,		
	2012	2013	2014
	(Dollars in thousands)		
Weighted average common shares outstanding for basic calculation	138,551,804	135,067,278	136,155,295
Add: Effect of stock options and restricted stock	1,148,300	—	—
Weighted average common shares outstanding for diluted calculation	139,700,104	135,067,278	136,155,295

Basic earnings per common share are calculated by dividing net income by the weighted average number of common shares outstanding. Diluted earnings per share are calculated by dividing net income by the sum of the

Table of Contents

weighted average number of common shares outstanding plus the additional common shares that would have been outstanding if potentially dilutive securities had been issued.

The weighted average common shares outstanding for the diluted earnings per share calculation excludes consideration of stock options covering 865,844 shares in 2012, 1,866,720 shares in 2013 and 1,481,992 shares in 2014, as the exercise prices were greater than the weighted average market price of our common stock for that period.

During 2012, we repurchased, in the open market, ten million shares under a previously announced share repurchase program authorized by the Board of Directors. These share repurchases represented a financing cash outflow of $101.7 million for 2012. These share repurchases decreased the weighted average shares outstanding by 5.6 million shares for 2012.

(16) Accumulated Other Comprehensive Loss

The balance in our accumulated other comprehensive loss is set forth in the following table:

	For year ended December 31,	
	2013	2014
	(Dollars in thousands)	
Foreign currency translation adjustments	$295,192	$328,233
Commodities and foreign currency derivatives and other, net of tax of ($300) and ($63), respectively	(2,568)	8,291
Total accumulated comprehensive loss	$292,624	$336,524

Table of Contents

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(17) Guarantor Information

On November 20, 2012, GrafTech International Ltd. (the “Parent”), issued $300 million aggregate principal amount of Senior Notes. The Senior Notes mature on November 15, 2020 and bear interest at a rate of 6.375% per year, payable semi-annually in arrears on May 15 and November 15 of each year. The Senior Notes have been guaranteed on a senior basis by the following wholly-owned direct and indirect subsidiaries of the Parent: GrafTech Finance Inc., GrafTech Holdings Inc., GrafTech USA LLC, Seadrift Coke LLP, Fiber Materials, Inc., Intermat, GrafTech Global Enterprises Inc., GrafTech International Holdings Inc., GrafTech DE LLC, GrafTech Seadrift Holding Corp, GrafTech International Trading Inc., GrafTech Technology LLC, GrafTech NY Inc., and Graphite Electrode Network LLC.

The guarantors of the Senior Notes, solely in their respective capacities as such, are collectively called the “Guarantors.” Our other subsidiaries, which are not guarantors of the Senior Notes, are called the “Non-Guarantors.”

All of the guarantees are unsecured. All of the guarantees are full, unconditional (subject to limited exceptions described below) and joint and several. Each of the Guarantors are 100% owned, directly or indirectly, by the Parent. All of the guarantees of the Senior Notes continue until the Senior Notes have been paid in full, and payment under such guarantees could be required immediately upon the occurrence of an event of default under the Senior Notes. If a Guarantor makes a payment under its guarantee of the Senior Notes, it would have the right under certain circumstances to seek contribution from the other Guarantors.

The Guarantors will be released from the guarantees upon the occurrence of certain events, including the following: the unconditional release or discharge of any guarantee or indebtedness that resulted in the creation of the guarantee of the Senior Notes by such Guarantor; the sale or other disposition, including by way of merger or consolidation or the sale of its capital stock, following which such Guarantor is no longer a subsidiary of the Parent; or the Parent's exercise of its legal defeasance option or its covenant defeasance option as described in the indenture applicable to the Senior Notes. If any Guarantor is released, no holder of the Senior Notes will have a claim as a creditor against such Guarantor and the indebtedness and other liabilities, including trade payables and preferred stock, if any, of such Guarantor will be effectively senior to the claim of any holders of the Senior Notes.

Investments in subsidiaries are recorded on the equity basis.

The following tables set forth condensed consolidating balance sheets as of December 31, 2013 and December 31, 2014 and condensed consolidating statements of income and comprehensive income for the three and nine months ended December 31, 2013 and 2014 and condensed consolidating statements of cash flows for 2013 and 2014 of the Parent, Guarantors and the Non-Guarantors.

Amounts presented in comprehensive income for the year ended 2012 and 2013 have been revised. Previously, the Company did not present comprehensive income of subsidiaries in the guarantor column. This amount has been revised to present $18.7 million in comprehensive loss for the guarantors during the year ended 2012 and $11.9 million in comprehensive loss during 2013.

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

CONDENSED CONSOLIDATING BALANCE SHEETS
As of December 31, 2013
(in thousands)

	Parent	Guarantors	Non-Guarantors	Consolidating Entries and Eliminations	Consolidated
ASSETS					
Current Assets:					
Cash and cash equivalents	$—	$4,752	$7,136	$—	$11,888
Accounts receivable - affiliates	42,410	28,551	15,824	(86,785)	—
Accounts receivable - trade	—	48,998	150,568	—	199,566
Inventories	—	174,935	315,479	—	490,414
Prepaid and other current assets	—	22,555	51,235	—	73,790
Total current assets	42,410	279,791	540,242	(86,785)	775,658
Investment in affiliates	1,709,914	828,012	—	(2,537,926)	—
Property, plant and equipment	—	540,273	280,712	—	820,985
Deferred income taxes	—	—	10,334	—	10,334
Goodwill	—	293,162	203,648	—	496,810
Notes receivable - affiliate	51,090	7,413	—	(58,503)	—
Other assets	4,752	53,447	55,862	—	114,061
Total Assets	$1,808,166	$2,002,098	$1,090,798	$(2,683,214)	$2,217,848
LIABILITIES AND STOCKHOLDERS' EQUITY					
Current Liabilities:					
Accounts payable - affiliate	$—	$58,206	$28,579	$(86,785)	$—
Accounts payable - trade	—	41,971	73,241	—	115,212
Short-term debt	—	165	996	—	1,161
Accrued income and other taxes	2,678	4,736	23,273	—	30,687
Rationalizations	—	1,890	16,531	—	18,421
Supply chain financing liability	—	—	9,455	—	9,455
Other accrued liabilities	2,444	12,404	26,091	—	40,939
Total current liabilities	5,122	119,372	178,166	(86,785)	215,875
Long-term debt - affiliate	—	51,090	7,413	(58,503)	—
Long-term debt - third party	475,675	50,525	15,393	—	541,593
Other long-term obligations	—	66,590	31,357	—	97,947
Deferred income taxes	6,620	4,607	30,457	—	41,684
Stockholders' equity	1,320,749	1,709,914	828,012	(2,537,926)	1,320,749
Total Liabilities and Stockholders' Equity	$1,808,166	$2,002,098	$1,090,798	$(2,683,214)	$2,217,848

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

CONDENSED CONSOLIDATING BALANCE SHEETS
As of December 31, 2014
(in thousands)

	Parent	Guarantors	Non-Guarantors	Consolidating Entries and Eliminations	Consolidated
ASSETS					
Current Assets:					
Cash and cash equivalents	$—	$5,503	$12,047	$—	$17,550
Accounts receivable - affiliates	40,474	35,618	40,185	(116,277)	—
Accounts receivable - trade	—	45,861	117,058	—	162,919
Inventories	—	148,080	234,823	—	382,903
Prepaid and other current assets	—	17,336	64,287	—	81,623
Total current assets	40,474	252,398	468,400	(116,277)	644,995
Investment in affiliates	1,414,278	762,251	—	(2,176,529)	—
Property, plant and equipment	—	431,602	222,438	—	654,040
Deferred income taxes	—	—	16,819	—	16,819
Goodwill	—	217,099	203,030	—	420,129
Notes receivable - affiliate	35,722	7,413	—	(43,135)	—
Other assets	4,110	45,617	48,095	—	97,822
Total Assets	$1,494,584	$1,716,380	$958,782	$(2,335,941)	$1,833,805
LIABILITIES AND STOCKHOLDERS' EQUITY					
Current Liabilities:					
Accounts payable - affiliate	$—	$80,659	$35,618	$(116,277)	$—
Accounts payable - trade	47	35,435	50,927	—	86,409
Short-term debt	187,973	131	—	—	188,104
Accrued income and other taxes	344	3,380	20,782	—	24,506
Rationalizations	—	7,538	2,025	—	9,563
Supply chain financing liability	—	—	—	—	—
Other accrued liabilities	2,444	15,252	25,623	—	43,319
Total current liabilities	190,808	142,395	134,975	(116,277)	351,901
Long-term debt - affiliate	—	35,722	7,413	(43,135)	—
Long-term debt - third party	300,000	40,393	1,222	—	341,615
Other long-term obligations	—	77,724	29,842	—	107,566
Deferred income taxes	—	5,118	23,079	—	28,197
Stockholders' equity	1,003,776	1,415,028	762,251	(2,176,529)	1,004,526
Total Liabilities and Stockholders' Equity	$1,494,584	$1,716,380	$958,782	$(2,335,941)	$1,833,805

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME
For the year ended December 31, 2012
(in thousands)

	Parent	Guarantors	Non-Guarantors	Consolidating Entries and Eliminations	Consolidated
Sales - affiliates	$—	$194,345	$216,859	$(411,204)	$—
Sales - third party	—	566,024	682,240	—	1,248,264
Net sales	—	760,369	899,099	(411,204)	1,248,264
Cost of sales	—	638,419	705,245	(411,204)	932,460
Gross profit	—	121,950	193,854	—	315,804
Research and development	—	13,796	—	—	13,796
Selling and administrative expenses	—	61,442	84,098	—	145,540
Operating income	—	46,712	109,756	—	156,468
Other expense (income), net	—	(2,133)	1,128	—	(1,005)
Interest expense - affiliate	3,766	59	586	(4,411)	—
Interest expense - third party	12,992	7,977	2,278	—	23,247
Interest income - affiliate	(59)	(4,352)	—	4,411	—
Interest income - third party	—	—	(261)	—	(261)
(Loss) income before income taxes	(16,699)	45,161	106,025	—	`134,487
(Benefit) provision for income taxes	(5,972)	3,981	18,837	—	16,846
Equity in earnings of subsidiary	128,368	87,188	—	(215,556)	—
Net income	$117,641	$128,368	$87,188	$(215,556)	$117,641
Statements of Comprehensive Income					
Net income (loss)	$117,641	$128,368	$87,188	$(215,556)	$117,641
Other comprehensive (loss) income	(18,741)	(18,741)	(9,929)	28,670	(18,741)
Comprehensive income (loss)	$98,900	$109,627	$77,259	$(186,886)	$98,900

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME
For the year ended December 31, 2013
(in thousands)

	Parent	Guarantors	Non-Guarantors	Consolidating Entries and Eliminations	Consolidated
Sales - affiliates	$—	$220,354	$149,251	$(369,605)	$—
Sales - third party	—	469,033	697,641	—	1,166,674
Net sales	—	689,387	846,892	(369,605)	1,166,674
Cost of sales	—	584,819	812,394	(369,605)	1,027,608
Gross profit	—	104,568	34,498	—	139,066
Research and development	—	10,437	—	—	10,437
Selling and administrative expenses	—	40,548	70,495	—	111,043
Rationalizations	—	2,732	17,424	—	20,156
Operating income	—	50,851	(53,421)	—	(2,570)
Other expense (income), net	—	(176)	1,874	—	1,698
Interest expense - affiliate	—	1,364	670	(2,034)	—
Interest expense - third party	31,294	3,029	1,714	—	36,037
Interest income - affiliate	(1,233)	(670)	(131)	2,034	—
Interest income - third party	—	—	(203)	—	(203)
(Loss) income before income taxes	(30,061)	47,304	(57,345)	—	`(40,102)
(Benefit) provision for income taxes	(10,659)	9,111	(11,295)	—	(12,843)
Equity in earnings of subsidiary	(7,857)	(46,050)	—	53,907	—
Net income	$(27,259)	$(7,857)	$(46,050)	$53,907	$(27,259)
Statements of Comprehensive Income					
Net (loss) income	$(27,259)	$(7,857)	$(46,050)	$53,907	$(27,259)
Other comprehensive (loss) income	(11,946)	(11,946)	(13,601)	25,547	(11,946)
Comprehensive income (loss)	$(39,205)	$(19,803)	$(59,651)	$79,454	$(39,205)

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME
For the year ended December 31, 2014
(in thousands)

	Parent	Guarantors	Non-Guarantors	Consolidating Entries and Eliminations	Consolidated
Sales - affiliates	$—	$263,742	$150,346	$(414,088)	$—
Sales - third party	—	422,991	662,313	—	1,085,304
Net sales	—	686,733	812,659	(414,088)	1,085,304
Cost of sales	—	630,031	777,114	(414,088)	993,057
Gross profit	—	56,702	35,545	—	92,247
Research and development	—	14,844	—	—	14,844
Selling and administrative expenses	—	55,454	68,724	—	124,178
Impairments	—	186,552	10,668		197,220
Rationalizations	—	9,109	2,516	—	11,625
Operating income	—	(209,257)	(46,363)	—	(255,620)
Other expense (income), net	—	1,575	870	—	2,445
Interest expense - affiliate	—	806	—	(806)	—
Interest expense - third party	32,118	4,037	902	—	37,057
Interest income - affiliate	(806)	—	—	806	—
Interest income - third party	—	(11)	(319)	—	(330)
(Loss) income before income taxes	(31,312)	(215,664)	(47,816)	—	`(294,792)
(Benefit) provision for income taxes	3,319	(5,618)	(7,117)	—	(9,416)
Equity in earnings of subsidiary	(251,495)	(40,699)	—	292,194	—
Net income	$(286,126)	$(250,745)	$(40,699)	$292,194	$(285,376)

Statements of Comprehensive Income

	Parent	Guarantors	Non-Guarantors	Consolidating Entries and Eliminations	Consolidated
Net income	$(286,126)	$(250,745)	$(40,699)	$292,194	$(285,376)
Other comprehensive income:	(43,900)	(43,900)	(28,650)	72,550	(43,900)
Comprehensive (loss) income	$(330,026)	$(294,645)	$(69,349)	$364,744	$(329,276)

112

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS
For the year ended December 31, 2012
(in thousands)

	Parent	Guarantors	Non-Guarantors	Consolidating Entries and Eliminations	Consolidated
Net cash provided by (used in) operating activities:	$44,361	$85,973	$23,066	$(52,000)	$101,400
Cash flow from investing activities:					
Loan repayments from affiliates	(66,869)	158,985	—	(92,116)	—
Capital expenditures	—	(91,183)	(36,545)	—	(127,728)
(Payments on) proceeds from derivatives	—	3,166	4,406	—	7,572
Other	—	—	194	—	194
Net cash provided by (used in) investing activities	(66,869)	70,968	(31,945)	(92,116)	(119,962)
Cash flow from financing activities:					
Loans repayments to affiliates	(169,656)	66,869	10,671	92,116	—
Dividends to affiliates	—	(52,000)	—	52,000	—
Short-term debt borrowings	—	(7,493)	1,755	—	(5,738)
Revolving Facility borrowings	—	292,000	133,000	—	425,000
Revolving Facility reductions	—	(454,500)	(133,000)	—	(587,500)
Proceeds from long term debt	300,000	—	—	—	300,000
Principal payments on long term debt	—	(171)	(54)	—	(225)
Supply chain financing	—	—	(2,967)	—	(2,967)
Proceeds from exercise of stock options	157	—	—	—	157
Purchase of treasury shares	(103,445)	—	—	—	(103,445)
Refinancing fees and debt issuance costs	(5,018)	(724)	(643)	—	(6,385)
Other	104	—	5,111	—	5,215
Net cash (used in) provided by financing activities	22,142	(156,019)	13,873	144,116	24,112
Net (decrease) increase in cash and cash equivalents	(366)	922	4,994	—	5,550
Effect of exchange rate changes on cash and cash equivalents	—	—	(662)	—	(662)
Cash and cash equivalents at beginning of period	366	3,503	8,560	—	12,429
Cash and cash equivalents at end of period	$—	$4,425	$12,892	$—	$17,317

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS
For the year ended December 31, 2013
(in thousands)

	Parent	Guarantors	Non-Guarantors	Consolidating Entries and Eliminations	Consolidated
Net cash (used in) provided by operating activities:	$(13,718)	$72,111	$58,444	$—	$116,837
Cash flow from investing activities:					
Loan repayments from affiliates	15,578	15,000	—	(30,578)	—
Capital expenditures	—	(52,278)	(34,066)	—	(86,344)
Insurance recoveries	—	—	1,500	—	1,500
Proceeds from derivatives (payments on)	—	437	(323)	—	114
Other	—	322	607	—	929
Net cash provided by (used in) investing activities	15,578	(36,519)	(32,282)	(30,578)	(83,801)
Cash flow from financing activities:					
Loans repayments to affiliates	—	(15,578)	(15,000)	30,578	—
Short-term debt borrowings	—	(6)	(7,259)	—	(7,265)
Revolving Facility borrowings	—	75,000	91,000	—	166,000
Revolving Facility reductions	—	(94,500)	(77,000)	—	(171,500)
Principal payments on long term debt	—	(166)	(59)	—	(225)
Supply chain financing	—	—	(17,508)	—	(17,508)
Proceeds from exercise of stock options	448	—	—	—	448
Purchase of treasury shares	(1,825)	—	—	—	(1,825)
Refinancing fees and debt issuance costs	(483)	(15)	(62)	—	(560)
Other	—	—	(5,210)	—	(5,210)
Net cash (used in) provided by financing activities	(1,860)	(35,265)	(31,098)	30,578	(37,645)
Net increase (decrease) in cash and cash equivalents	—	327	(4,936)	—	(4,609)
Effect of exchange rate changes on cash and cash equivalents	—	—	(820)	—	(820)
Cash and cash equivalents at beginning of period	—	4,425	12,892	—	17,317
Cash and cash equivalents at end of period	$—	$4,752	$7,136	$—	$11,888

Table of Contents
GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS
For the year ended December 31, 2014
(in thousands)

	Parent	Guarantors	Non-Guarantors	Consolidating Entries and Eliminations	Consolidated
Net cash (used in) provided by operating activities:	$(9,474)	$79,864	$50,513	$—	$120,903
Cash flow from investing activities:					
Loan repayments from affiliates	6,604	—	—	(6,604)	—
Capital expenditures	—	(58,926)	(26,055)	—	(84,981)
Insurance recoveries	—	—	2,834	—	2,834
Proceeds (payments) for derivatives	—	(2,195)	170	—	(2,025)
Proceeds from fixed asset sales	—	1,700	3,342		5,042
Other	—	—	178	—	178
Net cash provided by (used in) investing activities	6,604	(59,421)	(19,531)	(6,604)	(78,952)
Cash flow from financing activities:					
Loans repayments to affiliates	—	(6,604)	—	6,604	—
Short-term debt borrowings	—	(34)	(987)	—	(1,021)
Revolving Facility borrowings	—	183,000	86,000	—	269,000
Revolving Facility reductions	—	(193,000)	(100,000)	—	(293,000)
Principal payments on long term debt	—	(132)	(60)	—	(192)
Supply chain financing	—	—	(9,455)	—	(9,455)
Proceeds from exercise of stock options	2,813	—	—	—	2,813
Purchase of treasury shares	(894)	—	—	—	(894)
Refinancing fees and debt issuance costs	—	(2,922)	(357)	—	(3,279)
Other	951	—	—	—	951
Net cash (used in) provided by financing activities	2,870	(19,692)	(24,859)	6,604	(35,077)
Net increase (decrease) in cash and cash equivalents	—	751	6,123	—	6,874
Effect of exchange rate changes on cash and cash equivalents	—	—	(1,212)	—	(1,212)
Cash and cash equivalents at beginning of period	—	4,752	7,136	—	11,888
Cash and cash equivalents at end of period	$—	$5,503	$12,047	$—	$17,550

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(18) Subsequent Events

AGM Rationalization Initiatives
Subsequent to December 31, 2014, the Company reviewed plans to further optimize the production platform in our advanced graphite materials business for 2015 and beyond. As a result, we are finalizing additional rationalization actions within our AGM business. The Company expects to incur up to $10 million of additional rationalization charges related to these actions in the first half of 2015. We estimate that, as a result of these additional actions, the Company will improve its operating income by $5 million annually in future years.

Amended and Restated Credit Agreement
On February 27, 2015, GrafTech and certain of its subsidiaries entered into an Amended and Restated Credit Agreement that provides for, among other things, greater financial flexibility and a new $40 million senior secured delayed draw term loan facility.

As of December 31, 2014, we had $302 million of unused borrowing capacity under the revolving credit facility (after considering financial covenants restrictions and the outstanding letters of credit of approximately $5.3 million). Had this Amended and Restated Credit Agreement been in place as of December 31, 2014, we would have had availability of the full $400 million revolving credit facility, with $354 million of unused borrowing capacity (after considering financial covenants restrictions and the outstanding letters of credit of approximately $5.3 million). The additional $40 million delayed draw term loan facility is to be used in connection with the repayment of its Senior Subordinated Notes.

The interest rate applicable to the Amended and Restated Credit Facility is LIBOR plus a margin ranging from 2.25% to 3.75% (depending on our total senior secured leverage ratio). The borrowers pay a per annum fee ranging from 0.35% to 0.50% (depending on our senior secured leverage ratio) on the undrawn portion of the commitments under the Revolving Facility. The new financial covenants require us to maintain a minimum cash interest coverage ratio of 2.50 to 1.00 and a maximum senior secured leverage ratio ranging from 3.75 to 1.00 to 3.00 to 1.00, subject to adjustment for certain events.

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

Not applicable.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures
The Company maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in the Company’s reports under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the Commission’s rules and forms and that such information is accumulated and communicated to the Company’s management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.
The Company carries out a variety of on-going procedures, under the supervision and with the participation of the Company’s management, including the Company’s Chief Executive Officer and Chief Financial Officer, to evaluate the

effectiveness of the design and operation of the Company’s disclosure controls and procedures. Based on the foregoing, the Company’s Chief Executive Officer and Chief Financial Officer concluded that the Company’s disclosure controls and procedures were effective at a reasonable assurance level as of the end of the period covered by this report.

MANAGEMENT’S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Exchange Act Rule 13a-15(f). The 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 accounting principles generally accepted in the United States of America.

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.

Under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer, the Company conducted an evaluation of the effectiveness of the Company’s internal control over financial reporting based on the framework in “Internal Control — Integrated Framework” issued during 2013 by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management has concluded that the internal control over financial reporting was effective as of December 31, 2014.

Changes in Internal Control over Financial Reporting

There has been no change in the Company’s internal controls over financial reporting during the Company’s most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company’s internal controls over financial reporting.

Management’s assessment of the effectiveness of the Company’s internal control over financial reporting as of December 31, 2014 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report included herein.

Item 9B. Other Information

Not applicable.

Table of Contents

PART III

Items 10 to 14 (inclusive).

Except as set forth below, the information required by Items 10, 11, 12, 13 and 14 will appear in the GrafTech International Ltd. Proxy Statement for the Annual Meeting of Stockholders to be held on May 15, 2014, which will be filed on April 2, 2014 pursuant to Regulation 14A under the Securities Exchange Act of 1934 and is incorporated by reference in this Report pursuant to General Instruction G(3) of Form 10-K (other than the portions thereof not deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934).
The information set forth below is provided as required by Item 10 and the listing standards of the NYSE.
The following table sets forth information with respect to our current executive officers and directors, including their ages, as of February 15, 2014. There are no family relationships between any of our executive officers.

Name	Age	Position
Joel L. Hawthorne	50	President and Chief Executive Officer
Erick R. Asmussen	48	Vice President and Chief Financial Officer
Darrell Blair	56	Vice President and President, Industrial Materials
Lionel Batty	56	Vice President and President, Engineered Solutions
John D. Moran	56	Vice President and General Counsel, Secretary

Executive Officers

Joel L. Hawthorne, age 50, became Chief Executive Officer and President in January 2014. Previously, he was President, Engineered Solutions since March 2011. Mr. Hawthorne joined GrafTech as Director of Investor Relations in August 1999. In January 2001, he was appointed Director of Electrode Sales & Marketing, Americas and, in October 2005, he was appointed Director Worldwide Marketing and Americas Sales. In January 2009, he was appointed Vice President, Global Marketing & Sales for Industrial Materials with responsibility for all aspects of worldwide marketing and sales for the segment. Mr. Hawthorne holds a Bachelor of Science degree (accounting) and a Master of Science degree (business education) from the University of Akron.

Erick R. Asmussen, age 48, became Vice President and Chief Financial Officer in September 2013. Mr. Asmussen has over 20 years of corporate finance, treasury, accounting, planning and analysis, tax and corporate development experience. Since joining GrafTech in 1999 as Tax Director, he has also served as GrafTech's Worldwide Controller and Treasurer & Director of Finance. He became Vice President of Strategy, Planning and Corporate Development in May 2005. Prior to joining GrafTech, Mr. Asmussen served as Director of Tax Planning for Corning Incorporated, Tax Manager for AT&T Corporation, and Senior Tax Consultant for Arthur Andersen LLP. Mr. Asmussen holds a Master of Science in Taxation from State University of New York at Albany and a Bachelor of Science in Accounting from Rochester Institute of Technology.

Darrell Blair, age 56, became President of Industrial Materials in November 2014. In this role, he leads the GrafTech business segment that manufactures a broad range of high quality graphite electrodes, petroleum needle coke, as well as carbon and graphite refractory products. Prior to this he served as Vice President of Global Sales for GrafTech's graphite electrodes line of business. Mr. Blair joined the company in 1980 at its facility in Columbia, Tennessee. His extensive commercial, operations, and customer technical service experience includes international assignments in Puerto Rico, Mexico, Singapore, Hong Kong and, for the past 11 years, Switzerland. He holds a Bachelor's Degree in Chemical Engineering from the University of Kentucky and an MBA from Interamerican University of Puerto Rico.

Lionel Batty, age 56, was appointed President of GrafTech's Engineered Solutions business segment in January 2014. Prior to this he was President of its Graphite Electrodes business, and from 1999 to 2011 he was Vice President of

Corporate Research and Development. He has been located at the company's headquarters in Parma, Ohio, since 1999. From 1997 to 1998 he was Applied Technology Manager - Europe for GrafTech's electrode business, and from 1994 to 1996 he held a similar position for its specialty graphite business, both located in France. Mr. Batty began his career with GrafTech as a development engineer in 1983 at Parma, Ohio, and has held various technical and managerial positions at GrafTech locations in Clarksville, Tennessee; Sheffield, England; Notre Dame de Briançon, France; and

Table of Contents

Paris, France. He holds a BS in Chemical Engineering from Imperial College, London, and has an MBA from Sheffield Hallam University (formerly Sheffield Polytechnic), England.

John D. Moran, age 56, became Vice President and General Counsel, Secretary in April 2009. He joined GrafTech in May 2006 as Deputy General Counsel. From December 1996 to April 2006, he was employed by Corrpro Companies, Inc. serving as General Counsel, Senior Vice President & Secretary. He was in-house Counsel and Corporate Secretary for Sealy Corporation between January 1987 and December 1996. From 1984 through 1987 he was a tax accountant with Grant Thornton and became a Certified Public Accountant. He received a Bachelor of Business Administration in 1980 and Juris Doctorate in 1983 from Cleveland State University.

Table of Contents

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1)Financial Statements
See Index to Consolidated Financial Statements at page 63 of this Report.

(2) Financial Statement Schedules
None.
(b) Exhibits
The exhibits listed in the following table have been filed with, or incorporated by reference into, this Report.

Exhibit Number	Description of Exhibit
2.1.0(1)	Recapitalization and Stock Purchase and Sale Agreement dated as of November 14, 1994 among Union Carbide Corporation, Mitsubishi Corporation, GrafTech International Ltd. and GrafTech International Acquisition Inc. and Guaranty made by Blackstone Capital Partners II Merchant Banking Fund L.P. and Blackstone Offshore Capital Partners II L.P.
2.2.0(1)	Stock Purchase and Sale Agreement dated as of November 9, 1990 among Mitsubishi Corporation, Union Carbide Corporation and UCAR Carbon Company Inc.
2.3.0(1)	Transfer Agreement dated January 1, 1989 between Union Carbide Corporation and UCAR Carbon Company Inc.
2.3.1(1)	Amendment No. 1 to Transfer Agreement dated December 31, 1989.
2.3.2(1)	Amendment No. 2 to Transfer Agreement dated July 2, 1990.
2.3.3(1)	Amendment No. 3 to Transfer Agreement dated as of February 25, 1991.
2.4.0(1)	Amended and Restated Realignment Indemnification Agreement dated as of June 4, 1992 among Union Carbide Corporation, Union Carbide Chemicals and Plastics Company Inc., Union Carbide Industrial Gases Inc., UCAR Carbon Company Inc. and Union Carbide Coatings Service Corporation.
2.5.0(1)	Environmental Management Services and Liabilities Allocation Agreement dated as of January 1, 1990 among Union Carbide Corporation, Union Carbide Chemicals and Plastics Company Inc., UCAR Carbon Company Inc., Union Carbide Industrial Gases Inc. and Union Carbide Coatings Service Corporation.
2.5.1(1)	Amendment No. 1 to Environmental Management Services and Liabilities Allocation Agreement dated as of June 4, 1992.
2.6.0(2)	Trade Name and Trademark License Agreement dated March 1, 1996 between Union Carbide Corporation and UCAR Carbon Technology Corporation.
2.7.0(1)	Employee Benefit Services and Liabilities Agreement dated January 1, 1990 between Union Carbide Corporation and UCAR Carbon Company Inc.
2.7.1(1)	Amendment to Employee Benefit Services and Liabilities Agreement dated January 15, 1991.
2.7.2(1)	Supplemental Agreement to Employee Benefit Services and Liabilities Agreement dated February 25, 1991.
2.8.0(1)	Letter Agreement dated December 31, 1990 among Union Carbide Chemicals and Plastics Company Inc., UCAR Carbon Company Inc., Union Carbide Grafito, Inc. and Union Carbide Corporation.
3.1.0(23)	Amended and Restated Certificate of Incorporation of GrafTech International Ltd. dated November 30, 2010.
3.2.0(36)	Amended and Restated By-Laws of GrafTech International Ltd. dated as of September 30, 2012.
4.1.0(29)	6.375% Senior Notes due 2020.
10.1.0(27)	European Guarantee and Luxembourg Security Agreement dated as of April 20, 2012, made by GrafTech Luxembourg I S.à.r.l., GrafTech Luxembourg II S.à.r.l. and GrafTech Switzerland S.A., in favor of

JPMorgan Chase Bank, N.A., as collateral agent for the Secured Parties (as defined therein).

Table of Contents

Exhibit Number	Description of Exhibit
10.1.1(27)	Second Amended and Restated Indemnity, Subrogation and Contribution Agreement dated as of April 20, 2012, among GrafTech International Ltd., GrafTech Finance Inc., each of the other Domestic Subsidiaries (as defined therein) from time to time party thereto, and JPMorgan Chase Bank, N.A., as collateral agent for the Secured Parties (as defined therein).
10.1.2(27)	Pledge Agreement dated as of March 26, 2012, by GrafTech Luxembourg I S.à.r.l. in favor of JPMorgan Chase Bank, N.A., as collateral agent for the Secured Parties (as defined therein).
10.1.3(27)	Pledge Agreement dated as of March 30, 2012, by GrafTech Luxembourg II S.à.r.l. in favor of JPMorgan Chase Bank, N.A., as collateral agent for the Secured Parties (as defined therein).
10.1.4(21)	Amended and Restated Intellectual Property Security Agreement dated as of April 28, 2010 made by GrafTech International Ltd., GrafTech Global Enterprises Inc., GrafTech Finance Inc., and the other subsidiaries of GrafTech International Ltd. from time to time party thereto, in favor of JPMorgan Chase Bank, N.A., as Collateral Agent for the Secured Parties.
10.1.5(21)	Swiss Security Agreement dated April 28, 2010 between GrafTech Switzerland S.A., as Assignor, and JPMorgan Chase Bank, N.A., as Assignee.
10.1.6(21)	Form of LC Subsidiary Agreement among GrafTech Finance Inc. or GrafTech Switzerland S.A., as the Applicable Borrower, the applicable LC Subsidiary and JPMorgan Chase Bank, N.A., as Administrative Agent.
10.1.7(34)	Amended and Restated Credit Agreement dated as of April 23, 2014, among GrafTech International Ltd., GrafTech Finance Inc., GrafTech Luxembourg I S.à.r.l., GrafTech Luxembourg II S.à.r.l. and GrafTech Switzerland S.A.; the LC Subsidiaries (as defined therein) from time to time party thereto; and JPMorgan Chase Bank, N.A., as Administrative Agent and Collateral Agent, as an Issuing Bank and as Swingline Lender (as defined therein), filed as Exhibit A to the Amendment and Restatement Agreement dated as of April 23, 2014, among such parties.
10.1.8(32)	First Amendment dated as of November 19, 2014 in respect of the Amended and Restated Credit Agreement dated as of April 23, 2014 among GrafTech International Ltd., GrafTech Finance Inc., GrafTech Luxembourg I SarL, GrafTech Luxembourg II SarL, GrafTech Switzerland S.A., the LC Subsidiaries from time to time party thereto, the Lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent and Collateral Agent, as an Issuing Bank and as Swingline Lender.
10.1.9(34)	Second Amended and Restated Pledge Agreement dated as of April 23, 2014, by GrafTech Switzerland S.A. in favor of JPMorgan Chase Bank, N.A., as collateral agent for the Secured Parties (as defined therein).
10.1.10(34)	Third Amended and Restated Pledge Agreement dated as of April 23, 2014, among GrafTech International Ltd., GrafTech Finance Inc., the other subsidiaries of GrafTech International Ltd. from time to time party thereto, and JPMorgan Chase Bank, N.A., as collateral agent for the Secured Parties (as defined therein).
10.1.11(34)	

	Third Amended and Restated Security Agreement dated as of April 23, 2014, made by GrafTech International Ltd., GrafTech Finance Inc., and the other subsidiaries of GrafTech International Ltd. from time to time party thereto, in favor of JPMorgan Chase Bank, N.A., as collateral agent for the Secured Parties (as defined therein).
10.2.0(8)	Form of Restricted Stock Unit Agreement.
10.3.0(14)	Forms of Restricted Stock Agreement (2005 LTIP Version).
10.4.0(26)	Form of Long Term Incentive Plan Award Agreement (2010 Version).
10.4.1(26)	Form of Long Term Incentive Plan Award Agreement (2011 Version).
10.4.2(30)	Form of Long Term Incentive Plan Award Agreement (2012 Version).
10.4.3(31)	Form of Long Term Incentive Plan Award Agreement (2013 Version).
10.4.4(36)	Form of Equity Incentive Plan Award Agreement (Standard Version Effective 2014).
10.4.5(33)	Restricted Stock Agreement (2005 Plan; Director Version)
10.5.0(9)	GrafTech International Ltd. Management Stock Incentive Plan (Senior Version) as amended and restated through July 31, 2003.
10.6.0(10)	GrafTech International Ltd. Incentive Compensation Plan, effective January 1, 2003.
10.6.1(16)	Amendment No. 1 GrafTech International Ltd. Incentive Compensation Plan dated December 29, 2008.
10.7.0(11)	Form of Restricted Stock Agreement (Standard Form).
10.8.0(16)	GrafTech International Holdings Inc. Compensation Deferral Program as amended and restated (December 29, 2008).

Table of Contents

Exhibit Number	Description of Exhibit
10.9.0(26)	Amended and Restated GrafTech International Ltd. 2005 Equity Incentive Plan.
10.10.0(8)	Form of Severance Compensation Agreement for senior management (U.S. 2.99 Version).
10.10.1(16)	Form of IRS 409A Amendment to Severance Compensation Agreement for senior management (December 2008 U.S. 2.99 Version).
10.10.2(25)	Form of Severance Compensation Agreement for senior management (U.S. 2.99 Version - Revised).
10.10.3(34)	Graftech International Holdings Inc. 2014-2016 Executive Selective Severance Program
10.10.4(36)	Form of 2014 - 2016 Executive Selective Severance Program Notification Letter
10.11.0(16)	Form of IRS 409A Amendment to Severance Compensation Agreement for senior management (December 2008 International 2.99 Version).
10.12.0(14)	Form of Non-qualified Stock Option Agreement.
10.14.0(14)	Form of Terms and Conditions of Sale to standard contract of sale (2007 revision)
10.15.0(13)	Technology License Agreement, dated as of December 5, 2006, among GrafTech International Ltd., UCAR Carbon Company Inc., Alcan France, and Carbone Savoie (confidential treatment requested under Rule 24b-2 as to certain portions which are omitted and filed separately with the SEC.)
10.16.0(24)	Form of Indemnification Agreement with Directors and Executive Officers.
10.17.0(18)	Executive Incentive Compensation Plan.
10.18.0(23)	Form of Senior Subordinated Promissory Note. issued pursuant to April 28, 2010 Agreements and Plans of Merger.
10.19.0(23)	Registration Rights and Stockholders' Agreement, dated as of November 30, 2010, by and among GrafTech International Ltd. and each of the stockholders party thereto entered into pursuant to April 28, 2010 Agreements and Plans of Merger.
10.20.0(29)	Indenture, dated November 20, 2012, among GrafTech International Ltd., the Subsidiary Guarantors and U.S. Bank National Association, as Trustee.
12.1.0(36)	Computation of Ratio of Earnings to Fixed Charges.
21.1.0(31)	List of subsidiaries of GrafTech International Ltd.
23.1.0(36)	Consent of PricewaterhouseCoopers LLP.
24.1.0(36)	Powers of Attorney. (Included on Signatures pages).
31.1.0(36)	Certification pursuant to Rule 13a-14(a) under the Exchange Act by Joel L. Hawthorne, Chief Executive Officer and President.
31.2.0(36)	Certification pursuant to Rule 13a-14(a) under the Exchange Act by Erick R. Asmussen, Vice President and Chief Financial Officer.
32.1.0(36)	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Joel L. Hawthorne, Chief Executive Officer and President.
32.2.0(36)	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Erick R. Asmussen, Vice President and Chief Financial Officer.
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

(1) Incorporated by reference to the Registration Statement of GrafTech International Ltd. and GrafTech Global Enterprises Inc. on Form S-1 (Registration No. 33-84850).

(2) Incorporated by reference to the Quarterly Report of the registrant on Form l0-Q for the quarter ended March 31, 1996 (File No. 1-13888).

(3)

Incorporated by reference to the Annual Report of the registrant on Form 10-K for the year ended December 31, 1998 (File No. 1-13888).

(4) Incorporated by reference to the Quarterly Report of the registrant on Form 10-Q for the quarter ended June 30, 2003 (File No. 1-13888).

(5) Incorporated by reference to the Annual Report of the registrant on Form 10-K for the year ended December 31, 2001 (File No. 1-3888).
(6) Incorporated by reference to the Annual Report of the registrant on Form 10-K for the year ended December 31, 2004 (File No. 1-13888).
(7) Incorporated by reference to the Quarterly Report of the registrant on Form 10-Q for the quarter ended September 30, 2005 (File No. 1-13888).
(8) Incorporated by reference to the Annual Report of the registrant on Form 10-K for the year ended December 31, 2005 (File No. 1-13888).
(9) Incorporated by reference to the Registration Statement of the registrant on Form S-3 (Registration No. 333-108039).
(10) Incorporated by reference to the Quarterly Report of the registrant on Form 10-Q for the quarter ended March 31, 2006 (File No. 1-13888).
(11) Incorporated by reference to the Current Report of the registrant on Form 8-K filed on September 6, 2005 (File No. 1-13888).
(12) Incorporated by reference to the Quarterly Report of the registrant on Form 10-Q for the quarter ended June 30, 2001 (File No. 1-13888).
(13) Incorporated by reference to the Annual Report of the registrant on Form 10-K for the year ended December 31, 2006 (File No. 1-13888).
(14) Incorporated by reference to the Annual Report of the registrant on Form 10-K for the year ended December 31, 2007 (File No. 1-13888).
(15) Incorporated by reference to the Quarterly Report of the registrant on Form 10-Q for the quarter ended June 30, 2008 (File No. 1-13888).
(16) Incorporated by reference to the Annual Report of the registrant on Form 10-K for the year ended December 31, 2008 (File No. 1-13888).
(17) Incorporated by reference to the Quarterly Report of the registrant on Form 10-Q for the quarter ended March 31, 2009 (File No. 1-13888).
(18) Incorporated by reference to the Definitive Proxy Statement for the 2009 Annual Meeting of Stockholders of the registrant (File No. 1-13888).
(19) Incorporated by reference to the Annual Report of GrafTech International Ltd. on Form 10-K for the year ended December 31, 2009 (File No. 1-13888).
(20) Incorporated by reference to Amendment No. 1 to the Annual Report of GrafTech International Ltd. on Amendment No.1 to Form 10-K for the year ended December 31, 2009 (File No. 1-13888).
(21) Incorporated by reference to the Registration Statement of GrafTech Holdings Inc. on Form S-4 (Registration No. 167446) filed June 10, 2010.
(22) Incorporated by reference to Amendment No. 1 to the Registration Statement of GrafTech Holdings Inc. on Form S-4 (Registration No. 167446) filed August 19, 2010.
(23) Incorporated by reference to the Current Report of the registrant on Form 8-K filed on November 30, 2010 (File No. 1-13888).
(24) Incorporated by reference to the Annual Report of GrafTech International Ltd. on Form 10-K for the year ended December 31, 2010 (File No. 1-13888).
(25) Incorporated by reference to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2011 (File No. 1-13888).
(26) Incorporated by reference to the Annual Report of the registrant on Form 10-K for the year ended December 31, 2011 (File No. 1-13888).
(27) Incorporated by reference to the Quarterly Report of the registrant on Form 10-Q for the quarter ended March 31, 2012 (File No. 1-13888).
(28) Incorporated by reference to the Quarterly Report of the registrant on Form 10-Q for the quarter ended September 30, 2012 (File No. 1-13888).
(29)

Incorporated by reference to the Current Report of the registrant on Form 8-K filed on November 20, 2012 (File No. 1-13888).

(30) Incorporated by reference to the Annual Report of the registrant on Form 10-K for the year ended December 31, 2012 (File No. 1-13888).

(31) Incorporated by reference to the Annual Report of the registrant on Form 10-K for the year ended December 31, 2013 (File No. 1-13888).

(32) Incorporated by reference to the Current Report of the registrant on Form 8-K filed on November 25, 2014 (File No. 1-13888).

(33) Incorporated by reference to the Quarterly Report of the registrant on Form 10-Q for the quarter ended June 30, 2014 (File No. 1-13888).

Table of Contents

(34) Incorporated by reference to the Quarterly Report of the registrant on Form 10-Q for the quarter ended March 31, 2014 (File No. 1-13888).

(35) Incorporated by reference to the Quarterly Report of the registrant on Form 10-Q for the quarter ended September 30, 2014 (File No. 1-13888).

(36) Filed herewith.

Table of Contents

EXHIBIT INDEX

The exhibits listed in the following table have been filed with this Report.

Exhibit Number	Description of Exhibit
3.2.0	Amended and Restated Bylaws of GrafTech International Ltd. as of September 30, 2012
10.4.4	Form of Equity Incentive Plan Award Agreement (Standard Version Effective 2014)
10.10.4	Form of 2014-2016 Executive Selective Severance Program Notification Letter
12.1.0	Computation of Ratio of Earnings to Fixed Charges
23.1.0	Consent of PricewaterhouseCoopers LLP
24.1.0	Powers of Attorney (Included on Signatures pages)
31.1.0	Certification pursuant to Rule 13a-14(a) under the Exchange Act by Joel L. Hawthorne, President and Chief Executive Officer.
31.2.0	Certification pursuant to Rule 13a-14(a) under the Exchange Act by Erick R. Asmussen, Vice President and Chief Financial Officer .
32.1.0	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Joel L. Hawthorne, President and Chief Executive Officer.
32.2.0	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Erick R. Asmussen, Vice President and Chief Financial Officer .
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

Table of Contents

SIGNATURES

Pursuant to the requirements 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.

GRAFTECH INTERNATIONAL LTD.

March 2, 2015	By:	/s/ Joel L. Hawthorne
		Joel L. Hawthorne
	Title:	President and Chief Executive Officer
March 2, 2015	By:	/s/ Erick R. Asmussen
		Erick R. Asmussen
	Title:	Vice President and Chief Financial Officer

KNOW ALL MEN BY THESE PRESENTS, that each individual whose signature appears below hereby constitutes and appoints Joel L. Hawthorne and Erick R. Asmussen, and each of them individually, his or her true and lawful agent, proxy and attorney-in-fact, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to (i) act on, sign and file with the Securities and Exchange Commission any and all amendments to this Report together with all schedules and exhibits thereto, (ii) act on, sign and file with the Securities and Exchange Commission any and all exhibits to this Report and any and all exhibits and schedules thereto, (iii) act on, sign and file any and all such certificates, notices, communications, reports, instruments, agreements and other documents as may be necessary or appropriate in connection therewith and (iv) take any and all such actions which may be necessary or appropriate in connection therewith, granting unto such agents, proxies and attorneys-in-fact, and each of them individually, full power and authority to do and perform each and every act and thing necessary or appropriate to be done, as fully for all intents and purposes as he or she might or could do in person, and hereby approving, ratifying and confirming all that such agents, proxies and attorneys-in-fact, any of them or any of his, her or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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.

Signatures	Title	Date
/s/ Joel L. Hawthorne	President and Chief Executive Officer (Principal Executive Officer)	March 2, 2015
Joel L. Hawthorne		
/s/ Erick R. Asmussen	Vice President and Chief Financial Officer (Principal Financial Officer)	March 2, 2015
Erick R. Asmussen		
/s/ RANDY W. CARSON	Director	March 2, 2015
Randy W. Carson		
/s/ Thomas A. Danjczek	Director	March 2, 2015
Thomas A. Danjczek		
/s/ Karen Finerman	Director	March 2, 2015
Karen Finerman		
/s/ David R. Jardini	Director	March 2, 2015
David R. Jardini		
/s/ Nathan Milikowsky	Director	March 2, 2015
Nathan Milikowsky		
/s/ M. Catherine Morris	Director	March 2, 2015
M. Catherine Morris		

125