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

FORM 10-K

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

FOR THE FISCAL YEAR ENDED JUNE 30, 2016

Commission File Number 1-5318

KENNAMETAL INC.

(Exact name of registrant as specified in its charter)

Pennsylvania
(State or other jurisdiction of incorporation or organization)

25-0900168
(I.R.S. Employer Identification No.)

600 Grant Street
Suite 5100
Pittsburgh, Pennsylvania
(Address of Principal Executive Offices)

15219-2706
(Zip Code)

Registrant's telephone number, including area code: **(412) 248-8200**

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

Title of each class	Name of each exchange on which registered
Capital Stock, par value \$1.25 per share	New York Stock Exchange
Preferred Stock Purchase Rights	New York Stock Exchange

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

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

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

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

Indicate by check mark whether the registrant has submitted electronically 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 NO

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if smaller reporting company)

Smaller reporting company

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

As of December 31, 2015, the aggregate market value of the registrant's Capital Stock held by non-affiliates of the registrant, estimated solely for the purposes of this Form 10-K, was approximately \$1,033,300,000. For purposes of the foregoing calculation only, all directors and executive officers of the registrant and each person who may be deemed to own beneficially more than 5% of the registrant's Capital Stock have been deemed affiliates.

As of July 29, 2016, there were 79,700,981 of the Registrant's Capital Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the 2016 Annual Meeting of Shareholders are incorporated by reference into Part III.

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FORWARD-LOOKING INFORMATION

This Annual Report on Form 10-K contains “forward-looking” statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are statements that do not relate strictly to historical or current facts. For example, statements about Kennametal's outlook for earnings, sales volumes, and cash flow for its fiscal year 2017, its expectations regarding future growth and any statements regarding future operating or financial performance or events are forward-looking. We have also included forward looking statements in this Form 10-K concerning, among other things, our strategy, goals, plans and projections regarding our financial position, liquidity and capital resources, results of operations, market position, and product development. These statements are based on current estimates that involve inherent risks and uncertainties. Should one or more of these risks or uncertainties materialize, or should the assumptions underlying the forward-looking statements prove incorrect, our actual results could vary materially from our current expectations. There are a number of factors that could cause our actual results to differ from those indicated in the forward-looking statements. They include: economic recession; our ability to achieve all anticipated benefits of restructuring initiatives; our foreign operations and international markets, such as currency exchange rates, different regulatory environments, trade barriers, exchange controls, and social and political instability; changes in the regulatory environment in which we operate, including environmental, health and safety regulations; potential for future goodwill and other intangible asset impairment charges; our ability to protect and defend our intellectual property; continuity and security of information technology infrastructure; competition; our ability to retain our management and employees; demands on management resources; availability and cost of the raw materials we use to manufacture our products; product liability claims; integrating acquisitions and achieving the expected savings and synergies; global or regional catastrophic events; demand for and market acceptance of our products; business divestitures; energy costs; commodity prices; labor relations; and implementation of environmental remediation matters. We provide additional information about many of the specific risks we face in the “Risk Factors” Section of this Annual Report on Form 10-K. We can give no assurance that any goal or plan set forth in forward-looking statements can be achieved and readers are cautioned not to place undue reliance on such statements, which speak only as of the date made. We undertake no obligation to release publicly any revisions to forward-looking statements as a result of future events or developments.

PART I

ITEM 1 - BUSINESS

OVERVIEW Kennametal Inc. was incorporated in Pennsylvania in 1943. As a global industrial leader, Kennametal delivers productivity solutions to customers seeking peak performance in demanding environments. The Company provides innovative wear-resistant products, application engineering and services backed by advanced material science serving customers across diverse sectors of industrial production, transportation, earthworks, energy, construction, process industries and aerospace. Kennametal solutions are built around industry-essential technology platforms, including precision-engineered metalworking tools and components, surface technologies and earth cutting tools that are mission-critical to customer operations battling extreme conditions associated with wear fatigue, corrosion and high temperatures. The Company's reputation for material and industrial technology excellence, as well as expertise and innovation in the development of custom solutions and services, contributes to its leading position in its primary industrial and infrastructure markets. End users of the Company's products include manufacturers, metalworking suppliers, machinery operators and processors engaged in a diverse array of industries, including the manufacture of transportation vehicles and components; machine tool, light machinery and heavy machinery industries; airframe and aerospace components, defense; as well as producers and suppliers in equipment-intensive operations such as coal mining, road construction, quarrying, oil and gas exploration, refining, production and supply.

Our product offering includes a wide selection of standard and customized technologies for metalworking, such as sophisticated metal cutting tools, tooling systems and services, as well as advanced, high-performance materials, such as cemented tungsten carbide products, super alloys, coatings and investment castings to address customer demands. We offer these products through a variety of channels to meet customer-specified needs. We are a leading global supplier of tooling, engineered components and advanced materials consumed in production processes. We believe we are one of the largest global providers of consumable metal cutting tools and tooling supplies.

We specialize in developing and manufacturing metalworking tools and wear-resistant engineered components and coatings using a specialized type of powder metallurgy. Our metalworking tools are made of cemented tungsten carbides, ceramics, cermets and super-hard materials. We also manufacture and market a complete line of tool holders, tool-holding systems and rotary-cutting tools by machining and fabricating steel bars and other metal alloys. In addition, we produce specialized compacts and metallurgical powders, as well as products made from tungsten carbide or other hard materials that are used for custom-engineered and challenging applications, including mining and highway construction, among others. Further, we develop, manufacture and market engineered components and surface technology solutions with proprietary metal cladding capabilities.

Unless otherwise specified, any reference to a "year" refers to the fiscal year ending on June 30.

BUSINESS SEGMENT REVIEW The Company manages and reports its business in the following two segments: Industrial and Infrastructure. The Company's reportable operating segments have been determined in accordance with the Company's internal management structure, which is organized based on operating activities, the manner in which we organize segments for making operating decisions and assessing performance and the availability of separate financial results. Sales and operating income by segment are presented in Management's Discussion and Analysis of Financial Condition and Results of Operations set forth in Item 7 of this annual report on Form 10-K (MD&A). Additional segment data is provided in Note 20 of our consolidated financial statements set forth in Item 8 of this annual report on Form 10-K (Item 8) which is incorporated herein by reference.

During fiscal 2017, we began operating under a new structure. See additional discussion included in MD&A.

INDUSTRIAL In the Industrial segment, we focus on customers in the transportation, general engineering, aerospace and defense market sectors, as well as the machine tool industry. Our customers in these end markets use our products and services in the manufacture of engines, airframes, automobiles, trucks, ships and other various types of industrial equipment. The technology and customization requirements we provide vary by customer, application and industry. The value we deliver to our Industrial segment customers centers on knowledge of our customers' processes, application expertise and our diverse offering of products and services.

INFRASTRUCTURE In the Infrastructure segment, we focus on customers in the energy and earthworks market sectors who support primary industries such as oil and gas, power generation and chemicals; underground, surface and hard-rock mining; highway construction and road maintenance; and process industries such as food and beverage. Our success is determined by our associates gaining an in-depth understanding of our customers' engineering and development needs, to be able to offer complete system solutions and high-performance capabilities to optimize and add value to their operations.

INTERNATIONAL OPERATIONS During 2016, we generated 57 percent of our sales in markets outside of the United States of America (U.S.), with principal international operations in Western Europe, Asia and Canada. In addition, we operate additional manufacturing and distribution facilities in Israel, Latin America and South Africa, while serving customers through sales offices, agents and distributors in Eastern Europe and other parts of the world. While geographic diversification helps to minimize the sales and earnings impact of respective demand changes in any one particular region, our international operations are subject to normal risks of doing business globally, including fluctuations in currency exchange rates and changes in social, political and economic environments.

Our international assets and sales are presented in Note 20 of the Company's consolidated financial statements, set forth in Item 8 and are incorporated herein by reference. Further information about the effects and risks of currency exchange rates is presented in the Quantitative and Qualitative Disclosures About Market Risk section, as set forth in Item 7A of this annual report on Form 10-K (Item 7A).

GENERAL DEVELOPMENT OF BUSINESS In fiscal 2016 we continued to experience the effects of the further deterioration in customer demand in many of our end markets and certain geographies. Some areas of industrial production declined, in addition to further reductions in mining and oil and gas activity. In addition to restructuring actions, we took temporary cost reductions in various areas of the business.

In 2016, restructuring programs delivered incremental benefits of approximately \$44 million. We substantially completed Phase 1 of restructuring programs. Estimated ongoing annualized savings for this phase is \$40-\$45 million. The company has identified additional actions to adjust the company's cost structure. These initiatives are expected to improve the alignment of our cost structure with the current operating environment through rationalization of three additional manufacturing facilities and through headcount reductions. Restructuring programs not yet completed are currently anticipated to deliver annual ongoing pre-tax savings of \$75 million to \$90 million once fully implemented.

Additionally, we have embarked on a workforce reduction initiative which should reduce employment by 1,000 with expected costs of \$80-\$95 million, expected to result in an annual run rate savings of \$100-\$110 million by fiscal year-end 2017. Consistent with our fix-in-place manufacturing strategy, we believe that there are further cost improvements possible through investments in automation and efficiency programs which are expected to yield savings of several hundred million dollars over the next three years.

We are implementing a more robust sales and marketing strategy while continuing to work on the cost structure, serving our customers and preserving our competitive strengths. At the same time, we continue to focus on cash flow and liquidity. Our operating flexibility was enhanced with an amendment to our \$600 million five-year, multi-currency, revolving credit facility that extends to April 2021. Further discussion and analysis of the development in our business is set forth in MD&A.

ACQUISITIONS AND DIVESTITURES During the year ended June 30, 2016, we completed the sale of non-core businesses as defined in Note 4 of the Company's consolidated financial statements for an aggregate price of \$56.1 million, net of cash. The pre-tax net loss on divestiture during the year ended June 30, 2016 is \$131.5 million, of which \$127.9 million and \$3.6 million were recorded in the Infrastructure and Industrial segments, respectively.

We continue to evaluate new opportunities for the expansion of existing product lines into new market areas where appropriate. We also continue to evaluate opportunities for the introduction of new and/or complementary product offerings into new and/or existing market areas where appropriate. Rather than evaluating potential acquisitions in the near term, we expect to continue to grow our business and further enhance our market position through the investment opportunities that exist within our core businesses.

We are currently exploring strategic alternatives for a remaining non-core Infrastructure business. The estimated net book value of the business is approximately \$30 million as of June 30, 2016. As the strategic direction has not yet been determined for this business, the business is classified as held and used, and the Company cannot determine if additional impairment charges will be incurred.

MARKETING AND DISTRIBUTION To market our products, we maintain two premium brands: Kennametal® and WIDIA®. We sell and market our products through the following sales channels: (i) a direct sales force; (ii) a network of independent distributors and sales agents in North America, Europe, Latin America, Asia and other regions around the world; (iii) integrated supply channels; and (iv) via the internet. Application engineers and technicians are critical to the sales process and directly assist our customers with specified product design, selection, application and support.

RAW MATERIALS AND SUPPLIES Our major metallurgical raw materials consist of ore concentrates, compounds and secondary materials containing tungsten, tantalum, titanium, niobium and cobalt. Although an adequate supply of these raw materials currently exists, our major sources for raw materials are located abroad and prices fluctuate at times. We have entered into extended raw material supply agreements and will implement product price increases as deemed necessary to mitigate rising costs. For these reasons, we exercise great care in selecting, purchasing and managing availability of raw materials. We also purchase steel bars and forgings for making toolholders and other tool parts, as well as for producing rotary cutting tools and accessories. We obtain products purchased for use in manufacturing processes and for resale from thousands of suppliers located in the U.S. and abroad. Our internal capabilities help mitigate our reliance on third parties for raw materials as they provide access to additional sources of raw materials and offer tungsten carbide recycling capabilities.

RESEARCH AND DEVELOPMENT Our product development efforts focus on providing solutions to our customers' manufacturing challenges and productivity requirements. Our product development program provides discipline and focus for the product development process by establishing "gateways," or sequential tests, during the development process to remove inefficiencies and accelerate improvements. This program speeds and streamlines development into a series of actions and decision points, combining efforts and resources to produce new and enhanced products faster. This program is designed to assure a strong link between customer requirements and corporate strategy, and to enable us to gain full benefit from our investment in new product development.

We hold a number of patents and trademarks which, in the aggregate, are material to the operation of our businesses.

Research and development expenses included in operating expense totaled \$39.4 million, \$45.1 million and \$44.0 million in 2016, 2015 and 2014, respectively.

SEASONALITY Our business is affected by seasonal variations to varying degrees by traditional summer vacation shutdowns of customers' plants and holiday shutdowns that affect our sales levels during the first and second quarters of our fiscal year.

BACKLOG Our backlog of orders generally is not significant to our operations.

COMPETITION As one of the world's leading producers of engineered cemented carbide products and specialty wear-resistant components and coating solutions, we maintain a leading competitive position in major markets worldwide. We continually strengthen our competitive position by developing new and innovative metalworking and earth cutting products and services, innovative surface and wear solutions and innovative products for mining, construction and road milling applications to name a few. We actively compete in the sale of all our products with several large global competitors and with many smaller niche businesses offering various capabilities to customers around the world. While several of our competitors are divisions of larger corporations, our industry remains largely fragmented, containing several hundred fabricators, toolmakers and niche specialty coating businesses. Many of our competitors operate relatively small facilities, producing a limited selection of tools while buying cemented tungsten carbide components from original producers of cemented tungsten carbide products, including Kennametal. We also supply coating solutions and other engineered wear-resistant products to both larger corporations and smaller niche businesses. Given the fragmentation, opportunities for consolidation exist from both U.S.-based and internationally-based firms, as well as among thousands of industrial supply distributors.

The principal competitive differentiators in our businesses include customer focused technical application and support, custom and standard product innovation, product performance, quality and availability, as well as service, pricing and productivity delivered ascribed to our brands. We derive competitive advantage from our premium brand positions, global presence, application expertise and ability to address unique customer needs with new and improved tools, innovative surface and wear solutions, highly engineered components, consistent quality, traditional and digital customer service and technical assistance capabilities, state-of-the-art manufacturing and multiple sales channels. With these strengths, we are able to sell products based on the value-added productivity we deliver to our customers, rather than competing on price.

REGULATION From time to time, we are a party to legal claims and proceedings that arise in the ordinary course of business, which may relate to our operations or assets, including real, tangible, or intellectual property. While we currently believe that the amount of ultimate liability, if any, with respect to these actions will not materially affect our financial position, results of operations or liquidity, the ultimate outcome of any litigation is uncertain. Were an unfavorable outcome to occur or if protracted litigation were to ensue, the impact could be material to us.

Compliance with government laws and regulations pertaining to the discharge of materials or pollutants into the environment or otherwise relating to the protection of the environment did not have a material effect on our capital expenditures or competitive position for the years covered by this report, nor is such compliance expected to have a material effect in the future.

Among other environmental laws, we are subject to the Comprehensive Environmental Response Compensation and Liability Act of 1980 (Superfund), under which we have been designated by the United States Environmental Protection Agency (USEPA) as a potentially responsible party (PRP) with respect to environmental remedial costs at certain Superfund sites. We have evaluated our claims and liabilities associated with these Superfund sites based upon best currently available information. We believe our environmental accruals are adequate to cover our portion of the environmental remedial costs at the Superfund sites where we have been designated a PRP, to the extent these expenses are probable and reasonably estimable.

Reserves for other potential environmental issues at June 30, 2016 and 2015 were \$12.5 million and \$12.6 million, respectively. The reserves that we have established for environmental liabilities represent our best current estimate of the costs of addressing all identified environmental situations, based on our review of currently available evidence, and take into consideration our prior experience in remediation and that of other companies, as well as public information released by the USEPA, other governmental agencies, and by the PRP groups in which we are participating. Although the reserves currently appear to be sufficient to cover these environmental liabilities, there are uncertainties associated with environmental liabilities, and we can give no assurance that our estimate of any environmental liability will not increase or decrease in the future. The reserved and unreserved liabilities for all environmental concerns could change substantially due to factors such as the nature and extent of contamination, changes in remedial requirements, technological changes, discovery of new information, the financial strength of other PRPs, the identification of new PRPs and the involvement of and direction taken by the U.S. government on these matters.

We maintain a Corporate Environmental, Health and Safety (EHS) Department to monitor compliance with environmental regulations and to oversee remediation activities. In addition, we have designated EHS coordinators who are responsible for each of our manufacturing facilities. Our financial management team periodically meets with members of the Corporate EHS Department and the Corporate Legal Department to review and evaluate the status of environmental projects and contingencies. On a quarterly basis, we review financial provisions and reserves for environmental contingencies and adjust these reserves when appropriate.

EMPLOYEES We employed approximately 11,200 people at June 30, 2016, of which approximately 4,200 were located in the U.S. and 7,000 in other parts of the world, principally Europe, Asia Pacific and India. At June 30, 2016, approximately 3,900 of the above employees were represented by labor unions. We consider our labor relations to be generally good.

AVAILABLE INFORMATION Our Internet address is www.kennametal.com. On the SEC Filings page of our Web Site, which is accessible under the "About Us" tab, under Investor Relations, we post the following filings as soon as reasonably practicable after they are electronically filed with or furnished to the Securities and Exchange Commission (SEC): our annual report on Form 10-K, our annual proxy statement, our annual conflict minerals disclosure and report on Form SD, our annual reports on Form 11-K, our quarterly reports on Form 10-Q, our current reports on Form 8-K and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (Exchange Act). Our SEC Filings page of our Web Site also includes Forms 3, 4 and 5 filed pursuant to Section 16(a) of the Exchange Act. All filings posted on our SEC Filings page of our Web Site are available to be viewed on the Web page free of charge. On the Corporate Governance page of our Web Site, which is under the "About Us" tab, under Investor Relations, we post the following charters and guidelines: Audit Committee Charter, Compensation Committee Charter, Nominating/Corporate Governance Committee Charter, Kennametal Inc. Corporate Governance Guidelines and Kennametal Inc. Stock Ownership Guidelines. On the Ethics and Compliance page of our Web Site, which is under the "About Us" tab, under Company Profile, we post our Code of Conduct and our Conflict Minerals Statement. All charters and guidelines posted on our Web pages are available to be viewed on our Web page free of charge. Information contained on our Web site is not part of this annual report on Form 10-K or our other filings with the SEC. Copies of this annual report on Form 10-K and those items disclosed on the Corporate Governance and Ethics and Compliance pages of our Web Site are available without charge upon written request to: Investor Relations, Kelly Boyer, Kennametal Inc., 600 Grant Street, Suite 5100, Pittsburgh, Pennsylvania 15219-2706.

ITEM 1A – RISK FACTORS

This section describes material risks to our business that are currently known to us. Our business, financial condition or results of operations may be materially affected by a number of factors. Our management regularly monitors the risks inherent in our business, with input and assistance from our Enterprise Risk Management department. In addition to real time monitoring, we periodically conduct a formal enterprise-wide risk assessment to identify factors and circumstances that might present significant risk to the Company. Many of these factors are discussed throughout this report. The risks below, however, are not exhaustive. We operate in a rapidly changing environment. Other risks that we currently believe to be immaterial could become material in the future. We also are subject to legal and regulatory change. New factors can emerge, and it is not possible to predict the outcome of all other factors on our business, financial condition or results of operations. The following discussion details the material factors and uncertainties that we believe could cause Kennametal's actual results to differ materially from those projected in any forward-looking statements:

Downturns in the business cycle could adversely affect our sales and profitability. Our business has historically been cyclical and subject to significant impact from economic downturns. Global economic downturn coupled with global financial and credit market disruptions have had a negative impact on our sales and profitability historically. These events could contribute to weak end markets, a sharp drop in demand and higher costs of borrowing and/or diminished credit availability. Although we believe that the long-term prospects for our business remain positive, we are unable to predict the future course of industry variables or the strength, pace or sustainability of economic recovery and the effects of government intervention.

There can be no assurance that our restructuring efforts will have the intended effects. We are in the process of implementing restructuring and other actions to improve our manufacturing costs and operating expenses. However, there is no assurance that these actions, or any others that we have taken or may take, will be sufficient to counter any future economic or industry disruptions. We cannot provide assurance that we will not incur additional restructuring charges or impairment charges, or that we will achieve all of the anticipated benefits from restructuring actions we have taken. If we are unable to effectively restructure our operations in the light of evolving market conditions, it could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our international operations pose certain risks that may adversely impact sales and earnings. We have manufacturing operations and assets located outside of the U.S., including but not limited to those in Western Europe, Brazil, Canada, China, India, Israel and South Africa. We also sell our products to customers and distributors located outside of the U.S. During the year ended June 30, 2016, 57 percent of our consolidated sales were derived from non-U.S. markets. These international operations are subject to a number of special risks, in addition to the risks of our domestic business, including currency exchange rate fluctuations, differing protections of intellectual property, trade barriers, exchange controls, regional economic uncertainty, differing (and possibly more stringent) labor regulations, labor unrest, risk of governmental expropriation, domestic and foreign customs and tariffs, current and changing regulatory environments (including, but not limited to, the risks associated with the importation and exportation of products and raw materials), risk of failure of our foreign employees to comply with both U.S. and foreign laws, including antitrust laws, trade regulations and the Foreign Corrupt Practices Act, difficulty in obtaining distribution support, difficulty in staffing and managing widespread operations, differences in the availability and terms of financing, political instability and unrest and risks of increases in taxes. Also, in some foreign jurisdictions, we may be subject to laws limiting the right and ability of entities organized or operating therein to pay dividends or remit earnings to affiliated companies unless specified conditions are met. To the extent we are unable to effectively manage our international operations and these risks, our international sales may be adversely affected, we may be subject to additional and unanticipated costs, and we may be subject to litigation or regulatory action. As a consequence, our business, financial condition and results of operations could be seriously harmed.

Changes in the regulatory environment, including environmental, health and safety regulations, could subject us to increased compliance and manufacturing costs, which could have a material adverse effect on our business.

Health and Safety Regulations. Certain of our products contain hard metals, including tungsten and cobalt. Hard metal dust is being studied for potential adverse health effects by organizations in several regions throughout the world, including the U.S., Europe and Japan. Future studies on the health effects of hard metals may result in our products being classified as hazardous to human health, which could lead to new regulations in countries in which we operate that may restrict or prohibit the use of, and/or exposure to, hard metal dust. New regulation of hard metals could require us to change our operations, and these changes could affect the quality of our products and materially increase our costs.

Environmental Regulations. We are subject to various environmental laws, and any violation of, or our liabilities under, these laws could adversely affect us. Our operations necessitate the use and handling of hazardous materials and, as a result, we are subject to various federal, state, local and foreign laws, regulations and ordinances relating to the protection of the environment, including those governing discharges to air and water, handling and disposal practices for solid and hazardous wastes, the cleanup of contaminated sites and the maintenance of a safe workplace. These laws impose penalties, fines and other sanctions for noncompliance and liability for response costs, property damages and personal injury resulting from past and current spills, disposals or other releases of, or exposure to, hazardous materials. We could incur substantial costs as a result of noncompliance with or liability for cleanup or other costs or damages under these laws. We may be subject to more stringent environmental laws in the future. If more stringent environmental laws are enacted in the future, these laws could have a material adverse effect on our business, financial condition and results of operations.

Regulations affecting the mining and drilling industries or utilities industry. Some of our principal customers are mining and drilling and utility companies. Many of these customers supply coal, oil, gas or other fuels as a source for the production of utilities in the U.S. and other industrialized regions. The operations of these mining and drilling companies are geographically diverse and are subject to or affected by a wide array of regulations in the jurisdictions where they operate, such as applicable environmental laws and regulations governing the operations of utilities. As a result of changes in regulations and laws relating to such industries, our customers' operations could be disrupted or curtailed by governmental authorities. The high cost of compliance with mining, drilling and environmental regulations may also induce customers to discontinue or limit their operations, and may discourage companies from developing new opportunities. As a result of these factors, demand for our mining- and drilling-related products could be substantially affected by regulations adversely impacting the mining and drilling industries or altering the consumption patterns of utilities.

Impairment of goodwill and other intangible assets with indefinite lives could result in a negative impact on our financial condition and results of operations. At June 30, 2016, goodwill and other indefinite-lived intangible assets totaled \$315.3 million or 13% of our total assets. Goodwill results from acquisitions, representing the excess of cost over the fair value of the net tangible and other identifiable intangible assets we have acquired. At a minimum, we assess annually whether there has been impairment in the value of our intangible assets. If future operating performance at one or more of our reporting units were to fall significantly below current levels, we could record, under current applicable accounting rules, a non-cash impairment charge for goodwill or other intangible asset impairment. Any determination requiring the impairment of a significant portion of goodwill or other intangible assets would negatively affect our financial condition and results of operations.

Our continued success depends on our ability to protect and defend our intellectual property. Our future success depends in part upon our ability to protect and defend our intellectual property. We rely principally on nondisclosure agreements and other contractual arrangements and trade secret laws and, to a lesser extent, trademark and patent laws, to protect our intellectual property. However, these measures may be inadequate to protect our intellectual property from infringement by others or prevent misappropriation of our proprietary rights. In addition, the laws of some foreign countries do not protect proprietary rights to the same extent as do U.S. laws. If one of our patents is infringed upon by a third party, we may need to devote significant time and financial resources to attempt to halt the infringement. We may not be successful in defending the patents involved in such a dispute. Similarly, while we do not knowingly infringe on patents, copyrights or other intellectual property rights owned by other parties, we may be required to spend a significant amount of time and financial resources to resolve any infringement claims against us. We may not be successful in defending our position or negotiating an alternative remedy. Our inability to protect our proprietary information and enforce or defend our intellectual property rights in proceedings initiated by or against us could have a material adverse effect on our business, financial condition and results of operations.

Failure of, or a breach in security of, our information technology systems could adversely affect our business. We rely on information technology infrastructure to achieve our business objectives. Any disruption of this infrastructure could negatively impact our ability to record or process orders, manufacture and ship in a timely manner, or otherwise carry on business in the normal course. Any such events could cause us to lose customers or revenue and could require us to incur significant expense to remediate.

A security breach of our information technology could also interrupt or damage our operations or harm our reputation. In addition, we could be subject to liability if confidential information relating to customers, suppliers, employees or other parties is misappropriated from our computer system. Despite the implementation of security measures, these systems may be vulnerable to physical break-ins, computer viruses, programming errors or similar disruptive problems.

We operate in a highly competitive environment. Our domestic and foreign operations are subject to significant competitive pressures. We compete directly and indirectly with other manufacturers and suppliers of metalworking tools, engineered components and advanced materials. Some of our competitors are larger than we are and may have greater access to financial resources or be less leveraged than us. In addition, the industry in which our products are used is a large, fragmented industry that is highly competitive.

If we are unable to retain our qualified management and employees, our business may be negatively affected. Our ability to provide high quality products and services depends in part on our ability to retain our skilled personnel in the areas of management, product engineering, servicing and sales. Competition for such personnel is intense, and our competitors can be expected to attempt to hire our management and skilled employees from time to time. In addition, our restructuring activities and strategies for growth have placed, and are expected to continue to place, increased demands on our management's skills and resources. Additionally, we announced that we have embarked on a workforce reduction initiative which should reduce employment by 1,000. If we are unable to retain our management team and professional personnel, our customer relationships and level of technical expertise could be negatively affected, which may materially and adversely affect our business.

Any interruption of our workforce, including interruptions due to unionization efforts, changes in labor relations or shortages of appropriately skilled individuals could impact our business.

Our future operating results may be affected by fluctuations in the prices and availability of raw materials. The raw materials we use for our products include ore concentrates, compounds and secondary materials containing tungsten, tantalum, titanium, niobium and cobalt. A significant portion of our raw materials is supplied by sources outside of the U.S. The raw materials industry as a whole is highly cyclical and at times pricing and supply can be volatile due to a number of factors beyond our control, including natural disasters, general economic and political conditions, labor costs, competition, import duties, tariffs and currency exchange rate fluctuations. This volatility can significantly affect our raw material costs. In an environment of increasing raw material prices, competitive conditions can affect how much of the price increases in raw materials that we can recover in the form of higher sales prices for our products. To the extent we are unable to pass on any raw material price increases to our customers, our profitability could be adversely affected. Furthermore, restrictions in the supply of tungsten, cobalt and other raw materials could adversely affect our operating results. If the prices for our raw materials increase or we are unable to secure adequate supplies of raw materials on favorable terms, our profitability could be impaired. If the prices for our raw materials decrease, we could face product pricing challenges.

Product liability claims could have a material adverse effect on our business. The sale of metalworking, mining, highway construction and other tools and related products as well as engineered components and advanced materials entails an inherent risk of product liability claims. We cannot give assurance that the coverage limits of our insurance policies will be adequate or that our policies will cover any particular loss. Insurance can be expensive, and we may not always be able to purchase insurance on commercially acceptable terms, if at all. Claims brought against us that are not covered by insurance or that result in recoveries in excess of our insurance coverage could have a material adverse effect on our business, financial condition and results of operations.

We may not be able to complete, manage or integrate acquisitions successfully. In the past, we have acquired companies and we may continue to evaluate acquisition opportunities that have the potential to support and strengthen our business. We can give no assurances, however, that any acquisition opportunities will arise or if they do, that they will be consummated, or that additional financing, if needed, will be available on satisfactory terms. In addition, acquisitions involve inherent risks that the businesses acquired will not perform in accordance with our expectations. We may not be able to achieve the synergies and other benefits we expect from the integration of acquisitions as successfully or rapidly as projected, if at all. Our failure to consummate an acquisition or effectively integrate newly acquired operations could prevent us from realizing our expected strategic growth and rate of return on an acquired business and could have a material and adverse effect on our results of operations and financial condition.

Natural disasters or other global or regional catastrophic events could disrupt our operations and adversely affect results. Despite our concerted effort to minimize risk to our production capabilities and corporate information systems and to reduce the effect of unforeseen interruptions to us through business continuity planning, we still may be exposed to interruptions due to catastrophe, natural disaster, pandemic, terrorism or acts of war, which are beyond our control. Disruptions to our facilities or systems, or to those of our key suppliers, could also interrupt operational processes and adversely impact our ability to manufacture our products and provide services and support to our customers. As a result, our business, our results of operations, financial position, cash flows and stock price could be adversely affected.

ITEM 1B – UNRESOLVED STAFF COMMENTS

None.

ITEM 2 – PROPERTIES

Our principal executive offices are located at 600 Grant Street, Suite 5100, Pittsburgh, Pennsylvania, 15219. Our corporate center and Technology Center are located at 1600 Technology Way, P.O. Box 231, Latrobe, Pennsylvania, 15650. A summary of our principal manufacturing facilities and other materially important properties is as follows:

Location	Owned/Leased	Principal Products	Segment
United States:			
Gurley, Alabama	Owned	Metallurgical Powders	Infrastructure
Huntsville, Alabama	Owned	Metallurgical Powders	Infrastructure
Madison, Alabama	Owned	Tungsten Heavy Alloy	Infrastructure
Rogers, Arkansas	Owned/Leased	Carbide Products and Pelletizing Die Plates	Infrastructure
Rockford, Illinois	Owned	Indexable Tooling	Industrial
Goshen, Indiana	Leased	Powders; Welding Rods, Wires and Machines	Infrastructure
New Albany, Indiana	Leased	High Wear Coating for Steel Parts	Infrastructure
Greenfield, Massachusetts	Owned	High-Speed Steel Taps	Industrial
Traverse City, Michigan	Owned	Wear Parts	Infrastructure
Fallon, Nevada	Owned	Metallurgical Powders	Infrastructure
Asheboro, North Carolina	Owned	Carbide Round Tools	Industrial
Henderson, North Carolina	Owned	Metallurgical Powders	Infrastructure
Roanoke Rapids, North Carolina	Owned	Metalworking Inserts	Industrial
Cleveland, Ohio	Leased	Distribution	Industrial
Orwell, Ohio	Owned	Metalworking Inserts	Industrial
Solon, Ohio	Owned	Metalworking Toolholders	Industrial
Whitehouse, Ohio	Owned	Metalworking Inserts and Round Tools	Industrial
Bedford, Pennsylvania	Owned/Leased	Mining and Construction Tools, Wear Parts and Distribution	Infrastructure
Irwin, Pennsylvania	Owned	Carbide Wear Parts	Infrastructure
New Castle, Pennsylvania	Owned/Leased	Specialty Metals and Alloys	Infrastructure
Johnson City, Tennessee	Owned	Metalworking Inserts	Industrial
La Vergne, Tennessee	Owned	Metalworking Inserts	Industrial
Houston, Texas	Owned	Downhole Drilling Carbide Components	Infrastructure
Chilhowie, Virginia	Owned	Mining and Construction Tools and Wear Parts	Infrastructure
New Market, Virginia	Owned	Metalworking Toolholders	Industrial
International:			
La Paz, Bolivia	Owned	Tungsten Concentrate	Infrastructure
Indaiatuba, Brazil	Leased	Metalworking Carbide Drills and Toolholders	Industrial
Belleville, Canada	Owned	Casting Components, Coatings and Powder Metallurgy Components	Infrastructure
Victoria, Canada	Owned	Wear Parts	Infrastructure
Fengpu, China	Owned	Intermetallic Composite Ceramic Powders and Parts	Infrastructure
Shanghai, China	Owned	Powders, Welding Rods and Wires and Casting Components	Infrastructure
Shanghai, China	Owned	Distribution	Industrial
Tianjin, China	Owned	Metalworking Inserts and Carbide Round Tools	Industrial
Xuzhou, China	Leased	Mining Tools	Infrastructure
Ebermannstadt, Germany	Owned	Metalworking Inserts	Industrial
Essen, Germany	Owned	Metalworking Inserts, Metallurgical Powders and Wear Parts	Industrial
Königsee, Germany	Leased	Metalworking Carbide Drills	Industrial
Lichtenau, Germany	Owned	Metalworking Toolholders	Industrial
Mistelgau, Germany	Owned	Metallurgical Powders, Metalworking Inserts and Wear Parts	Infrastructure
Nabburg, Germany	Owned	Metalworking Toolholders and Metalworking Round Tools, Drills and Mills	Industrial
Neunkirchen, Germany	Owned	Distribution	Industrial

Location	Owned/Leased	Principal Products	Segment
Schongau, Germany	Owned	Ceramic Vaporizer Boats	Infrastructure
Vohenstraus, Germany	Owned	Metalworking Carbide Drills	Industrial
Bangalore, India	Owned	Metalworking Inserts and Toolholders and Wear Parts	Industrial
Shlomi, Israel	Owned	High-Speed Steel and Carbide Round Tools	Industrial
San Giuliano Milanese, Italy	Leased	Indexable Inserts	Industrial
Zory, Poland	Leased	Mining and Construction Conicals	Infrastructure
Boksburg, South Africa	Leased	Mining and Construction Conicals	Infrastructure
Barcelona, Spain	Leased	Metalworking Cutting Tools	Industrial
Kingswinford, United Kingdom	Leased	Distribution	Industrial
Newport, United Kingdom	Owned	Intermetallic Composite Powders	Infrastructure

We also have a network of warehouses and customer service centers located throughout North America, Europe, India, Asia Pacific and Latin America, a significant portion of which are leased. The majority of our research and development efforts are conducted in a corporate technology center located in Latrobe, Pennsylvania, U.S., as well as in our facilities in Rogers, Arkansas, U.S.; Fürth, Germany and Bangalore, India.

We use all of our significant properties in the businesses of powder metallurgy, tools, tooling systems, engineered components and advanced materials. Our production capacity is adequate for our present needs. We believe that our properties have been adequately maintained, are generally in good condition and are suitable for our business as presently conducted.

ITEM 3 - LEGAL PROCEEDINGS

The information set forth in Part I, Item 1, of this annual report on Form 10-K under the caption “Regulation” is incorporated into this Item 3. From time to time, we are party to legal claims and proceedings that arise in the ordinary course of business, which may relate to our operations or assets, including real, tangible or intellectual property. Although certain of these actions are currently pending, we do not believe that any individual proceeding is material or that our pending legal proceedings in the aggregate are material to Kennametal.

ITEM 4 - MINE SAFETY DISCLOSURES

Not applicable.

EXECUTIVE OFFICERS OF THE REGISTRANT

Incorporated by reference into this Part I is the information set forth in Part III, Item 10 under the caption “Executive Officers of the Registrant” of this annual report on Form 10-K.

PART II

ITEM 5 - MARKET FOR THE REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our capital stock is traded on the New York Stock Exchange (symbol KMT). The number of Shareholders of record as of July 29, 2016 was 1,698. Stock price ranges and dividends declared and paid were as follows:

Quarter ended	September 30	December 31	March 31	June 30
Fiscal 2016				
High	\$ 34.61	\$ 29.45	\$ 23.61	\$ 26.24
Low	23.77	17.71	15.11	20.98
Dividends	0.20	0.20	0.20	0.20
Fiscal 2015				
High	\$ 46.76	\$ 42.18	\$ 36.25	\$ 39.91
Low	40.00	33.23	27.63	33.09
Dividends	0.18	0.18	0.18	0.18

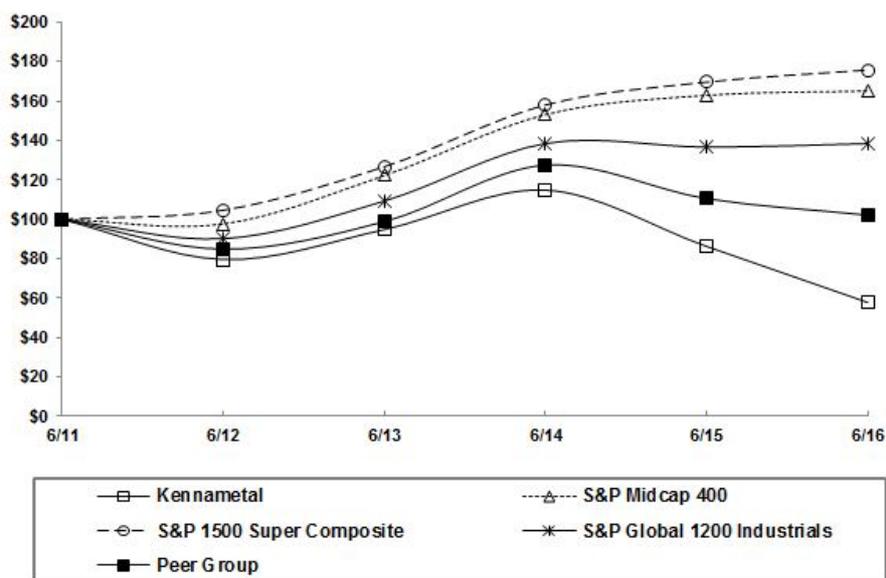
The information incorporated by reference in Part III, Item 12 of this annual report on Form 10-K from our 2016 Proxy Statement under the heading “Equity Compensation Plans – Equity Compensation Plan Information” is hereby incorporated by reference into this Item 5.

PERFORMANCE GRAPH

The following graph compares cumulative total shareholder return on our capital stock with the cumulative total shareholder return on the common stock of the companies in the Standard & Poor’s Mid-Cap 400 Market Index (S&P Midcap 400), the Standard & Poor’s Composite 1500 Market Index (S&P 1500 Composite), the Standard & Poor’s Global 1200 Industrials Index (S&P Global 1200 Industrials) and the peer groups of companies determined by us for the period from July 1, 2011 to June 30, 2016.

The Peer Group consists of the following companies: Actuant Corporation; Allegheny Technologies Incorporated; Ametek, Inc.; Carpenter Technology Corporation; Crane Co.; Donaldson Company, Inc.; Flowserve Corporation; Greif; Harsco Corporation; IDEX Corporation; Joy Global Inc.; Lincoln Electric Holdings, Inc.; Pall Corporation; Parker Hannifin Corporation; Sandvik AB, Corp.; Teleflex Incorporated; The Timken Company; and Woodward, Inc.

Comparison of 5 - Year Cumulative Total Return



Assumes \$100 Invested on July 1, 2011 and All Dividends Reinvested

	2011	2012	2013	2014	2015	2016
Kennametal	\$ 100.00	\$ 79.61	\$ 94.81	\$ 114.80	\$ 86.23	\$ 57.78
Peer Group Index	100.00	84.92	98.84	127.49	110.49	102.11
S&P Midcap 400	100.00	97.67	122.27	153.12	162.92	165.09
S&P 1500 Super Composite	100.00	104.63	126.73	158.04	169.60	175.77
S&P Global 1200 Industrials	100.00	90.16	109.30	138.46	136.64	138.43

ISSUER PURCHASES OF EQUITY SECURITIES

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 ⁽²⁾
April 1 through April 30, 2016	1,465	\$ 22.82	—	10,100,100
May 1 through May 31, 2016	2,873	24.56	—	10,100,100
June 1 through June 30, 2016	81	24.28	—	10,100,100
Total	4,419	\$ 23.98	—	

⁽¹⁾ During the fourth quarter of 2016, 2,593 shares were purchased on the open market on behalf of Kennametal to fund the Company's dividend reinvestment program. Also, during the current period employees delivered 1,826 shares of restricted stock to Kennametal, upon vesting, to satisfy tax withholding requirements.

⁽²⁾ On July 25, 2013, the Company publicly announced an open-ended, amended repurchase program for up to 17 million shares of its outstanding capital stock.

UNREGISTERED SALES OF EQUITY SECURITIES

None.

ITEM 6 - SELECTED FINANCIAL DATA

	2016	2015	2014	2013	2012
OPERATING RESULTS (in thousands)					
Sales	\$ 2,098,436	\$ 2,647,195	\$ 2,837,190	\$ 2,589,373	\$ 2,736,246
Cost of goods sold	1,482,369	1,841,202	1,940,187	1,744,369	1,741,996
Operating expense	494,975	554,895	589,768	527,850	561,490
Restructuring and asset impairment charges	(1) 143,810	582,235	17,608	—	—
Loss on divestiture	(2) 131,463	—	—	—	—
Interest expense	27,752	31,466	32,451	27,472	27,215
Provision (benefit) for income taxes	25,313	(16,654)	66,611	59,693	79,136
(Loss) income from continuing operations attributable to Kennametal	(225,968)	(373,896)	158,366	203,265	307,230
Net (loss) income attributable to Kennametal	(225,968)	(373,896)	158,366	203,265	307,230
FINANCIAL POSITION (in thousands)					
Working capital	\$ 648,066	\$ 775,802	\$ 962,440	\$ 1,031,880	\$ 704,340
Total assets	2,368,793	2,849,529	3,868,086	3,301,039	3,034,188
Long-term debt, including capital leases, excluding current maturities	699,558	735,885	981,666	703,626	490,608
Total debt, including capital leases and notes payable	701,453	751,587	1,061,783	747,945	565,745
Total Kennametal shareholders' equity	964,323	1,345,807	1,929,256	1,781,826	1,643,850
PER SHARE DATA ATTRIBUTABLE TO KENNAMETAL SHAREHOLDERS					
Basic (loss) earnings from continuing operations	(3) \$ (2.83)	\$ (4.71)	\$ 2.01	\$ 2.56	\$ 3.83
Basic (loss) earnings	(3) (2.83)	(4.71)	2.01	2.56	3.83
Diluted (loss) earnings from continuing operations	(3) (2.83)	(4.71)	1.99	2.52	3.77
Diluted (loss) earnings	(3) (2.83)	(4.71)	1.99	2.52	3.77
Dividends	0.80	0.72	0.72	0.64	0.54
Book value (at June 30)	12.10	16.96	24.52	22.89	20.53
Market Price (at June 30)	22.11	34.12	46.28	38.83	33.15
OTHER DATA (in thousands, except number of employees)					
Capital expenditures	\$ 110,697	\$ 100,939	\$ 117,376	\$ 82,835	\$ 103,036
Number of employees (at June 30)	11,178	12,718	13,521	12,648	12,932
Basic weighted average shares outstanding	79,835	79,342	78,678	79,463	80,216
Diluted weighted average shares outstanding	79,835	79,342	79,667	80,612	81,439
KEY RATIOS					
Sales (decline) growth	(4) (20.7)%	(6.7)%	9.6%	(5.4)%	13.8%
Gross profit margin	29.4	30.4	31.6	32.6	36.3
Operating margin	(5) (8.3)	(13.5)	9.3	11.4	15.2

(1) In 2016, the charges related to goodwill and other intangible asset impairment charges of \$108.5 million, restructuring charges of \$30.0 million and fixed asset disposal charges of \$5.4 million. In 2015, the charges related to goodwill and other intangible asset impairment charges of \$541.7 million and restructuring charges of \$40.5 million. In 2014, the charges related to restructuring activity.

(2) In 2016, the charge related to the loss on divestiture of non-core businesses.

(3) In 2016, basic and diluted loss per share included U.S. deferred tax valuation allowance of \$1.02 per share, divestiture and related charges of \$1.39 per share, goodwill and other intangible asset impairment charges of \$0.96 per share and restructuring and related charges of \$0.50 per share. In 2015, basic and diluted loss per share included goodwill and other intangible asset impairment charges of \$6.13 per share and restructuring and related charges of \$0.56 per share.

(4) In 2016, divestiture impact of sales decline was negative 5 percent.

(5) In 2016, operating margin included divestiture and related charges of \$131.5 million, goodwill and other intangible asset impairment charges of \$108.5 million and restructuring and related charges of \$53.5 million. In 2015, operating margin included goodwill and other intangible asset impairment charges of \$541.7 million and restructuring and related charges of \$58.1 million.

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

The following discussion should be read in connection with the consolidated financial statements of Kennametal Inc. and the related financial statement notes. Unless otherwise specified, any reference to a "year" is to a fiscal year ended June 30. Additionally, when used in this annual report on Form 10-K, unless the context requires otherwise, the terms "we," "our" and "us" refer to Kennametal Inc. and its subsidiaries.

OVERVIEW As a global industrial leader, Kennametal Inc. delivers productivity solutions to customers seeking peak performance in demanding environments. We provide innovative wear-resistant products, application engineering and services backed by advanced material science serving customers across diverse sectors of industrial production, transportation, earthworks, energy, construction, process industries and aerospace. Our solutions are built around industry-essential technology platforms, including precision-engineered metalworking tools and components, surface technologies and earth cutting tools that are mission-critical to customer operations battling extreme conditions associated with wear fatigue, corrosion and high temperatures. The Company's reputation for material and industrial technology excellence, as well as expertise and innovation in development of custom solutions and services, contributes to our leading position in our primary industrial and infrastructure markets. End users of our products include manufacturers, metalworking suppliers, machinery operators and processors engaged in a diverse array of industries, including the manufacture of transportation vehicles and components; machine tool, light machinery and heavy machinery industries; airframe and aerospace components; defense; as well as producers and suppliers in equipment-intensive operations such as coal mining, road construction, quarrying, oil and gas exploration, refining, production and supply. We believe we are one of the largest global providers of consumable metal cutting tools and tooling supplies.

For 2016, sales were \$2,098.4 million, a decrease of 21 percent compared to prior year sales of \$2,647.2 million, driven by organic sales decline, impact of divestiture and unfavorable currency exchange. Operating loss was \$174.9 million compared to operating loss of \$357.8 million in the prior year. The decrease in operating loss was driven primarily by higher non-cash goodwill and other intangible asset impairment charges in the prior year. Other drivers include current year lower material costs, incremental restructuring benefits, manufacturing productivity improvements and lower restructuring and related charges, offset partially by the current year loss on divestiture, organic sales decline, unfavorable product mix, lower fixed cost absorption and unfavorable currency exchange. The Company reported loss per diluted share of \$2.83 in 2016.

Our operating flexibility was enhanced with an amendment to our revolving credit facility that extends maturity from April 2018 to April 2021. Similar to the prior agreement, the amendment permits revolving loans of up to \$600 million for working capital, capital expenditures and general corporate purposes. The definition of the maximum leverage ratio was temporarily increased under the 2016 Amendment as defined in the agreement in order to increase operating flexibility. Further, the earnings before interest, taxes, depreciation and amortization (EBITDA) definition in the 2016 Amendment now allows for up to \$120 million of aggregate cash restructuring payment add-backs through December 31, 2017. Other material provisions, including the minimum consolidated interest coverage ratio, remain unchanged.

During the year the Company completed the sale of several non-core businesses related to certain castings, steel-plate fabrication and deburring for an aggregate price of \$56.1 million, net of cash acquired. Annual sales for these non-core businesses were approximately \$220 million. A portion of the transaction proceeds were used to pay down revolver debt with the remaining balance being held as cash on hand. The transaction resulted in a pre-tax loss on the sale of \$131.5 million.

We generated cash flow from operating activities of \$219.3 million in the current year, driven by improved working capital management. We have actively managed our capital structure by decreasing our debt by \$50.1 million and by returning \$63.7 million to Shareholders through dividends. In addition, we made capital expenditures of \$110.7 million during the year.

We invested further in technology and innovation to continue delivering a high level of new products to our customers. Research and development expenses included in operating expense totaled \$39.4 million for 2016.

The permanent savings that we are realizing from restructuring are the result of programs that we have undertaken over the past 33 months. Pre-tax benefits from these restructuring actions were approximately \$79 million in 2016, of which approximately \$44 million were incremental to prior year. We substantially completed Phase 1 of our restructuring programs. We also have identified additional actions to adjust the company's cost structure. Refer to the Results of Continuing Operations section of Item 7 for further discussion and analysis of our restructuring programs.

NEW OPERATING STRUCTURE IMPLEMENTED IN FISCAL 2017 In order to take advantage of the growth opportunities of our WIDIA brand, we implemented a new operating structure.

A key attribute of the new structure is the establishment of the WIDIA operating segment. In order to better lever the opportunities that lie in this business, in addition to being more agile and competitive in the marketplace, we are placing higher levels of focus, determination and leadership in the business. Industrial and WIDIA in 2017 will be formed from the 2016 Industrial segment. We will have three reportable operating segments going forward: Industrial, WIDIA and Infrastructure.

RESULTS OF CONTINUING OPERATIONS

SALES Sales of \$2,098.4 million in 2016 decreased 21 percent from \$2,647.2 million in 2015 reflecting an 11 percent organic sales decline, a 5 percent divestiture impact, and a 5 percent unfavorable currency exchange impact. Sales decreased by 30 percent in the Infrastructure segment and 13 percent in the Industrial segment. Drivers of the organic sales decrease were 28 percent in energy, 15 percent in earthworks, 11 percent in general engineering and 4 percent in transportation, while aerospace and defense remained flat.

Sales of \$2,647.2 million in 2015 decreased 7 percent from \$2,837.2 million in 2014 reflecting an 5 percent organic sales decline and a 4 percent unfavorable currency exchange impact, offset by 2 percent increase from prior year acquisition and divestiture activity. Sales decreased by 10 percent in the Infrastructure segment and 4 percent in the Industrial segment. Drivers of the organic sales decrease, were earthworks of 10 percent, energy markets of 10 percent, aerospace and defense of 6 percent, transportation of 1 percent and general engineering of 1 percent.

GROSS PROFIT Gross profit decreased \$189.9 million to \$616.1 million in 2016 from \$806.0 million in 2015. This decrease was primarily due to organic sales decline, unfavorable business mix in both segments, lower fixed cost absorption, unfavorable currency exchange and divestiture impact, offset partially by lower raw material costs and restructuring benefits. The gross profit margin for 2016 was 29.4 percent compared to 30.4 percent in 2015.

Gross profit decreased \$91.0 million to \$806.0 million in 2015 from \$897.0 million in 2014. The decrease was primarily due to organic sales decline, unfavorable currency exchange and unfavorable business mix in the Infrastructure segment, offset partially by restructuring benefits, contributions from the TMB acquisition and the benefits of a nonrecurring inventory charge of \$6.4 million that occurred in the prior year. The gross profit margin for 2015 was 30.4 percent compared to 31.6 percent in 2014.

OPERATING EXPENSE Operating expense in 2016 was \$495.0 million, a decrease of \$59.9 million, or 10.8 percent, compared to \$554.9 million in 2015. The decrease is primarily due to divestiture impact of \$18.6 million, favorable foreign currency exchange impacts of \$23.3 million, restructuring benefits and the impact of cost reduction initiatives, offset partially by \$8.3 million higher restructuring related charges.

Operating expense in 2015 was \$554.9 million, a decrease of \$34.9 million, or 5.9 percent, compared to \$589.8 million in 2014. The decrease is primarily due to foreign currency exchange impacts of \$24.7 million, restructuring benefits and the impact of cost reduction initiatives, offset partially by annual merit increase.

RESTRUCTURING AND RELATED CHARGES AND ASSET IMPAIRMENT CHARGES

Restructuring and Related Charges

During 2016, we recorded restructuring and related charges of \$53.5 million. Of this amount, restructuring charges totaled \$30.0 million. Restructuring-related charges of \$7.3 million were recorded in cost of goods sold and \$16.2 million in operating expense during 2016. Total restructuring and related charges since the inception of our restructuring plans through 2016 were \$130.7 million. See Note 15 in our consolidated financial statements set forth in Item 8 (Note 15).

During 2015, we recorded restructuring and related charges of \$58.1 million. Of this amount, restructuring charges totaled \$42.1 million, of which \$1.5 million were charges related to inventory disposals and were recorded in cost of goods sold. Restructuring-related charges of \$8.2 million were recorded in cost of goods sold and \$7.8 million in operating expense during 2015.

During 2014, we recorded restructuring and related charges of \$19.1 million. Of this amount, restructuring charges totaled \$17.8 million, of which \$0.2 million were charges related to inventory disposals and were recorded in cost of goods sold. Restructuring-related charges of \$1.2 million were recorded in cost of goods sold and \$0.1 million in operating expense during 2014.

Phase 1

We implemented restructuring actions in conjunction with our Phase 1 restructuring program to achieve synergies across Kennametal as a result of the TMB acquisition by consolidating operations among both organizations, reducing administrative overhead and leveraging the supply chain. These restructuring actions were substantially completed in fiscal 2016 and were mostly cash expenditures. Estimated ongoing annualized savings for this phase is \$40-\$45 million, and we incurred inception to date charges of \$59.3 million.

Ongoing restructuring programs

We are currently implementing restructuring actions to streamline the Company's cost structure. These initiatives are expected to improve the alignment of our cost structure with the current operating environment through rationalization and consolidation of certain manufacturing facilities and through headcount reductions; enhancement of operational efficiencies through an enterprise-wide cost reduction program; and other employment and cost reduction programs. These restructuring actions are currently anticipated to deliver annual ongoing pre-tax savings of \$75 million to \$90 million once completed by December of fiscal 2019 and are anticipated to be mostly cash expenditures. The total pre-tax charges for these programs are expected to be in the range of \$105 million to \$125 million.

Asset Impairment Charges

During 2016 and 2015, we recorded non-cash pre-tax goodwill and other intangible asset impairment charges of \$108.5 million and \$541.7 million, respectively. There were no asset impairment charges during 2014. See Note 2 in our consolidated financial statements set forth in Item 8 (Note 2).

During 2016, we identified specific machinery and equipment that was no longer being utilized in the manufacturing organization of which we disposed by abandonment. As a result of this review, we recorded property, plant, and equipment impairment charges of \$5.4 million during 2016, which has been presented as restructuring and asset impairment charges in our consolidated statement of income.

LOSS ON DIVESTITURE We recognized a pre-tax loss on the sale of non-core businesses of \$131.5 million in 2016, which includes the impact of estimated working capital adjustments, deal costs and transaction costs. Of this amount, \$127.9 million and \$3.6 million were recorded in the Infrastructure and Industrial segments, respectively. See Note 4 in our consolidated financial statements set forth in Item 8 (Note 4).

AMORTIZATION OF INTANGIBLES Amortization expense was \$20.8 million, \$26.7 million and \$26.2 million in 2016, 2015 and 2014, respectively. The decrease of \$5.9 million from 2015 to 2016 is driven primarily by the impact of divestiture.

INTEREST EXPENSE Interest expense decreased \$3.7 million to \$27.8 million in 2016, compared with \$31.5 million in 2015 due to lower average borrowings throughout the current period. The portion of our debt subject to variable rates of interest was less than 1 percent and approximately 7 percent at June 30, 2016 and 2015, respectively. The decrease in the portion of our debt subject to variable rates was due to the decrease in the balance outstanding on our revolving credit facility.

Interest expense decreased \$1.0 million to \$31.5 million in 2015, compared with \$32.5 million in 2014 due to lower average borrowings throughout the current period. The portion of our debt subject to variable rates of interest was approximately 7 percent and 34 percent at June 30, 2015 and 2014, respectively. The decrease in the portion of our debt subject to variable rates was due to the decrease in the balance outstanding on our revolving credit facility.

OTHER (INCOME) EXPENSE, NET In 2016, other income, net was \$4.1 million compared to other income, net of \$1.7 million in 2015. The year-over-year increase is due primarily to the reduction of a contingent liability associated with a prior acquisition and income from transition services provided to the acquirer of our non-core businesses, partially offset by a loss on sale of assets and lower interest income.

In 2015, other income, net was \$1.7 million compared to other expense, net of \$2.2 million in 2014. The year-over-year change was due primarily to gains on derivatives in 2015.

INCOME TAXES The effective tax rate for 2016 was 12.7 percent (provision on a loss) compared to 4.3 percent (benefit on a loss) for 2015. The change in the effective rate from 2015 to 2016 was primarily driven by a 2016 discrete tax charge for a valuation allowance recorded against our net deferred tax assets in the U.S., primarily related to asset impairment charges and restructuring charges in both periods and the loss on divestiture in the current year, as well as an overall decrease in demand in U.S. operations.

The effective tax rate for 2015 was 4.3 percent (benefit on a loss) compared to 29.1 percent (provision on income) for 2014. The change in the effective rate from 2014 to 2015 was primarily driven by the asset impairment charges recorded in the current year, non-deductible restructuring and divestiture costs recorded in the prior year and charges related to a change in assertion with respect to certain foreign subsidiaries' undistributed earnings which are no longer considered permanently reinvested. All earnings of other non U. S. subsidiaries are permanently reinvested and no deferred taxes have been provided on those earnings.

(LOSS) INCOME ATTRIBUTABLE TO KENNAMETAL SHAREHOLDERS Loss attributable to Kennametal Shareholders was \$226.0 million, or \$2.83 per diluted share, in 2016, compared to \$373.9 million, or \$4.71 per diluted share, in 2015. The decrease in loss from continuing operations is a result of the factors previously discussed.

Loss from continuing operations attributable to Kennametal Shareholders was \$373.9 million or \$4.71 per diluted share, in 2015, compared to income of \$158.4 million, or \$1.99 per diluted share, in 2014. The change in (loss) income from continuing operations was a result of the factors previously discussed.

BUSINESS SEGMENT REVIEW We operate two reportable operating segments consisting of Industrial and Infrastructure. Corporate expenses that are not allocated are reported in Corporate. Segment determination is based upon internal organizational structure, the manner in which we organize segments for making operating decisions and assessing performance and the availability of separate financial results.

INDUSTRIAL

(in thousands)	2016	2015	2014
External sales	\$ 1,269,162	\$ 1,461,744	\$ 1,524,075
Operating income	81,243	160,894	177,040

External sales of \$1,269.2 million in 2016 decreased by \$192.6 million, or 13 percent, from 2015. The decrease in sales is attributable to a 7 percent organic sales decline and a 6 percent unfavorable currency exchange impact. Excluding the impact of currency exchange and divestiture, sales decreased approximately 27 percent in energy, 8 percent in general engineering and 4 percent in transportation, while sales increased in aerospace and defense approximately 1 percent. The oil and gas downturn caused a decline in the energy market, most acutely in the Americas, where there was spillover into the broader general engineering market. The downturn was somewhat amplified as inventory levels in the indirect channel were lowered. Sales in the transportation market benefited from strong global unit sales offset by lower sales in Asia in part due to fewer tooling package sales in the current year. Aerospace sales increased modestly as favorable developments in Europe and Asia were somewhat offset by our decision to exit certain low margin business. On a segment regional basis excluding the impact of currency exchange and divestiture, sales decreased by 11 percent in the Americas, 10 percent in Asia and 1 percent in Europe. The sales decrease in the Americas was driven by general engineering and energy and to a lesser extent transportation. The sales decrease in Asia was driven by transportation, general engineering and energy, offset partially by an increase in aerospace and defense. The sales decrease in Europe was driven by energy and aerospace and defense, offset partially by an increase in transportation.

In 2016, Industrial operating income was \$81.2 million and decreased by \$79.7 million from 2015. The primary drivers of the decrease in operating income were organic sales decline, unfavorable currency exchange of \$11.9 million, lower fixed cost absorption, unfavorable mix, loss on divestiture of \$3.6 million, fixed asset disposal charges of \$3.4 million and intangible asset impairment of \$2.3 million, offset partially by incremental restructuring program benefits of \$26.7 million, lower raw material costs and \$3.0 million less restructuring and related charges. Industrial operating margin was 6.4 percent compared with 11.0 percent in the prior year.

External sales of \$1,461.7 million in 2015 decreased by \$62.3 million, or 4 percent, from 2014. The decrease in sales is attributable to unfavorable currency exchange impact of 5 percent, offset partially by an increase of 1 percent due to prior year net acquisition and divestiture activity. Excluding the impact of currency exchange, sales increased in both general engineering and transportation by approximately 2 percent while the aerospace and defense served markets decreased approximately 4 percent and energy decreased approximately 6 percent. In general engineering, sales growth in the indirect channel was partially offset by weak demand in the energy market due to the downturn in the oil and gas markets. Transportation end market sales increased due to strong growth in Asia from our component solutions focus, partially offset by fewer new tooling programs sales in the Americas and slower market conditions in Europe. Sales in aerospace and defense declined due to our decision to exit certain low margin business. On a regional basis, excluding impacts of acquisition and divestiture, sales increased by approximately 8 percent in Asia and remained flat in the Americas, while sales decreased 2 percent in Europe. The sales increase in Asia was driven primarily by transportation and to a lesser extent aerospace and defense and general engineering. The Americas sales benefited from increases in general engineering, offset by decreases in aerospace and defense and transportation. The sales decrease in Europe was driven primarily by aerospace and defense and to a lesser extent transportation.

In 2015, Industrial operating income was \$160.9 million and decreased by \$16.1 million from 2014. The primary drivers of the decrease in operating income were driven by increased restructuring and related charges of \$16.6 million and lower absorption of manufacturing cost due to an inventory reduction initiative, offset partially by the impact of acquisition, restructuring benefits and decreased operating expense as a result of cost reduction efforts. Industrial operating margin was 11.0 percent compared with 11.6 percent in 2014.

INFRASTRUCTURE

(in thousands)	2016	2015	2014
External sales	\$ 829,274	\$ 1,185,451	\$ 1,313,115
Operating (loss) income	(246,306)	(509,381)	94,940

External sales of \$829.3 million in 2016 decreased by \$356.2 million, or 30 percent, from 2015. The decrease in sales was attributed to organic sales decline of 16 percent, divestiture impact of 11 percent and unfavorable currency exchange impact of 3 percent. Excluding the impact of divestiture and currency exchange, sales decreased approximately 28 percent in energy, 21 percent in general engineering and 15 percent in earthworks. Sales were lower year-over-year due to persistent weak demand in oil and gas, mining, industrial applications and processing end markets. On a segment regional basis excluding the impact of divestiture and currency exchange, sales decreased 25 percent in the Americas, 10 percent in Asia, and 1 percent in Europe. The sales decrease in the Americas was driven by energy, earthworks and general engineering. The sales decrease in Asia was driven by earthworks and general engineering, offset partially by an increase in energy. The sales decrease in Europe was driven primarily by energy, while general engineering remained flat and earthworks increased.

In 2016, Infrastructure operating loss in 2016 was \$246.3 million, a decrease of \$263.1 million from 2015 operating loss of \$509.4 million. The decrease in operating loss was primarily driven by lower impairment charges in the current versus prior year period. See Notes 2 and see Note 8 in our consolidated financial statements set forth in Item 8 (Note 8). The current year also includes a loss on divestiture for the sale of non-core businesses of \$127.9 million, see Note 4. In addition to the aforementioned impairment charge and loss on divestiture, operating results for the current period were negatively impacted by lower organic sales, lower fixed cost absorption and unfavorable mix, offset partially by an increase in lower raw material costs and incremental restructuring program benefits of \$18.1 million.

We are currently exploring strategic alternatives for a remaining non-core Infrastructure business. The estimated net book value of the business is approximately \$30 million as of June 30, 2016. As the strategic direction has not yet been determined for this business, the Company cannot determine if additional impairment charges will be incurred.

External sales of \$1,185.5 million in 2015 decreased by \$127.7 million, or 10 percent, from 2014. The decrease in sales was attributed to organic sales decline of 11 percent and unfavorable currency exchange impact of 4 percent, offset partially by the impact of acquisition of 5 percent. Excluding the impact of currency exchange, sales decreased approximately 11 percent in the energy market and approximately 10 percent in the earthworks markets. The energy market was impacted by the severe downturn in oil and gas markets. In the earthworks markets, underground mining remained weak throughout 2015, while construction sales were down in all regions, particularly in Europe and Asia due to lower infrastructure project work year over year. General industrial sales decreased, tied largely to the impacts of the downturn in oil and gas markets, while weakness in machine demand resulted in lower surface finishing sales. On a regional basis, excluding impacts of acquisition, sales decreased 12 percent in Asia, 10 percent in Europe and 9 percent in the Americas. The sales decrease in all geographic regions were driven by the energy markets and the earthworks markets.

In 2015, Infrastructure operating loss in 2015 was \$509.4 million, a decrease of \$604.3 million from 2014 operating income of \$94.9 million. In addition to the previously mentioned impairment charges of \$541.7 million, operating results for the current period were negatively impacted by lower organic sales, higher restructuring and related charges of \$17.7 million, lower manufacturing absorption due to lower sales volumes and an inventory reduction initiative and unfavorable mix, partly offset by the impacts of the TMB acquisition and restructuring benefits. 2014 operating income included a non-recurring inventory charge of \$6.4 million.

CORPORATE

(in thousands)	2016	2015	2014
Corporate unallocated expense	\$ (9,880)	\$ (9,336)	\$ (8,548)

In 2016, Corporate unallocated expense increased \$0.5 million, or 5.8 percent, from 2015, primarily due to higher restructuring-related charges in 2016 than in 2015. In 2015, Corporate unallocated expense increased \$0.8 million, or 9.2 percent, from 2014, primarily due to higher restructuring-related charges in 2015 than in 2014.

LIQUIDITY AND CAPITAL RESOURCES Cash flow from operations is the primary source of funding for capital expenditures and internal growth. During the year ended June 30, 2016, cash flow provided by operating activities was \$219.3 million.

Our five-year, multi-currency, revolving credit facility, as amended and restated in April 2016 (Credit Agreement) is used to augment cash from operations and as an additional source of funds. The Credit Agreement permits revolving credit loans of up to \$600.0 million for working capital, capital expenditures and general corporate purposes. The Credit Agreement allows for borrowings in U.S. dollars, euro, Canadian dollars, pound sterling and Japanese yen. Interest payable under the Credit Agreement is based upon the type of borrowing under the facility and may be (1) LIBOR plus an applicable margin, (2) the greater of the prime rate or the Federal Funds effective rate plus an applicable margin or (3) fixed as negotiated by us. The Credit Agreement matures in April 2021. We had no outstanding borrowings on our Credit Agreement as of June 30, 2016.

The Credit Agreement requires us to comply with various restrictive and affirmative covenants, including two financial covenants: a maximum leverage ratio and a minimum consolidated interest coverage ratio (as those terms are defined in the agreement). We were in compliance with all covenants as of June 30, 2016. For the year ended June 30, 2016, average daily borrowings outstanding under the Credit Agreement were approximately \$20.6 million. Borrowings under the Credit Agreement are guaranteed by our significant domestic subsidiaries.

Additionally, we obtain local financing through credit lines with commercial banks in the various countries in which we operate. At June 30, 2016, these borrowings amounted to \$1.2 million of notes payable and \$0.7 million of term debt, capital leases and other debt. We believe that cash flow from operations and the availability under our credit lines will be sufficient to meet our cash requirements over the next 12 months.

Based upon our debt structure at June 30, 2016 and 2015, less than 1 percent and approximately 7 percent of our debt, respectively, was exposed to variable rates of interest. The decrease in the portion of our debt subject to variable rates was due to the decrease in the balance outstanding on our revolving credit facility.

Except as noted below, we consider substantially all of the unremitted earnings of our non-U.S. subsidiaries that have not previously been taxed in the U.S. to be permanently reinvested. As of June 30, 2016, cash and cash equivalents of \$55.3 million would not be available for use in the U.S. on a long-term basis without incurring U.S. federal and state income tax consequences. We have not repatriated, nor do we anticipate the need to repatriate, funds to the U.S. to satisfy domestic liquidity needs arising in the ordinary course of business or associated with our domestic debt service requirements. Notwithstanding the above, we redeployed cash from certain non-U.S. subsidiaries related to the transaction specified in Note 4. As such, the year ended June 30, 2016 includes a tax charge of \$4.7 million related to this change in assertion with respect to a portion of our foreign subsidiaries' undistributed earnings, which are no longer considered permanently reinvested. The remaining undistributed earnings of our foreign subsidiaries continue to be indefinitely reinvested and would not be available for use in the U.S. on a long term basis without incurring U.S. federal and state income tax consequences.

At June 30, 2016, we had cash and cash equivalents of \$161.6 million. Total Kennametal Shareholders' equity was \$964.3 million and total debt was \$701.5 million. Our current senior credit ratings are at investment grade levels. We believe that our current financial position, liquidity and credit ratings provide us access to the capital markets. We continue to closely monitor our liquidity position and the condition of the capital markets, as well as the counterparty risk of our credit providers.

The following is a summary of our contractual obligations and other commercial commitments as of June 30, 2016 (in thousands):

Contractual Obligations		Total	2017	2018-2019	2020-2021	Thereafter
Long-term debt	(1)	\$ 800,949	\$ 22,225	\$ 44,450	\$ 426,901	\$ 307,373
Notes payable	(2)	1,268	1,268	—	—	—
Pension benefit payments	(3)		52,172	98,290	105,311	(3)
Postretirement benefit payments	(3)		2,036	3,685	3,286	(3)
Capital leases	(4)	800	775	25	—	—
Operating leases		77,274	18,623	22,922	14,793	20,936
Purchase obligations	(5)	367,969	150,905	157,289	29,898	29,877
Unrecognized tax benefits	(6)	3,765	560	2,809	—	396
Total			\$ 248,564	\$ 329,470	\$ 580,189	

(1) Long-term debt includes interest obligations of \$101.0 million. Interest obligations were determined assuming interest rates as of June 30, 2016 remain constant.

(2) Notes payable includes interest obligations of \$0.1 million. Interest obligations were determined assuming interest rates as of June 30, 2016 remain constant.

(3) Annual payments are expected to continue into the foreseeable future at the amounts noted in the table.

(4) Capital leases include interest obligations of \$0.1 million.

(5) Purchase obligations consist of purchase commitments for materials, supplies and machinery and equipment as part of the ordinary conduct of business. Purchase obligations with variable price provisions were determined assuming market prices as of June 30, 2016 remain constant.

(6) Unrecognized tax benefits are positions taken or expected to be taken on an income tax return that may result in additional payments to tax authorities. These amounts include interest of \$0.3 million and penalty of \$0.3 million accrued related to such positions as of June 30, 2016. Positions for which we are not able to reasonably estimate the timing of potential future payments are included in the 'Thereafter' column. If a tax authority agrees with the tax position taken or expected to be taken or the applicable statute of limitations expires, then additional payments will not be necessary.

Other Commercial Commitments		Total	2017	2018-2019	2020-2021	Thereafter
Standby letters of credit		\$ 14,156	\$ 14,156	\$ —	\$ —	\$ —
Guarantees		19,010	12,895	1,367	216	4,532
Total		\$ 33,166	\$ 27,051	\$ 1,367	\$ 216	\$ 4,532

The standby letters of credit relate to insurance and other activities. The guarantees are non-debt guarantees with financial institutions, which are required primarily for security deposits, product performance guarantees and advances.

Cash Flow Provided by Operating Activities

During 2016, cash flow provided by operating activities was \$219.3 million, compared to \$351.4 million in 2015. During 2016, cash flow provided by operating activities for the current year consisted of net income and non-cash items amounting to \$163.8 million and changes in certain assets and liabilities netting to \$55.5 million. These changes were primarily driven by a decrease in inventory of \$69.6 million due to our continued focus on working capital management and a decrease in accounts receivable of \$32.7 million due to lower sales volume. Partially offsetting these inflows were a decrease in accrued income taxes of \$25.2 million driven by payment of a capital gains tax related to a prior period tax reorganization and a decrease in accounts payable and accrued liabilities of \$2.2 million.

During 2015, cash flow provided by operating activities was \$351.4 million, compared to \$271.9 million in 2014. During 2015, cash flow provided by operating activities for the current year consisted of net income and non-cash items amounting to \$279.1 million, offset by changes in certain assets and liabilities netting to \$72.4 million. These changes were primarily driven by a decrease in inventory of \$70.9 million due to improved working capital management, a decrease in accounts receivable of \$46.6 million due to lower sales volumes and a decrease in accounts payable and accrued liabilities of \$8.2 million.

During 2014, cash flow provided by operating activities was \$271.9 million. Cash flow provided by operating activities consisted of net income and non-cash items amounting to \$338.7 million, offset by changes in certain assets and liabilities netting to \$66.8 million. These changes were primarily driven by an increase in accounts receivable of \$45.0 million due to higher sales volumes and a decrease in accrued income taxes of \$12.5 million.

Cash Flow Used for Investing Activities

Cash flow used for investing activities was \$47.9 million for 2016, a decrease of \$36.6 million, compared to \$84.6 million in 2015. During 2016, cash flow used for investing activities included capital expenditures, net of \$104.7 million, which consisted primarily of equipment upgrades. Partially offsetting this outflow was an inflow of \$56.1 million of proceeds from the divestiture of non-core businesses.

Cash flow used for investing activities was \$84.6 million for 2015, a decrease of \$655.6 million, compared to \$740.2 million in 2014. During 2015, cash flow used for investing activities included capital expenditures, net were \$84.8 million, which consisted primarily of equipment upgrades.

Cash flow used for investing activities was \$740.2 million for 2014. During 2014, cash flow used for investing activities included the TMB acquisition for \$607.0 million, net of cash acquired, the Emura acquisition for \$25.6 million cash paid in 2014 and \$2.0 million related to a small acquisition in the Infrastructure segment. Capital expenditures, net were \$116.1 million, which consisted primarily of equipment upgrades. These cash outflows were partially offset by \$10.2 million of proceeds from sale of a small non-core business acquired as part of the TMB acquisition.

Cash Flow (Used for) Provided by Financing Activities

Cash flow used for financing activities was \$110.5 million for 2016, compared to \$333.0 million in 2015. During 2016, cash flow used for financing activities included \$63.7 million of cash dividends paid to Shareholders and \$50.8 million net decrease in borrowings, partially offset by \$4.5 million of dividend reinvestment and the effect of employee benefit and stock plans.

Cash flow used for financing activities was \$333.0 million for 2015, compared to cash flow provided by financing activities of \$270.4 million in 2014. During 2015, cash flow used for financing activities included \$282.5 million net decrease in borrowings and \$57.0 million of cash dividends paid to Shareholders, partially offset by \$13.8 million of dividend reinvestment and the effect of employee benefit and stock plans.

Cash flow provided by financing activities was \$270.4 million for 2014. During 2014, cash flow provided by financing activities included a \$313.1 million net increase in borrowings, which included \$287.1 million of borrowings outstanding under our Credit Agreement, and \$26.7 million of dividend reinvestment and the effect of employee benefit and stock plans, partially offset by \$56.4 million of cash dividends paid to Shareholders and \$14.2 million used for the purchase of capital stock.

FINANCIAL CONDITION At June 30, 2016, total assets were \$2,368.8 million, a decrease of \$480.7 million from \$2,849.5 million at June 30, 2015. Total liabilities decreased \$101.1 million from \$1,474.1 million at June 30, 2015 to \$1,373.0 million at June 30, 2016.

Working capital was \$648.1 million at June 30, 2016, a decrease of \$127.7 million, or 16.5 percent from \$775.8 million at June 30, 2015. Inventory decreased \$116.7 million due to lower work in process and powder blends, finished goods and raw materials driven by improved working capital management. Accounts receivable decreased \$74.5 million due to lower sales volume and deferred income taxes decreased \$45.7 million due primarily to effects from recording of a valuation allowance against our net deferred tax assets in the U.S. Partially offsetting these items were an increase in cash and cash equivalents \$56.1 million; a decrease in other current liabilities of \$26.4 million due primarily to lower restructuring liabilities and lower accrued compensation; and a decrease in current maturities of long-term debt, capital leases and notes payable of \$13.8 million due to debt reduction initiatives. Currency exchange rate effects accounted for \$20.5 million of the decrease in working capital, and \$32.9 million of the decrease in working capital is related to the sale of non-core businesses.

Property, plant and equipment, net decreased \$85.2 million from \$815.8 million at June 30, 2015 to \$730.6 million at June 30, 2016, primarily due to depreciation expense of \$96.7 million, \$67.6 million sold as part of sale of non-core businesses, unfavorable currency exchange impacts of \$10.7 million and capital disposals of \$6.0 million. Partially offsetting these items was capital expenditures of \$110.7 million, which includes a net \$1.0 million change which was included in accounts payable at June 30, 2016 related to purchases of property, plant and equipment.

At June 30, 2016, other assets were \$562.8 million, a decrease of \$212.3 million from \$775.2 million at June 30, 2015. The primary drivers for the decrease were a decrease in goodwill of \$118.9 million, a decrease in other intangible assets of \$79.5 million and a decrease in deferred income taxes of \$9.6 million. The decrease in goodwill was due to impairment charges in the Infrastructure segment of \$105.7 million, \$7.5 million of goodwill written off as part of the sale of non-core businesses and unfavorable currency exchange effects of \$5.7 million. The change in other intangible assets was due to \$52.7 million intangibles sold as part of the sale of non-core businesses, amortization expense of \$20.8 million, impairments of \$2.7 million and unfavorable currency exchange effects of \$1.7 million. The decrease in deferred income taxes is due primarily to recording of a valuation allowance against our net deferred tax assets in the U.S.

Long-term debt and capital leases decreased \$36.3 million to \$699.6 million at June 30, 2016 from \$735.9 million at June 30, 2015. This change was driven by the \$42.8 million decrease of borrowings outstanding on the revolver, a portion of which is deemed current maturities. Accrued pension benefits increased \$38.8 million to \$182.6 million, driven primarily by actuarial losses due to discount rate changes.

Kennametal Shareholders' equity was \$964.3 million at June 30, 2016, a decrease of \$381.5 million from \$1,345.8 million in the prior year. The decrease was primarily due to net loss attributable to Kennametal of \$226.0 million, cash dividends paid to Shareholders of \$63.7 million, unrecognized net pension and other postretirement benefit loss of \$78.3 million and unfavorable currency exchange of \$51.5 million, partially offset by a reclassification of foreign currency translation adjustment loss into earnings upon sale of non-core businesses of \$15.1 million and capital stock issued under employee benefit and stock plans of \$14.7 million.

ENVIRONMENTAL MATTERS The operation of our business has exposed us to certain liabilities and compliance costs related to environmental matters. We are involved in various environmental cleanup and remediation activities at certain of our locations.

Superfund Sites Among other environmental laws, we are subject to Superfund, under which we have been designated by the USEPA as a PRP with respect to environmental remedial costs at certain Superfund sites. We have evaluated our claims and liabilities associated with these Superfund sites based upon best currently available information. We believe our environmental accruals are adequate to cover our portion of the environmental remedial costs at the Superfund sites where we have been designated a PRP, to the extent these expenses are probable and reasonably estimable.

Other Environmental Issues We establish and maintain reserves for other potential environmental issues. At June 30, 2016 and 2015, the total of accruals for these reserves was \$12.5 million and \$12.6 million, respectively. These reserves represent anticipated costs associated with the remediation of these issues.

The reserves we have established for environmental liabilities represent our best current estimate of the costs of addressing all identified environmental situations, based on our review of currently available evidence, and taking into consideration our prior experience in remediation and that of other companies, as well as public information released by the USEPA, other governmental agencies, and by the PRP groups in which we are participating. Although the reserves currently appear to be sufficient to cover these environmental liabilities, there are uncertainties associated with environmental liabilities, and we can give no assurance that our estimate of any environmental liability will not increase or decrease in the future. The reserved and unreserved liabilities for all environmental concerns could change substantially due to factors such as the nature and extent of contamination, changes in remedial requirements, technological changes, discovery of new information, the financial strength of other PRPs, the identification of new PRPs and the involvement of and direction taken by the government on these matters.

We maintain a Corporate EHS Department to monitor compliance with environmental regulations and to oversee remediation activities. In addition, we have designated EHS coordinators who are responsible for each of our global manufacturing facilities. Our financial management team periodically meets with members of the Corporate EHS Department and the Corporate Legal Department to review and evaluate the status of environmental projects and contingencies. On a quarterly basis, we review financial provisions and reserves for environmental contingencies and adjust these reserves when appropriate.

EFFECTS OF INFLATION Despite modest inflation in recent years, rising costs, including the cost of certain raw materials, continue to affect our operations throughout the world. We strive to minimize the effects of inflation through cost containment, productivity improvements and price increases.

DISCUSSION OF CRITICAL ACCOUNTING POLICIES In preparing our financial statements in conformity with accounting principles generally accepted in the U.S., we make judgments and estimates about the amounts reflected in our financial statements. As part of our financial reporting process, our management collaborates to determine the necessary information on which to base our judgments and develops estimates used to prepare the financial statements. We use historical experience and available information to make these judgments and estimates. However, different amounts could be reported using different assumptions and in light of different facts and circumstances. Therefore, actual amounts could differ from the estimates reflected in our financial statements. Our significant accounting policies are described in Note 2. We believe that the following discussion addresses our critical accounting policies.

Revenue Recognition We recognize revenue for our products and assembled machines when title and all risks of loss and damages pass to the buyer. Our general conditions of sale explicitly state that the delivery of our products and assembled machines is freight on board shipping point and that title and all risks of loss and damages pass to the buyer upon delivery of the sold products or assembled machines to the common carrier.

Our general conditions of sale explicitly state that acceptance of the conditions of shipment is considered to have occurred unless written notice of objection is received by Kennametal within 10 calendar days of the date specified on the invoice. We do not ship products or assembled machines unless we have documentation authorizing shipment to our customers. Our products are consumed by our customers in the manufacture of their products. Historically, we have experienced very low levels of returned products and assembled machines and do not consider the effect of returned products and assembled machines to be material. We have recorded an estimated returned goods allowance to provide for any potential returns.

We warrant that products and services sold are free from defects in material and workmanship under normal use and service when correctly installed, used and maintained. This warranty terminates 30 days after delivery of the product to the customer and does not apply to products that have been subjected to misuse, abuse, neglect or improper storage, handling or maintenance. Products may be returned to Kennametal only after inspection and approval by Kennametal and upon receipt by the customer of shipping instructions from Kennametal. We have included an estimated allowance for warranty returns in our returned goods allowance discussed above.

We recognize revenue related to the sale of specialized assembled machines upon customer acceptance and installation, as installation is deemed essential to the functionality of a specialized assembled machine. Sales of specialized assembled machines were immaterial for 2016, 2015 and 2014.

Stock-Based Compensation We recognize stock-based compensation expense for all stock options, restricted stock awards and restricted stock units over the period from the date of grant to the date when the award is no longer contingent on the employee providing additional service (substantive vesting period). We utilize the Black-Scholes valuation method to establish the fair value of all stock option awards. Time vesting stock units are valued at the market value of the stock on the grant date. Performance vesting stock units with a market condition are valued using a Monte Carlo model.

Accounting for Contingencies We accrue for contingencies when it is probable that a liability or loss has been incurred and the amount can be reasonably estimated. Contingencies by their nature relate to uncertainties that require the exercise of judgment in both assessing whether or not a liability or loss has been incurred and estimating the amount of probable loss. The significant contingencies affecting our financial statements include environmental, health and safety matters and litigation.

Long-Lived Assets We evaluate the recoverability of property, plant and equipment and intangible assets that are amortized whenever events or changes in circumstances indicate the carrying amount of such assets may not be fully recoverable. Changes in circumstances include technological advances, changes in our business model, capital structure, economic conditions or operating performance. Our evaluation is based upon, among other things, our assumptions about the estimated future undiscounted cash flows these assets are expected to generate. When the sum of the undiscounted cash flows is less than the carrying value, we will recognize an impairment loss to the extent that carrying value exceeds fair value. We apply our best judgment when performing these evaluations to determine if a triggering event has occurred, the undiscounted cash flows used to assess recoverability and the fair value of the asset.

Goodwill and Indefinite-Lived Intangible Assets We evaluate the recoverability of goodwill of each of our reporting units by comparing the fair value of each reporting unit with its carrying value. The fair values of our reporting units are determined using a combination of a discounted cash flow analysis and market multiples based upon historical and projected financial information. We apply our best judgment when assessing the reasonableness of the financial projections used to determine the fair value of each reporting unit. We evaluate the recoverability of indefinite-lived intangible assets using a discounted cash flow analysis based on projected financial information. We perform our annual impairment tests during the June quarter in connection with our annual planning process, unless there are impairment indicators based on the results of an ongoing cumulative qualitative assessment that warrant a test prior to that.

The \$298.5 million of goodwill allocated to the Industrial reporting unit is not at risk of failing Step 1 of the impairment test since fair value substantially exceeded the carrying value as of the date of the last impairment test. There is no goodwill allocated to the Infrastructure reporting unit.

Pension and Other Postretirement Benefits We sponsor these types of benefit plans for certain employees and retirees. Accounting for the cost of these plans requires the estimation of the cost of the benefits to be provided well into the future and attributing that cost over the expected work life of employees participating in these plans. This estimation requires our judgment about the discount rate used to determine these obligations, expected return on plan assets, rate of future compensation increases, rate of future health care costs, withdrawal and mortality rates and participant retirement age. Differences between our estimates and actual results may significantly affect the cost of our obligations under these plans.

In the valuation of our pension and other postretirement benefit liabilities, management utilizes various assumptions. Our discount rates are derived by identifying a theoretical settlement portfolio of high quality corporate bonds sufficient to provide for a plan's projected benefit payments. This rate can fluctuate based on changes in the corporate bond yields. At June 30, 2016, a hypothetical 25 basis point increase in our discount rates would increase our pre-tax income by approximately \$1.7 million, and a hypothetical 25 basis point decrease in our discount rates would decrease our pre-tax income by approximately \$2.3 million.

The long-term rate of return on plan assets is estimated based on an evaluation of historical returns for each asset category held by the plans, coupled with the current and short-term mix of the investment portfolio. The historical returns are adjusted for expected future market and economic changes. This return will fluctuate based on actual market returns and other economic factors.

The rate of future health care cost increases is based on historical claims and enrollment information projected over the next fiscal year and adjusted for administrative charges. This rate is expected to decrease until 2027. At June 30, 2016, a hypothetical 1 percent increase or decrease in our health care cost trend rates would be immaterial to our pre-tax income.

Future compensation rates, withdrawal rates and participant retirement age are determined based on historical information. These assumptions are not expected to significantly change. Mortality rates are determined based on a review of published mortality tables.

We expect to contribute approximately \$12.1 million and \$2.0 million to our pension and other postretirement benefit plans, respectively, in 2017.

In 2016, substantially all plan participants of the U.S. Retirement Income Plan (RIP) became inactive. As a result, the average remaining life expectancy of the inactive participants will be used to amortize the unrecognized net gain or loss instead of the average remaining service period of active plan participants in fiscal 2017.

Allowance for Doubtful Accounts We record allowances for estimated losses resulting from the inability of our customers to make required payments. We assess the creditworthiness of our customers based on multiple sources of information and analyze additional factors such as our historical bad debt experience, industry and geographic concentrations of credit risk, current economic trends and changes in customer payment terms. This assessment requires significant judgment. If the financial condition of our customers was to deteriorate, additional allowances may be required, resulting in future operating losses that are not included in the allowance for doubtful accounts at June 30, 2016.

Inventories Inventories are stated at the lower of cost or market. We use the last-in, first-out method for determining the cost of a significant portion of our U.S. inventories. The cost of the remainder of our inventories is determined under the first-in, first-out or average cost methods. When market conditions indicate an excess of carrying costs over market value, a lower-of-cost-or-market provision is recorded. Excess and obsolete inventory reserves are established based upon our evaluation of the quantity of inventory on hand relative to demand.

Income Taxes Realization of our deferred tax assets is primarily dependent on future taxable income, the timing and amount of which are uncertain, in part, due to the expected profitability of certain foreign subsidiaries. A valuation allowance is recognized if it is "more likely than not" that some or all of a deferred tax asset will not be realized. As of June 30, 2016, the deferred tax assets net of valuation allowances relate primarily to net operating loss carryforwards, pension benefits, accrued employee benefits and inventory reserves. In the event that we were to determine that we would not be able to realize our deferred tax assets in the future, an increase in the valuation allowance would be required. In the event we were to determine that we are able to use our deferred tax assets and a valuation allowance had been recorded against the deferred tax assets, a decrease in the valuation allowance would be required.

NEW ACCOUNTING STANDARDS

Adopted

In April 2014, the Financial Accounting Standards Board (FASB) issued guidance on reporting discontinued operations and disclosures of disposals of components of an entity. Under the guidance, only disposals representing a strategic shift in operations should be presented as discontinued operations. Additionally, the guidance requires expanded disclosures about discontinued operations that will provide financial statement users with more information about the assets, liabilities, income and expenses of discontinued operations. The guidance also requires disclosure of the pre-tax income attributable to a disposal of a significant part of an organization that does not qualify for discontinued operations reporting. This guidance was effective for Kennametal beginning July 1, 2015. The divestiture of non-core businesses outlined in Note 4 was evaluated under this guidance.

Issued

In June 2016, the FASB issued guidance on measurement of credit losses on financial instruments. The new guidance introduces an approach based on expected losses to estimate credit losses on certain types of financial instruments. It also modifies the impairment model for available-for-sale debt securities and provides for a simplified accounting model for purchased financial assets with credit deterioration since their origination. The scope of this amendment includes valuation of trade receivables. This standard is effective for Kennametal beginning July 1, 2020. We are in the process of assessing the impact the adoption of this guidance will have on our consolidated financial statements.

In May 2016, the FASB issued guidance on narrow scope improvements and practical expedients as part of Topic 606: Revenue from Contracts with Customers. The amendments address collectability criterion and accounting for contracts that do not meet the criteria, presentation of sales taxes and other similar taxes collected from customers, noncash consideration, contract modifications at transition and completed contracts at transition, in addition to a technical correction. This standard is effective for Kennametal beginning July 1, 2018, in conjunction with the adoption of Accounting Standards Update 2014-09, "Revenue from Contracts with Customers: Topic 606." We are in the process of assessing the impact the adoption of this guidance will have on our consolidated financial statements.

In April 2016, the FASB issued guidance on identifying performance obligations and licensing as part of Topic 606: Revenue from Contracts with Customers. The amendments in this update clarify identifying performance obligations and the licensing implementation guidance, while retaining the related principles for those areas. This standard is effective for Kennametal beginning July 1, 2018, in conjunction with the adoption of Accounting Standards Update 2014-09, "Revenue from Contracts with Customers: Topic 606." We are in the process of assessing the impact the adoption of this guidance will have on our consolidated financial statements.

In March 2016, the FASB issued guidance intended to simplify equity-based award accounting and presentation. The guidance impacts income tax accounting related to equity-based awards, the classification of awards as either equity or liabilities, and the classification on the statement of cash flows. This standard is effective for Kennametal beginning July 1, 2017. We are in the process of assessing the impact the adoption of this guidance will have on our consolidated financial statements.

In March 2016, the FASB issued guidance on principal versus agent considerations in reporting revenue gross versus net. This guidance is intended to improve the operability and understandability of the implementation guidance on principal versus agent considerations. As this update serves to clarify existing guidance, it is not expected to have a material impact on our consolidated financial statements.

In February 2016, the FASB issued guidance on lease accounting, which replaces the existing guidance in ASC 840, Leases. The standard establishes a right-of-use (ROU) model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. This standard is effective for Kennametal beginning July 1, 2019. We are in the process of assessing the impact the adoption of this guidance will have on our consolidated financial statements.

In November 2015, the FASB issued guidance on balance sheet classification of deferred taxes. The amendments in this Update require that deferred tax liabilities and assets be classified as noncurrent in a classified statement of financial position, as opposed to the current practice of separating deferred income tax liabilities and assets into current and noncurrent amounts on the balance sheet. This standard is effective for Kennametal beginning July 1, 2017. We are in the process of assessing the impact the adoption of this ASU will have on our consolidated financial statements.

In August 2015, the FASB issued guidance that defers the effective date of previously issued ASU 2014-09, "Revenue from Contracts with Customers: Topic 606." Under this guidance, the effective date for Kennametal was deferred from July 1, 2017 to July 1, 2018. We are in the process of assessing the impact the adoption of this ASU will have on our consolidated financial statements.

In July 2015, the FASB issued guidance on subsequent measurement of inventory. The amendments in this update require that inventory other than LIFO be subsequently measured at the lower of cost and net realizable value, as opposed to the current practice of lower of cost or market. Subsequent measurement is unchanged for inventory measured using LIFO. This standard is effective for Kennametal beginning July 1, 2017. We are in the process of evaluating the impact of adoption on our consolidated financial statements.

In April 2015, the FASB issued guidance on the presentation of debt issuance costs. The guidance requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct reduction from the carrying amount of that debt liability, consistent with debt discounts. This standard is effective for Kennametal beginning July 1, 2016 and will be retrospectively applied. The guidance did not have a material impact on our consolidated financial position, results of operations and cash flows.

In April 2015, the FASB issued guidance on accounting for fees paid in a cloud computing arrangement. The amendments in this update provide guidance to customers about whether a cloud computing arrangement includes a software license and accounting for the arrangement as capitalized and amortized as an intangible asset or expensed as incurred as a service contract. This standard is effective for Kennametal beginning July 1, 2016. The provisions of the guidance may be applied prospectively or retrospectively. We plan to adopt this guidance prospectively, and adoption of this ASU is not expected to have a material impact on our consolidated financial position, results of operations and cash flows.

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers: Topic 606." This ASU replaces nearly all existing U.S. GAAP guidance on revenue recognition. The standard prescribes a five-step model for recognizing revenue, the application of which will require significant judgment. This standard is effective for Kennametal July 1, 2017. We are in the process of assessing the impact the adoption of this ASU will have on our consolidated financial statements.

ITEM 7A - QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

MARKET RISK We are exposed to certain market risks arising from transactions that are entered into in the normal course of business. As part of our financial risk management program, we use certain derivative financial instruments to manage these risks. We do not enter into derivative transactions for speculative purposes and, therefore, hold no derivative instruments for trading purposes. We use derivative financial instruments to provide predictability to the effects of changes in foreign exchange rates on our consolidated results and to achieve our targeted mix of fixed and floating interest rates on outstanding debt. Our objective in managing foreign exchange exposures with derivative instruments is to reduce volatility in cash flow, allowing us to focus more of our attention on business operations. With respect to interest rate management, these derivative instruments allow us to achieve our targeted fixed-to-floating interest rate mix as a separate decision from funding arrangements in the bank and public debt markets. We measure hedge effectiveness by assessing the changes in the fair value or expected future cash flows of the hedged item. The ineffective portions are recorded in other (income) expense, net. See Notes 2 and 16 of our consolidated financial statements set forth in Item 8.

We are exposed to counterparty credit risk for nonperformance of derivative contracts and, in the event of nonperformance, to market risk for changes in interest and currency exchange rates, as well as settlement risk. We manage exposure to counterparty credit risk through credit standards, diversification of counterparties and procedures to monitor concentrations of credit risk. We do not anticipate nonperformance by any of the counterparties.

The following provides additional information on our use of derivative instruments. Included below is a sensitivity analysis that is based upon a hypothetical 10 percent weakening or strengthening in the U.S. dollar compared to the June 30, 2016 currency exchange rates and the effective interest rates under our current borrowing arrangements. We compared the contractual derivative and borrowing arrangements in effect at June 30, 2016 to the hypothetical foreign exchange or interest rates in the sensitivity analysis to determine the effect on interest expense, pre-tax income or accumulated other comprehensive (loss) income. Our analysis takes into consideration the different types of derivative instruments and the applicability of hedge accounting.

CASH FLOW HEDGES *Currency* A portion of our operations consists of investments in foreign subsidiaries. Our exposure to market risk from changes in foreign exchange rates arises from these investments, intercompany loans utilized to finance these subsidiaries, trade receivables and payables and firm commitments arising from international transactions. We manage our foreign exchange transaction risk to reduce the volatility of cash flows caused by currency exchange rate fluctuations through natural offsets where appropriate and through foreign exchange contracts. These contracts are designated as hedges of forecasted transactions that will settle in future periods and that would otherwise expose us to currency risk.

Our foreign exchange hedging program is intended to mitigate our exposure to currency exchange rate movements. This exposure arises largely from anticipated cash flows from cross-border intercompany sales of products and services. This program utilizes range forwards and forward contracts primarily to sell foreign currency. The notional amounts of the contracts translated into U.S. dollars at June 30, 2016 and 2015 were \$53.3 million and \$53.8 million, respectively. We would have received \$0.3 million and \$2.6 million at June 30, 2016 and 2015, respectively to settle these contracts representing the fair value of these agreements. At June 30, 2016, a hypothetical 10 percent strengthening or weakening of the U.S. dollar would have changed accumulated other comprehensive (loss) income, net of tax, by \$1.7 million.

In addition, we may enter into forward contracts to hedge transaction exposures or significant cross-border intercompany loans by either purchasing or selling specified amounts of foreign currency at a specified date. At June 30, 2016 and 2015, we had outstanding forward contracts to purchase and sell foreign currency with notional amounts, translated into U.S. dollars at June 30, 2016 and 2015 rates, of \$57.5 million and \$93.4 million, respectively. At June 30, 2016, a hypothetical 10 percent change in the year-end exchange rates would have resulted in an increase or decrease in pre-tax income of \$5.8 million related to these positions.

Interest Rate Our exposure to market risk for changes in interest rates relates primarily to our long-term debt obligations. We seek to manage our interest rate risk in order to balance our exposure between fixed and floating rates, while attempting to minimize our borrowing costs. To achieve these objectives, we primarily use interest rate swap contracts to manage exposure to interest rate changes related to these borrowings. We had no swaps in place as of June 30, 2016 and 2015.

DEBT AND NOTES PAYABLE At June 30, 2016 and 2015, we had \$701.5 million and \$751.6 million, respectively, of outstanding debt, including capital leases and notes payable. Effective interest rates as of June 30, 2016 and 2015 were 3.6 percent and 3.0 percent, respectively. A hypothetical change of 10 percent in market interest rates from June 30, 2016 levels would have no impact on our interest expense.

CURRENCY EXCHANGE RATE FLUCTUATIONS Currency exchange rate fluctuations increased diluted earnings per share by \$0.08 in 2016, did not have a material impact in 2015 and decreased diluted earnings per share by \$0.07 in 2014. Currency exchange rate fluctuations may have a material impact on future earnings in the short term and long term.

ITEM 8 - FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Management has conducted an assessment of the Company's internal controls over financial reporting as of June 30, 2016 using the criteria in *Internal Control – Integrated Framework (2013)*, issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's internal control over financial reporting is 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.

Based on its assessment, management has concluded that the Company maintained effective internal control over financial reporting as of June 30, 2016, based on criteria in *Internal Control – Integrated Framework (2013)* issued by the COSO. The effectiveness of the Company's internal control over financial reporting as of June 30, 2016 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Report of Independent Registered Public Accounting Firm

To the Shareholders of Kennametal Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income, cash flow and shareholders' equity present fairly, in all material respects, the financial position of Kennametal Inc. and its subsidiaries at June 30, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended June 30, 2016 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the index appearing under Item 15(a) (2) presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of June 30, 2016, 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 and financial statement schedule, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 8. Our responsibility is to express opinions on these financial statements, on the financial statement schedule, 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.

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
Pittsburgh, Pennsylvania
August 11, 2016

CONSOLIDATED STATEMENTS OF INCOME

Year ended June 30 (in thousands, except per share data)	2016	2015	2014
Sales	\$ 2,098,436	\$ 2,647,195	\$ 2,837,190
Cost of goods sold	1,482,369	1,841,202	1,940,187
Gross profit	616,067	805,993	897,003
Operating expense	494,975	554,895	589,768
Restructuring and asset impairment charges (Notes 2 and 15)	143,810	582,235	17,608
Loss on divestiture (Note 4)	131,463	—	—
Amortization of intangibles	20,762	26,686	26,195
Operating (loss) income	(174,943)	(357,823)	263,432
Interest expense	27,752	31,466	32,451
Other (income) expense, net	(4,124)	(1,674)	2,172
(Loss) income before income taxes	(198,571)	(387,615)	228,809
Provision (benefit) for income taxes	25,313	(16,654)	66,611
Net (loss) income	(223,884)	(370,961)	162,198
Less: Net income attributable to noncontrolling interests	2,084	2,935	3,832
Net (loss) income attributable to Kennametal	\$ (225,968)	\$ (373,896)	\$ 158,366
PER SHARE DATA ATTRIBUTABLE TO KENNAMETAL SHAREHOLDERS			
Basic (loss) earnings per share	\$ (2.83)	\$ (4.71)	\$ 2.01
Diluted (loss) earnings per share	\$ (2.83)	\$ (4.71)	\$ 1.99
Dividends per share	\$ 0.80	\$ 0.72	\$ 0.72
Basic weighted average shares outstanding	79,835	79,342	78,678
Diluted weighted average shares outstanding	79,835	79,342	79,667

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in thousands)	2016	2015	2014
Net (loss) income	\$ (223,884)	\$ (370,961)	\$ 162,198
Other comprehensive (loss) income, net of tax			
Unrealized (loss) gain on derivatives designated and qualified as cash flow hedges	(150)	6,652	(706)
Reclassification of unrealized (gain) loss on expired derivatives designated and qualified as cash flow hedges	(1,563)	(2,873)	1,987
Unrecognized net pension and other postretirement benefit loss	(78,295)	(47,982)	(11,990)
Reclassification of net pension and other postretirement benefit loss	4,925	2,931	2,184
Foreign currency translation adjustments	(52,695)	(139,465)	31,763
Reclassification of foreign currency translation adjustment loss realized upon sale	15,088	—	—
Total other comprehensive (loss) income, net of tax	(112,690)	(180,737)	23,238
Total comprehensive (loss) income	(336,574)	(551,698)	185,436
Less: comprehensive income (loss) attributable to noncontrolling interests	896	(410)	4,198
Comprehensive (loss) income attributable to Kennametal Shareholders	\$ (337,470)	\$ (551,288)	\$ 181,238

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

CONSOLIDATED BALANCE SHEETS

As of June 30 (in thousands, except per share data)	2016	2015
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 161,579	\$ 105,494
Accounts receivable, less allowance for doubtful accounts of \$12,724 and \$13,560 respectively	370,916	445,373
Inventories (Note 7)	458,830	575,531
Deferred income taxes (Note 12)	26,713	72,449
Other current assets	57,303	59,699
Total current assets	1,075,341	1,258,546
Property, plant and equipment:		
Land and buildings	353,789	401,207
Machinery and equipment	1,511,462	1,573,597
Less accumulated depreciation	(1,134,611)	(1,158,979)
Property, plant and equipment, net	730,640	815,825
Other assets:		
Investments in affiliated companies	2	361
Goodwill (Notes 2 and 8)	298,487	417,389
Other intangible assets, less accumulated amortization of \$114,093 and \$153,370, respectively (Notes 2 and 8)	207,208	286,669
Deferred income taxes (Note 12)	14,459	24,091
Other	42,656	46,648
Total other assets	562,812	775,158
Total assets	\$ 2,368,793	\$ 2,849,529
LIABILITIES		
Current liabilities:		
Current maturities of long-term debt and capital leases (Note 10)	\$ 732	\$ 8,129
Notes payable to banks (Note 11)	1,163	7,573
Accounts payable	182,039	187,381
Accrued income taxes	16,602	25,237
Accrued vacation pay	24,709	26,566
Accrued payroll	49,761	49,180
Other current liabilities (Note 9)	152,269	178,678
Total current liabilities	427,275	482,744
Long-term debt and capital leases, less current maturities (Note 10)	699,558	735,885
Deferred income taxes (Note 12)	17,126	59,744
Accrued postretirement benefits (Note 13)	18,876	19,230
Accrued pension benefits (Note 13)	182,597	143,799
Accrued income taxes	3,100	3,002
Other liabilities	24,460	29,690
Total liabilities	1,372,992	1,474,094
Commitments and contingencies (Note 19)		
EQUITY		
Kennametal Shareholders' Equity:		
Preferred stock, no par value; 5,000 shares authorized; none issued	—	—
Capital stock, \$1.25 par value; 120,000 shares authorized; 79,694 and 79,375 shares issued, respectively	99,618	99,219
Additional paid-in capital	436,617	419,829
Retained earnings	780,597	1,070,282
Accumulated other comprehensive loss	(352,509)	(243,523)
Total Kennametal Shareholders' Equity	964,323	1,345,807
Noncontrolling interests	31,478	29,628
Total equity	995,801	1,375,435
Total liabilities and equity	\$ 2,368,793	\$ 2,849,529

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

CONSOLIDATED STATEMENTS OF CASH FLOW

Year ended June 30 (in thousands)	2016	2015	2014
OPERATING ACTIVITIES			
Net (loss) income	\$ (223,884)	\$ (370,961)	\$ 162,198
Adjustments for non-cash items:			
Depreciation	96,704	104,978	104,027
Amortization	20,762	26,686	26,195
Stock-based compensation expense	18,129	16,827	17,641
Restructuring and asset impairment charges (Notes 2 and 15)	118,779	548,028	3,408
Loss on divestiture (Note 4)	131,124	—	—
Deferred income tax provision	8,328	(48,575)	23,119
Other	(6,113)	2,098	2,106
Changes in certain assets and liabilities:			
Accounts receivable	32,661	46,552	(45,041)
Inventories	69,552	70,874	(5,310)
Accounts payable and accrued liabilities	(2,180)	(8,218)	13,748
Accrued income taxes	(25,247)	(10,163)	(12,485)
Accrued pension and postretirement benefits	(15,013)	4,863	(16,592)
Other	(4,280)	(31,552)	(1,141)
Net cash flow provided by operating activities	219,322	351,437	271,873
INVESTING ACTIVITIES			
Purchases of property, plant and equipment	(110,697)	(100,939)	(117,376)
Disposals of property, plant and equipment	5,978	16,122	1,236
Business acquisition, net of cash acquired (Note 4)	—	—	(634,615)
Proceeds from divestiture (Note 4)	56,127	—	10,225
Other	659	263	356
Net cash flow used for investing activities	(47,933)	(84,554)	(740,174)
FINANCING ACTIVITIES			
Net (decrease) increase in notes payable	(6,288)	(63,647)	31,568
Net increase (decrease) in short-term revolving and other lines of credit	—	200	(3,600)
Term debt borrowings	50,070	89,712	736,079
Term debt repayments	(94,577)	(308,736)	(450,928)
Purchase of capital stock	(295)	(318)	(14,165)
Dividend reinvestment and the effect of employee benefit and stock plans	4,519	13,844	26,676
Cash dividends paid to Shareholders	(63,717)	(56,979)	(56,436)
Other	(181)	(7,039)	1,214
Net cash flow (used for) provided by financing activities	(110,469)	(332,963)	270,408
Effect of exchange rate changes on cash and cash equivalents	(4,835)	(6,355)	(1,494)
CASH AND CASH EQUIVALENTS			
Net increase (decrease) in cash and cash equivalents	56,085	(72,435)	(199,387)
Cash and cash equivalents, beginning of year	105,494	177,929	377,316
Cash and cash equivalents, end of year	\$ 161,579	\$ 105,494	\$ 177,929

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

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

Year ended June 30 (in thousands)	2016		2015		2014	
	Shares	Amount	Shares	Amount	Shares	Amount
CAPITAL STOCK						
Balance at beginning of year	79,375	\$ 99,219	78,672	\$ 98,340	77,842	\$ 97,303
Dividend reinvestment	12	15	7	9	7	9
Capital stock issued under employee benefit and stock plans	319	399	703	879	1,155	1,443
Purchase of capital stock	(12)	(15)	(7)	(9)	(332)	(415)
Balance at end of year	79,694	99,618	79,375	99,219	78,672	98,340
ADDITIONAL PAID-IN CAPITAL						
Balance at beginning of year		419,829		395,890		374,300
Dividend reinvestment		279		311		319
Capital stock issued under employee benefit and stock plans		14,271		23,939		35,019
Sale of subsidiary stock to noncontrolling interests		2,517		—		—
Purchase of capital stock		(279)		(311)		(13,748)
Balance at end of year		436,617		419,829		395,890
RETAINED EARNINGS						
Balance at beginning of year		1,070,282		1,501,157		1,399,227
Net (loss) income		(225,968)		(373,896)		158,366
Cash dividends paid to Shareholders		(63,717)		(56,979)		(56,436)
Balance at end of year		780,597		1,070,282		1,501,157
ACCUMULATED OTHER COMPREHENSIVE (LOSS) INCOME						
Balance at beginning of year		(243,523)		(66,131)		(89,004)
Unrealized (loss) gain on derivatives designated and qualified as cash flow hedges		(150)		6,652		(706)
Reclassification of unrealized (gain) loss on expired derivatives designated and qualified as cash flow hedges		(1,563)		(2,873)		1,987
Unrecognized net pension and other postretirement benefit loss		(78,295)		(47,982)		(11,990)
Reclassification of net pension and other postretirement benefit loss		4,925		2,931		2,184
Foreign currency translation adjustments		(51,508)		(136,120)		31,398
Reclassification of foreign currency translation adjustment loss realized upon sale		15,088		—		—
Other comprehensive (loss) income, net of tax		(111,503)		(177,392)		22,873
Sale of subsidiary stock to noncontrolling interests		2,517		—		—
Balance at end of year		(352,509)		(243,523)		(66,131)
NONCONTROLLING INTERESTS						
Balance at beginning of year		29,628		32,352		30,467
Net income		2,084		2,935		3,832
Other comprehensive (loss) income, net of tax		(1,188)		(3,345)		366
Sale of subsidiary stock to noncontrolling interests		2,566		—		—
Cash dividends paid to noncontrolling interests		(1,612)		(2,314)		(2,313)
Balance at end of year		31,478		29,628		32,352
Total equity, June 30		\$ 995,801		\$ 1,375,435		\$ 1,961,608

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 — NATURE OF OPERATIONS

Kennametal Inc. delivers productivity solutions to customers seeking peak performance in demanding environments. We provide innovative wear-resistant products, application engineering and services backed by advanced material science serving customers across diverse sectors of industrial production, transportation, earthworks, energy, construction, process industries and aerospace. Our solutions are built around industry-essential technology platforms, including precision-engineered metalworking tools and components, surface technologies and earth cutting tools that are mission-critical to customer operations battling extreme conditions associated with wear fatigue, corrosion and high temperatures. The Company's reputation for material and industrial technology excellence, as well as expertise and innovation in development of custom solutions and services, contributes to our leading position in our primary industrial and infrastructure markets. End users of our products include manufacturers, metalworking suppliers, machinery operators and processors engaged in a diverse array of industries, including the manufacture of transportation vehicles and components; machine tool, light machinery and heavy machinery industries; airframe and aerospace components; defense; as well as producers and suppliers in equipment-intensive operations such as coal mining, road construction, quarrying, oil and gas exploration, refining, production and supply.

Our product offering includes a wide selection of standard and customized technologies for metalworking, such as sophisticated metal cutting tools, tooling systems and services, as well as advanced, high-performance materials, such as cemented tungsten carbide products, super alloys, coatings and investment castings to address customer demands. We offer these products through a variety of channels to meet customer-specified needs. We are a leading global supplier of tooling, engineered components and advanced materials consumed in production processes. We believe we are one of the largest global providers of consumable metal cutting tools and tooling supplies.

We specialize in developing and manufacturing metalworking tools and wear-resistant engineered components and coatings using a specialized type of powder metallurgy. Our metalworking tools are made of cemented tungsten carbides, ceramics, cermets and super-hard materials. We also manufacture and market a complete line of tool holders, tool-holding systems and rotary-cutting tools by machining and fabricating steel bars and other metal alloys. In addition, we produce specialized compacts and metallurgical powders, as well as products made from tungsten carbide or other hard materials that are used for custom-engineered and challenging applications, including mining and highway construction, among others. Further, we develop, manufacture and market engineered components and surface technology solutions with proprietary metal cladding capabilities.

Unless otherwise specified, any reference to a "year" is to a fiscal year ended June 30. When used in this annual report on Form 10-K, unless the context requires otherwise, the terms "we," "our" and "us" refer to Kennametal Inc. and its subsidiaries.

NOTE 2 — SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The summary of our significant accounting policies is presented below to assist in evaluating our consolidated financial statements.

PRINCIPLES OF CONSOLIDATION The consolidated financial statements include our accounts and those of our majority-owned subsidiaries. All significant intercompany balances and transactions are eliminated. Investments in entities of less than 50 percent of the voting stock over which we have significant influence are accounted for on an equity basis. The factors used to determine significant influence include, but are not limited to, our management involvement in the investee, such as hiring and setting compensation for management of the investee, the ability to make operating and capital decisions of the investee, representation on the investee's board of directors and purchase and supply agreements with the investee. Investments in entities of less than 50 percent of the voting stock in which we do not have significant influence are accounted for on the cost basis.

USE OF ESTIMATES IN THE PREPARATION OF FINANCIAL STATEMENTS In preparing our consolidated financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP), we make judgments and estimates about the amounts reflected in our financial statements. As part of our financial reporting process, our management collaborates to determine the necessary information on which to base our judgments and develop estimates used to prepare the financial statements. We use historical experience and available information to make these judgments and estimates. However, different amounts could be reported using different assumptions and in light of different facts and circumstances. Therefore, actual amounts could differ from the estimates reflected in our financial statements.

CASH AND CASH EQUIVALENTS Cash investments having original maturities of three months or less are considered cash equivalents. Cash equivalents principally consist of investments in money market funds and bank deposits at June 30, 2016.

ACCOUNTS RECEIVABLE We market our products to a diverse customer base throughout the world. Trade credit is extended based upon periodically updated evaluations of each customer's ability to satisfy its obligations. We make judgments as to our ability to collect outstanding receivables and provide allowances for the portion of receivables when collection becomes doubtful. Accounts receivable reserves are determined based upon an aging of accounts and a review of specific accounts.

INVENTORIES Inventories are stated at the lower of cost or market. We use the last-in, first-out (LIFO) method for determining the cost of a significant portion of our United States (U.S.) inventories. The cost of the remainder of our inventories is determined under the first-in, first-out or average cost methods. When market conditions indicate an excess of carrying costs over market value, a lower-of-cost-or-market provision is recorded. Excess and obsolete inventory reserves are established based upon our evaluation of the quantity of inventory on hand relative to demand. The excess and obsolete inventory reserve at June 30, 2016 and 2015 was \$36.7 million and \$45.0 million, respectively.

PROPERTY, PLANT AND EQUIPMENT Property, plant and equipment are carried at cost. Major improvements are capitalized, while maintenance and repairs are expensed as incurred. Retirements and disposals are removed from cost and accumulated depreciation accounts, with the gain or loss reflected in operating income. Interest related to the construction of major facilities is capitalized as part of the construction costs and is depreciated over the facilities' estimated useful lives.

Depreciation for financial reporting purposes is computed using the straight-line method over the following estimated useful lives: building and improvements over 15-40 years; machinery and equipment over 4-15 years; furniture and fixtures over 5-10 years and computer hardware and software over 3-5 years.

Leased property and equipment under capital leases are depreciated using the straight-line method over the terms of the related leases.

LONG-LIVED ASSETS We evaluate the recoverability of property, plant and equipment and intangible assets that are amortized, whenever events or changes in circumstances indicate the carrying amount of any such assets may not be fully recoverable. Changes in circumstances include technological advances, changes in our business model, capital structure, economic conditions or operating performance. Our evaluation is based upon, among other things, our assumptions about the estimated future undiscounted cash flows these assets are expected to generate. When the sum of the undiscounted cash flows is less than the carrying value of the asset or asset group, we will recognize an impairment loss to the extent that carrying value exceeds fair value. We apply our best judgment when performing these evaluations to determine if a triggering event has occurred, the undiscounted cash flows used to assess recoverability and the fair value of the asset.

GOODWILL AND OTHER INTANGIBLE ASSETS Goodwill represents the excess of cost over the fair value of the net assets of acquired companies. Goodwill and other intangible assets with indefinite lives are tested at least annually for impairment. We perform our annual impairment tests during the June quarter in connection with our annual planning process, unless there are impairment indicators based on the results of an ongoing cumulative qualitative assessment that warrant a test prior to that. We evaluate the recoverability of goodwill for each of our reporting units by comparing the fair value of each reporting unit with its carrying value. The fair values of our reporting units are determined using a combination of a discounted cash flow analysis and market multiples based upon historical and projected financial information. We apply our best judgment when assessing the reasonableness of the financial projections used to determine the fair value of each reporting unit. We evaluate the recoverability of indefinite-lived intangible assets using a discounted cash flow analysis based on projected financial information. This evaluation is sensitive to changes in market interest rates and other external factors.

Identifiable assets with finite lives are reviewed for impairment when events or circumstances indicate that the carrying value may not be recoverable. During the December quarter of fiscal 2016, we performed an interim review of our identifiable assets with finite lives and preliminarily determined that the assets were not impaired. During the March quarter of fiscal 2016, we completed the finalization of fair values related to intangibles and property, plant and equipment. We also completed a review of our identifiable assets with finite lives and determined that the assets were not impaired.

Acquisition Impact on Goodwill

On November 4, 2013, we acquired TMB from Allegheny Technologies Incorporated (ATI), the operations of which are included in both the Industrial and Infrastructure segments. As a result of the acquisition, we increased goodwill by \$246.6 million in based on our purchase price allocations, \$3.0 million of which was recorded in the Industrial segment in 2015 based on finalization of the purchase price allocation. The goodwill recorded relates to operating synergies associated with the acquisition that we expected to realize. Goodwill of \$202.1 million was deductible for tax purposes.

2015 December Quarter Impairment Charge

As previously disclosed, we recorded a non-cash pre-tax impairment charge during the three months ended December 31, 2014 of \$376.5 million in the Infrastructure segment, of which \$375.0 million was for goodwill and \$1.5 million was for an indefinite-lived trademark intangible asset.

2015 March Quarter Impairment Charge

As previously disclosed, we recorded an additional non-cash pre-tax impairment charge during the three months ended March 31, 2015 of \$152.9 million in the Infrastructure reporting unit, of which \$152.5 million was for goodwill and \$0.4 million was for an indefinite-lived trademark intangible asset.

In addition, we recorded an additional \$6.8 million charge during the three months ended March 31, 2015 for an indefinite-lived trademark intangible asset based upon completion of the 2015 December valuation.

During 2015, an impairment of \$10.5 million was recorded for a contract-based technology intangible asset that was part of the Infrastructure segment, resulting in a non-cash impairment charge of \$5.5 million and a reduction in a liability of \$5.0 million.

2016 December Quarter Impairment Charge

Late in the December quarter of fiscal 2016, the Company experienced a further unexpected deterioration in customer demand in many of its end markets and certain geographies at that time. Industrial production indices in the U.S. and China declined, as well as further reductions in mining and oil and gas activity. In view of these declines and the significant impact on our near term financial forecasts as well as a significant and sustained decline in the Company's stock price, we determined an interim impairment test of our goodwill and other long-lived assets of our Industrial and Infrastructure reporting units was required. As a result of this interim test, we recorded a preliminary non-cash pre-tax impairment charge during the three months ended December 31, 2015 of \$106.1 million in the Infrastructure segment, of which \$105.7 million was for goodwill and \$0.4 million was for an indefinite-lived trademark intangible asset. We also recorded a preliminary non-cash pre-tax impairment charge during the three months ended December 31, 2015 of \$2.3 million in the Industrial segment for an indefinite-lived trademark intangible asset. These impairment charges are recorded in restructuring and asset impairment charges in our consolidated statements of income. There is \$298.5 million of goodwill at the Industrial reporting unit. The Industrial reporting unit passed the 2016 interim and annual goodwill impairment tests with fair value substantially exceeded the carrying value. No goodwill remains with the Infrastructure reporting unit as of June 30, 2016.

The further acceleration or extended persistence of the current downturn in the global end markets could have a further negative impact on our business and financial performance. We cannot provide assurance that we will achieve all of the anticipated benefits from restructuring actions we have taken and expect to continue to take. If we are unable to effectively restructure our operations in the light of evolving market conditions, it could have a material adverse effect on our business, financial condition, results of operations and cash flows. We are currently exploring strategic alternatives for a remaining non-core Infrastructure business. The estimated net book value of the business is approximately \$30 million as of June 30, 2016. As the strategic direction has not yet been determined for these businesses, the Company cannot determine if additional impairment charges will be incurred.

We recorded no goodwill and other intangible asset impairment charges in 2014.

Divestiture Impact on Goodwill

During 2016, we completed the sale of non-core businesses, see Note 4. As a result of this transaction, goodwill decreased by \$1.1 million and \$6.5 million in our Industrial and Infrastructure segments, respectively. These decreases are recorded in loss on divestiture in our consolidated statements of income.

Divestiture Impact on Other Intangible Assets

The divestiture of non-core businesses completed during 2016 resulted in a reduction of \$30.0 million in customer-related, \$15.4 million in unpatented technology, \$5.0 million in indefinite-lived trademarks, \$1.1 million in definite-lived trademarks, \$0.8 million in technology-based and other and \$0.5 million in contract-based.

PENSION AND OTHER POSTRETIREMENT BENEFITS We sponsor these types of benefit plans for certain employees and retirees. Accounting for the cost of these plans requires the estimation of the cost of the benefits to be provided well into the future and attributing that cost over the expected work life of employees participating in these plans. This estimation requires our judgment about the discount rate used to determine these obligations, expected return on plan assets, rate of future compensation increases, rate of future health care costs, withdrawal and mortality rates and participant retirement age. Differences between our estimates and actual results may significantly affect the cost of our obligations under these plans.

In the valuation of our pension and other postretirement benefit liabilities, management utilizes various assumptions. Discount rates are derived by identifying a theoretical settlement portfolio of high quality corporate bonds sufficient to provide for a plan's projected benefit payments. This rate can fluctuate based on changes in the corporate bond yields.

The long-term rate of return on plan assets is estimated based on an evaluation of historical returns for each asset category held by the plans, coupled with the current and short-term mix of the investment portfolio. The historical returns are adjusted for expected future market and economic changes. This return will fluctuate based on actual market returns and other economic factors.

The rate of future health care costs is based on historical claims and enrollment information projected over the next year and adjusted for administrative charges. This rate is expected to decrease until 2027.

Future compensation rates, withdrawal rates and participant retirement age are determined based on historical information. These assumptions are not expected to significantly change. Mortality rates are determined based on a review of published mortality tables.

EARNINGS PER SHARE Basic earnings per share is computed using the weighted average number of shares outstanding during the period, while diluted earnings per share is calculated to reflect the potential dilution that occurs related to the issuance of capital stock under stock option grants, restricted stock awards and restricted stock units. The difference between basic and diluted earnings per share relates solely to the effect of capital stock options, restricted stock awards and restricted stock units.

In 2016 and 2015, the effect of unexercised capital stock options and unvested restricted stock units was anti-dilutive as a result of a net loss in the periods and therefore has been excluded from diluted shares outstanding as well as from the diluted earnings per share calculation. For purposes of determining the number of diluted shares outstanding at June 30, 2014, weighted average shares outstanding for basic earnings per share calculations were increased due solely to the dilutive effect of unexercised capital stock options, unvested restricted stock awards and unvested restricted stock units by 1.0 million shares. Unexercised capital stock options, unvested restricted stock awards and restricted stock units of 0.3 million shares at June 30, 2014 were not included in the computation of diluted earnings per share because the option exercise price was greater than the average market price, and therefore the inclusion would have been anti-dilutive.

REVENUE RECOGNITION We recognize revenue for our products and assembled machines when title and all risks of loss and damages pass to the buyer. Our general conditions of sale explicitly state that the delivery of our products and assembled machines is freight on board shipping point and that title and all risks of loss and damage pass to the buyer upon delivery of the sold products or assembled machines to the common carrier.

Our general conditions of sale explicitly state that acceptance of the conditions of shipment are considered to have occurred unless written notice of objection is received by Kennametal within 10 calendar days of the date specified on the invoice. We do not ship products or assembled machines unless we have documentation from our customers authorizing shipment. Our products are consumed by our customers in the manufacture of their products. Historically, we have experienced very low levels of returned products and assembled machines and do not consider the effect of returned products and assembled machines to be material. We have recorded an estimated returned goods allowance to provide for any potential returns.

We warrant that products and services sold are free from defects in material and workmanship under normal use and service when correctly installed, used and maintained. This warranty terminates 30 days after delivery of the product to the customer and does not apply to products that have been subjected to misuse, abuse, neglect or improper storage, handling or maintenance. Products may be returned to Kennametal, only after inspection and approval by Kennametal and upon receipt by the customer of shipping instructions from Kennametal. We have included an estimated allowance for warranty returns in our returned goods allowance.

We recognize revenue related to the sale of specialized assembled machines upon customer acceptance and installation, as installation is deemed essential to the functionality of a specialized assembled machine. Sales of specialized assembled machines were immaterial for 2016, 2015 and 2014.

STOCK-BASED COMPENSATION We recognize stock-based compensation expense for all stock options, restricted stock awards and restricted stock units over the period from the date of grant to the date when the award is no longer contingent on the employee providing additional service (substantive vesting period). We utilize the Black-Scholes valuation method to establish the fair value of all stock option awards. Time vesting stock units are valued at the market value of the stock on the grant date. Performance vesting stock units with a market condition are valued using a Monte Carlo model.

Capital stock options are granted to eligible employees at fair market value at the date of grant. Capital stock options are exercisable under specified conditions for up to 10 years from the date of grant. The Kennametal Inc. Stock and Incentive Plan of 2010, as Amended and Restated on October 22, 2013, and as further amended January 27, 2015 (A/R 2010 Plan) authorizes the issuance of up to 9,500,000 shares of the Company's capital stock plus any shares remaining unissued under the Kennametal Inc. Stock and Incentive Plan of 2002, as amended (2002 Plan). Under the provisions of the A/R 2010 Plan participants may deliver stock, owned by the holder for at least six months, in payment of the option price and receive credit for the fair market value of the shares on the date of delivery. The fair market value of shares delivered during 2016, 2015 and 2014 was immaterial. In addition to stock option grants, the A/R 2010 Plan permits the award of stock appreciation rights, performance share awards, performance unit awards, restricted stock awards, restricted unit awards and share awards to directors, officers and key employees.

RESEARCH AND DEVELOPMENT COSTS Research and development costs of \$39.4 million, \$45.1 million and \$44.0 million in 2016, 2015 and 2014, respectively, were expensed as incurred. These costs are included in operating expense in the consolidated statements of income.

SHIPPING AND HANDLING FEES AND COSTS All fees billed to customers for shipping and handling are classified as a component of sales. All costs associated with shipping and handling are classified as a component of cost of goods sold.

INCOME TAXES Deferred income taxes are recognized based on the future income tax effects (using enacted tax laws and rates) of differences in the carrying amounts of assets and liabilities for financial reporting and tax purposes. A valuation allowance is recognized if it is "more likely than not" that some or all of a deferred tax asset will not be realized.

DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES As part of our financial risk management program, we use certain derivative financial instruments. We do not enter into derivative transactions for speculative purposes and, therefore, hold no derivative instruments for trading purposes. We use derivative financial instruments to provide predictability to the effects of changes in foreign exchange rates on our consolidated results, achieve our targeted mix of fixed and floating interest rates on outstanding debt. Our objective in managing foreign exchange exposures with derivative instruments is to reduce volatility in cash flow, allowing us to focus more of our attention on business operations. With respect to interest rate management, these derivative instruments allow us to achieve our targeted fixed-to-floating interest rate mix, as a separate decision from funding arrangements, in the bank and public debt markets.

We account for derivative instruments as a hedge of the related asset, liability, firm commitment or anticipated transaction, when the derivative is specifically designated as a hedge of such items. We measure hedge effectiveness by assessing the changes in the fair value or expected future cash flows of the hedged item. The ineffective portions are recorded in other (income) expense, net. Certain currency forward contracts hedging significant cross-border intercompany loans are considered other derivatives and, therefore, do not qualify for hedge accounting. These contracts are recorded at fair value in the balance sheet, with the offset to other (income) expense, net.

CASH FLOW HEDGES *Currency* Forward contracts and range forward contracts (a transaction where both a put option is purchased and a call option is sold) are designated as cash flow hedges and hedge anticipated cash flows from cross-border intercompany sales of products and services. Gains and losses realized on these contracts at maturity are recorded in accumulated other comprehensive (loss) income, and are recognized as a component of other (income) expense, net when the underlying sale of products or services is recognized into earnings.

Interest Rate Floating-to-fixed interest rate swap contracts, designated as cash flow hedges, are entered into from time to time to hedge our exposure to interest rate changes on a portion of our floating rate debt. These interest rate swap contracts convert a portion of our floating rate debt to fixed rate debt. We record the fair value of these contracts as an asset or a liability, as applicable, in the balance sheet, with the offset to accumulated other comprehensive (loss) income.

FAIR VALUE HEDGES *Interest Rate* Fixed-to-floating interest rate swap contracts, designated as fair value hedges, are entered into from time to time to hedge our exposure to fair value fluctuations on a portion of our fixed rate debt. These interest rate swap contracts convert a portion of our fixed rate debt to floating rate debt. When in place, these contracts require periodic settlement, and the difference between amounts to be received and paid under the contracts is recognized in interest expense.

CURRENCY TRANSLATION Assets and liabilities of international operations are translated into U.S. dollars using year-end exchange rates, while revenues and expenses are translated at average exchange rates throughout the year. The resulting net translation adjustments are recorded as a component of accumulated other comprehensive (loss) income. The local currency is the functional currency of most of our locations. A gain of \$1.6 million, a gain of \$1.7 million and a loss of \$2.5 million from currency transactions were included in other (income) expense, net in 2016, 2015 and 2014, respectively.

NEW ACCOUNTING STANDARDS

Adopted

In April 2014, the Financial Accounting Standards Board (FASB) issued guidance on reporting discontinued operations and disclosures of disposals of components of an entity. Under the guidance, only disposals representing a strategic shift in operations should be presented as discontinued operations. Additionally, the guidance requires expanded disclosures about discontinued operations that will provide financial statement users with more information about the assets, liabilities, income and expenses of discontinued operations. The guidance also requires disclosure of the pre-tax income attributable to a disposal of a significant part of an organization that does not qualify for discontinued operations reporting. This guidance was effective for Kennametal beginning July 1, 2015. The divestiture of non-core businesses outlined in Note 4 was evaluated under this guidance.

Issued

In June 2016, the FASB issued guidance on measurement of credit losses on financial instruments. The new guidance introduces an approach based on expected losses to estimate credit losses on certain types of financial instruments. It also modifies the impairment model for available-for-sale debt securities and provides for a simplified accounting model for purchased financial assets with credit deterioration since their origination. The scope of this amendment includes valuation of trade receivables. This standard is effective for Kennametal beginning July 1, 2020. We are in the process of assessing the impact the adoption of this guidance will have on our consolidated financial statements.

In May 2016, the FASB issued guidance on narrow scope improvements and practical expedients as part of Topic 606: Revenue from Contracts with Customers. The amendments address collectability criterion and accounting for contracts that do not meet the criteria, presentation of sales taxes and other similar taxes collected from customers, noncash consideration, contract modifications at transition and completed contracts at transition, in addition to a technical correction. This standard is effective for Kennametal beginning July 1, 2018, in conjunction with the adoption of Accounting Standards Update 2014-09, "Revenue from Contracts with Customers: Topic 606." We are in the process of assessing the impact the adoption of this guidance will have on our consolidated financial statements.

In April 2016, the FASB issued guidance on identifying performance obligations and licensing as part of Topic 606: Revenue from Contracts with Customers. The amendments in this update clarify identifying performance obligations and the licensing implementation guidance, while retaining the related principles for those areas. This standard is effective for Kennametal beginning July 1, 2018, in conjunction with the adoption of Accounting Standards Update 2014-09, "Revenue from Contracts with Customers: Topic 606." We are in the process of assessing the impact the adoption of this guidance will have on our consolidated financial statements.

In March 2016, the FASB issued guidance intended to simplify equity-based award accounting and presentation. The guidance impacts income tax accounting related to equity-based awards, the classification of awards as either equity or liabilities, and the classification on the statement of cash flows. This standard is effective for Kennametal beginning July 1, 2017. We are in the process of assessing the impact the adoption of this guidance will have on our consolidated financial statements.

In March 2016, the FASB issued guidance on principal versus agent considerations in reporting revenue gross versus net. This guidance is intended to improve the operability and understandability of the implementation guidance on principal versus agent considerations. As this update serves to clarify existing guidance, it is not expected to have a material impact on our consolidated financial statements.

In February 2016, the FASB issued guidance on lease accounting, which replaces the existing guidance in ASC 840, Leases. The standard establishes a right-of-use (ROU) model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. This standard is effective for Kennametal beginning July 1, 2019. We are in the process of assessing the impact the adoption of this guidance will have on our consolidated financial statements.

In November 2015, the FASB issued guidance on balance sheet classification of deferred taxes. The amendments in this Update require that deferred tax liabilities and assets be classified as noncurrent in a classified statement of financial position, as opposed to the current practice of separating deferred income tax liabilities and assets into current and noncurrent amounts on the balance sheet. This standard is effective for Kennametal beginning July 1, 2017. We are in the process of assessing the impact the adoption of this ASU will have on our consolidated financial statements.

In August 2015, the FASB issued guidance that defers the effective date of previously issued ASU 2014-09, "Revenue from Contracts with Customers: Topic 606." Under this guidance, the effective date for Kennametal was deferred from July 1, 2017 to July 1, 2018. We are in the process of assessing the impact the adoption of this ASU will have on our consolidated financial statements.

In July 2015, the FASB issued guidance on subsequent measurement of inventory. The amendments in this update require that inventory other than LIFO be subsequently measured at the lower of cost and net realizable value, as opposed to the current practice of lower of cost or market. Subsequent measurement is unchanged for inventory measured using LIFO. This standard is effective for Kennametal beginning July 1, 2017. We are in the process of evaluating the impact of adoption on our consolidated financial statements.

In April 2015, the FASB issued guidance on the presentation of debt issuance costs. The guidance requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct reduction from the carrying amount of that debt liability, consistent with debt discounts. This standard is effective for Kennametal beginning July 1, 2016 and will be retrospectively applied. The guidance did not have a material impact on our consolidated financial position, results of operations and cash flows.

In April 2015, the FASB issued guidance on accounting for fees paid in a cloud computing arrangement. The amendments in this update provide guidance to customers about whether a cloud computing arrangement includes a software license and accounting for the arrangement as capitalized and amortized as an intangible asset or expensed as incurred as a service contract. This standard is effective for Kennametal beginning July 1, 2016. The provisions of the guidance may be applied prospectively or retrospectively. We plan to adopt this guidance prospectively, and adoption of this ASU is not expected to have a material impact on our consolidated financial position, results of operations and cash flows.

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers: Topic 606." This ASU replaces nearly all existing U.S. GAAP guidance on revenue recognition. The standard prescribes a five-step model for recognizing revenue, the application of which will require significant judgment. This standard is effective for Kennametal July 1, 2017. We are in the process of assessing the impact the adoption of this ASU will have on our consolidated financial statements.

NOTE 3 — SUPPLEMENTAL CASH FLOW DISCLOSURES

Year ended June 30 (in thousands)	2016	2015	2014
Cash paid during the period for:			
Interest	\$ 26,250	\$ 30,984	\$ 29,836
Income taxes	43,733	40,295	49,393
Supplemental disclosure of non-cash information:			
Changes in accounts payable related to purchases of property, plant and equipment	1,000	(9,900)	2,100

NOTE 4 — ACQUISITIONS AND DIVESTITURES

Divestiture of Non-Core Businesses

In 2016, Kennametal completed the transaction to sell all of the outstanding capital stock of: Kennametal Extrude Hone LLC and its wholly owned subsidiaries, Kennametal Stellite S.r.l. (Bellusco, Italy), Kennametal Stellite S.p.A. (Milan, Italy), Kennametal Stellite GmbH (Koblenz, Germany); and all of the assets of the businesses of: Tricon (manufacturing operations in Birmingham, Alabama; Chicago, Illinois; and Elko, Nevada), Landis (manufacturing operation in Waynesboro, Pennsylvania); and all of the assets located at the Biel, Switzerland manufacturing facility ("non-core businesses") to Madison Industries for an aggregate price of \$56.1 million cash, net of cash. A portion of the transaction proceeds were used to pay down revolver debt and the remaining balance is being held as cash on hand.

The net book value of these non-core businesses was \$191.9 million. The pre-tax net loss on divestiture recognized in 2016 was \$131.5 million, of which \$127.9 million and \$3.6 million were recorded in the Infrastructure and Industrial segments, respectively. The pre-tax income attributable to the non-core businesses was assessed and determined to be immaterial for disclosure for the periods presented.

TMB Acquisition

On November 4, 2013, the Company completed its transaction to acquire TMB from ATI which included all of the assets of TDY Industries, LLC, a wholly owned subsidiary of ATI, used or held for use by TDY in connection with the business; and all of the shares of TDY Limited and ATI Holdings SAS, both wholly-owned subsidiaries of ATI, for a preliminary purchase price of \$607.0 million, net of cash acquired. We funded the acquisition primarily through a combination of cash from operations and available borrowings under our existing credit facility. TMB is a leading producer of tungsten metallurgical powders, as well as tooling technologies and components. When acquired, the business had approximately 1,175 employees in 12 locations primarily in the United States of America, and 6 other countries.

As part of the acquisition of TMB, Kennametal incurred \$8.7 million for the year ended June 30, 2014 of acquisition-related costs, which are included in operating expense and cost of goods sold.

The accompanying consolidated balance sheet as of June 30, 2015 reflects the final allocation of the purchase price. We recorded an additional \$3.0 million of goodwill in 2015 based on finalization of the purchase price. See Note 2.

The operating results for the year ended June 30, 2014 include net sales of \$194.9 million and net loss attributable to Kennametal of \$10.5 million related to TMB.

TMB Unaudited Pro Forma Financial Information

The following unaudited pro forma summary of operating results presents the consolidated results of operations as if the TMB acquisition had occurred on July 1, 2012. These amounts were calculated after applying our accounting policies and adjusting TMB's results to reflect increased depreciation and amortization expense resulting from recording fixed assets and intangible assets at fair value, as well as increased cost of sales resulting from recording inventory at fair value. The pro forma results for the year ended June 30, 2014 excludes \$8.7 million of acquisition-related and includes \$19.1 million of restructuring-related pre-tax costs. The pro forma results have been presented for comparative purposes only, include no expected sales or cost synergies and are not indicative of future results of operations or what would have occurred had the acquisition been made on July 1, 2012.

Unaudited pro forma summary of operating results of Kennametal, assuming the acquisition had occurred as of July 1, 2012, are as follows:

Year ended June 30 (in thousands)		2014
Pro forma (unaudited):		
Net Sales	\$	2,941,005
Net income attributable to Kennametal	\$	175,804
Per share data attributable to Kennametal Shareholders :		
Basic earnings per share	\$	2.23
Diluted earnings per share	\$	2.21

During the year ended June 30, 2014, we divested a small non-core business acquired as part of the TMB acquisition for proceeds of \$10.2 million.

Emura

On August 1, 2013, the Company acquired the operating assets of Emura, based in La Paz, Bolivia, and secured related material sourcing agreements for a purchase price of \$40.1 million, of which \$25.6 million was paid in fiscal year 2014 and \$0.5 million was paid in fiscal year 2013, and \$14.0 million of contingent consideration, as discussed in Note 5. Emura's principal operations are engaged in collecting, testing, processing and exporting tungsten ore material, and was a long-standing supplier to Kennametal. The addition of Emura enhances the Company's strategic tungsten sourcing capabilities to serve growth globally.

Other

On September 30, 2013, the Company completed a small acquisition in the Infrastructure segment for \$2.0 million.

NOTE 5 — FAIR VALUE MEASUREMENTS

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy consists of three levels to prioritize the inputs used in valuations, as defined below:

Level 1: Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.

Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly, including quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability (e.g., interest rates); and inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Level 3: Inputs that are unobservable.

As of June 30, 2016, the fair values of the Company's financial assets and financial liabilities measured at fair value on a recurring basis are categorized as follows:

(in thousands)	Level 1	Level 2	Level 3	Total
Assets:				
Derivatives ⁽¹⁾	\$ —	\$ 334	\$ —	\$ 334
Total assets at fair value	\$ —	\$ 334	\$ —	\$ 334
Liabilities:				
Derivatives ⁽¹⁾	\$ —	\$ 763	\$ —	\$ 763
Contingent consideration	—	—	6,600	6,600
Total liabilities at fair value	\$ —	\$ 763	\$ 6,600	\$ 7,363

There have been no changes in classification and transfers between levels in the fair value hierarchy in the current period. The fair value of contingent consideration payable that was classified as Level 3 relates to our probability assessments of expected future milestone targets, primarily associated with product delivery, related to a previous acquisition. The contingent consideration is expected to be paid over the next six months and is recorded in other current liabilities in our consolidated balance sheet. The Company reassessed this contingent consideration and determined that an adjustment of \$3.4 million to reduce the fair value of the remaining contingent consideration was necessary during 2016 due to agreed upon terms with the seller that they did not achieve certain milestone targets and to a return of inventory to the seller during the period. No other changes in the expected outcome have occurred during 2016.

As of June 30, 2015, the fair value of the Company's financial assets and financial liabilities measured at fair value on a recurring basis are categorized as follows:

(in thousands)	Level 1	Level 2	Level 3	Total
Assets:				
Derivatives ⁽¹⁾	\$ —	\$ 2,678	\$ —	\$ 2,678
Total assets at fair value	\$ —	\$ 2,678	\$ —	\$ 2,678
Liabilities:				
Derivatives ⁽¹⁾	\$ —	\$ 44	\$ —	\$ 44
Contingent consideration	—	—	10,000	10,000
Total liabilities at fair value	\$ —	\$ 44	\$ 10,000	\$ 10,044

⁽¹⁾ Currency derivatives are valued based on observable market spot and forward rates and are classified within Level 2 of the fair value hierarchy.

NOTE 6 — DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

As part of our financial risk management program, we use certain derivative financial instruments. See Note 2 for discussion on our derivative instruments and hedging activities policy.

The fair value of derivatives designated and not designated as hedging instruments in the consolidated balance sheet are as follows:

(in thousands)	2016	2015
Derivatives designated as hedging instruments		
Other current assets - range forward contracts	\$ 323	\$ 2,626
Total derivatives designated as hedging instruments	323	2,626
Derivatives not designated as hedging instruments		
Other current assets - currency forward contracts	11	52
Other current liabilities - currency forward contracts	(763)	(44)
Total derivatives not designated as hedging instruments	(752)	8
Total derivatives	\$ (429)	\$ 2,634

Certain currency forward contracts that hedge significant cross-border intercompany loans are considered as other derivatives and therefore do not qualify for hedge accounting. These contracts are recorded at fair value in the consolidated balance sheet, with the offset to other (income) expense, net. Losses (gains) related to derivatives not designated as hedging instruments have been recognized as follows:

(in thousands)	2016	2015	2014
Other (income) expense, net - currency forward contracts	\$ 719	\$ (1,026)	\$ 1,057

FAIR VALUE HEDGES

Fixed-to-floating interest rate swap contracts, designated as fair value hedges, are entered into from time to time to hedge our exposure to fair value fluctuations on a portion of our fixed rate debt. We had no such contracts outstanding at June 30, 2016 and June 30, 2015.

CASH FLOW HEDGES

Currency forward contracts and range forward contracts (a transaction where both a put option is purchased and a call option is sold) are designated as cash flow hedges and hedge anticipated cash flows from cross-border intercompany sales of products and services. Gains and losses realized on these contracts at maturity are recorded in accumulated other comprehensive (loss) income, and are recognized as a component of other (income) expense, net when the underlying sale of products or services is recognized into earnings. The notional amount of the contracts translated into U.S. dollars at June 30, 2016 and 2015 was \$53.3 million and \$53.8 million, respectively. The time value component of the fair value of range forward contracts is excluded from the assessment of hedge effectiveness. Assuming the market rates remain constant with the rates at June 30, 2016, we expect to recognize into earnings in the next 12 months an immaterial amount of losses on outstanding derivatives.

Floating-to-fixed interest rate swap contracts, designated as cash flow hedges, are entered into from time to time to hedge our exposure to interest rate changes on a portion of our floating rate debt. These interest rate swap contracts convert a portion of our floating rate debt to fixed rate debt. We record the fair value of these contracts as an asset or a liability, as applicable, in the balance sheet, with the offset to accumulated other comprehensive (loss) income, net of tax. We had no such contracts outstanding at June 30, 2016 or 2015, respectively.

The following represents gains and losses related to cash flow hedges:

(in thousands)	2016	2015	2014
Gains (losses) recognized in other comprehensive loss (income), net	\$ (297)	\$ 6,651	\$ (702)
Losses (gains) reclassified from accumulated other comprehensive loss into other (income) expense, net	\$ 381	\$ (250)	\$ 1,399

No portion of the gains or losses recognized in earnings was due to ineffectiveness and no amounts were excluded from our effectiveness testing for the years ended June 30, 2016, 2015 and 2014.

NOTE 7 — INVENTORIES

Inventories consisted of the following at June 30:

(in thousands)	2016		2015	
Finished goods	\$	284,054	\$	324,840
Work in process and powder blends		166,274		249,629
Raw materials		68,472		100,881
Inventories at current cost		518,800		675,350
Less: LIFO valuation		(59,970)		(99,819)
Total inventories	\$	458,830	\$	575,531

We used the LIFO method of valuing inventories for approximately 44 percent and 47 percent of total inventories at June 30, 2016 and 2015, respectively.

NOTE 8 — GOODWILL AND OTHER INTANGIBLE ASSETS

A summary of the carrying amount of goodwill attributable to each segment, as well as the changes in such, is as follows:

(in thousands)	Industrial		Infrastructure		Total	
Gross goodwill	\$	472,337	\$	654,081	\$	1,126,418
Accumulated impairment losses		(150,842)		—		(150,842)
Balance as of June 30, 2014	\$	321,495	\$	654,081	\$	975,576
Activity for the year ended June 30, 2015:						
Acquisition		2,984		—		2,984
Translation		(19,950)		(13,721)		(33,671)
Change in gross goodwill		(16,966)		(13,721)		(30,687)
Gross goodwill		455,371		640,360		1,095,731
Accumulated impairment losses		(150,842)		(527,500)		(678,342)
Balance as of June 30, 2015	\$	304,529	\$	112,860	\$	417,389
Activity for the year ended June 30, 2016:						
Divestiture		(1,075)		(6,461)		(7,536)
Translation		(4,967)		(688)		(5,655)
Change in gross goodwill		(6,042)		(7,149)		(13,191)
Impairment charges		—		(105,711)		(105,711)
Gross goodwill		449,329		633,211		1,082,540
Accumulated impairment losses		(150,842)		(633,211)		(784,053)
Balance as of June 30, 2016	\$	298,487	\$	—	\$	298,487

The components of our other intangible assets were as follows:

(in thousands)	Estimated Useful Life (in years)	June 30, 2016		June 30, 2015	
		Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Contract-based	3 to 15	\$ 7,152	\$ (6,886)	\$ 8,523	\$ (6,990)
Technology-based and other	4 to 20	47,323	(27,011)	52,820	(29,723)
Customer-related	10 to 21	205,471	(66,938)	275,796	(90,141)
Unpatented technology	10 to 30	31,837	(4,614)	59,449	(14,426)
Trademarks	5 to 20	12,668	(8,644)	18,575	(12,090)
Trademarks	Indefinite	16,850	—	24,876	—
Total		\$ 321,301	\$ (114,093)	\$ 440,039	\$ (153,370)

Amortization expense for intangible assets was \$20.8 million, \$26.7 million and \$26.2 million for 2016, 2015 and 2014, respectively. Estimated amortization expense for 2017 through 2021 is \$15.8 million, \$14.3 million, \$13.9 million, \$13.7 million, and \$13.3 million, respectively.

NOTE 9 — OTHER CURRENT LIABILITIES

Other current liabilities consisted of the following at June 30:

(in thousands)	2016	2015
Accrued employee benefits	\$ 33,754	\$ 40,995
Accrued restructuring (Note 15)	15,703	20,788
Payroll, state and local taxes	12,983	15,006
Accrued legal and professional fees	12,112	11,710
Accrued interest	7,079	7,040
Other	70,638	83,139
Total other current liabilities	\$ 152,269	\$ 178,678

NOTE 10 — LONG-TERM DEBT AND CAPITAL LEASES

Long-term debt and capital lease obligations consisted of the following at June 30:

(in thousands)	2016	2015
2.65% Senior Unsecured Notes due 2019 net of discount of \$0.3 million for 2016 and \$0.3 million for 2015	\$ 399,748	\$ 399,671
3.875% Senior Unsecured Notes due 2022 net of discount of \$0.2 million for 2016 and \$0.2 million for 2015	299,794	299,757
Credit Agreement:		
Euro-denominated borrowings, 0.9% to 1.1% in 2016 and 2015, due 2021	—	42,609
U.S. Dollar-denominated borrowings, 1.2% in 2016 and 2015, due 2021	—	200
Capital leases with terms expiring through 2018 at 1.6% to 5.4% in 2016 and 2015	748	1,771
Other	—	6
Total debt and capital leases	700,290	744,014
Less current maturities:		
Long-term debt	—	(8,049)
Capital leases	(732)	(74)
Other	—	(6)
Total current maturities	(732)	(8,129)
Long-term debt and capital leases, less current maturities	\$ 699,558	\$ 735,885

Senior Unsecured Notes On November 7, 2012, we issued \$400.0 million of 2.65 percent Senior Unsecured Notes due in 2019. Interest is paid semi-annually on May 1 and November 1 of each year. We used the net proceeds from this notes offering to repay outstanding indebtedness under our credit facility and for general corporate purposes. On February 14, 2012, we issued \$300 million of 3.875 percent Senior Unsecured Notes due in 2022. Interest is paid semi-annually on February 15 and August 15 of each year.

Credit Agreement The five-year, multi-currency, revolving credit facility, as amended and restated in April 2016 (Credit Agreement) permits revolving credit loans of up to \$600 million for working capital, capital expenditures and general corporate purposes. The Credit Agreement matures in April 2021 and allows for borrowings in U.S. dollars, euro, Canadian dollars, pound sterling and Japanese yen. Interest payable under the Credit Agreement is based upon the type of borrowing under the facility and may be (1) LIBOR plus an applicable margin, (2) the greater of the prime rate or the Federal Funds effective rate plus an applicable margin, or (3) fixed as negotiated by us.

The Credit Agreement requires us to comply with various restrictive and affirmative covenants, including two financial covenants: a maximum leverage ratio and a minimum consolidated interest coverage ratio (as those terms are defined in the agreement). We were in compliance with all covenants as of June 30, 2016. We had \$0.0 million and \$42.8 million of borrowings outstanding under the Credit Agreement as of June 30, 2016 and June 30, 2015, respectively. Borrowings under the Credit Agreement are guaranteed by our significant domestic subsidiaries.

Future principal maturities of long-term debt are \$400 million in 2020 and \$300 million beyond 2021.

Future minimum lease payments under capital leases for the next five years and thereafter in total are as follows:

(in thousands)

2017	\$	775
2018		25
2019		—
2020		—
2021		—
After 2021		—
Total future minimum lease payments		800
Less amount representing interest		(52)
Amount recognized as capital lease obligations	\$	748

At June 30, 2016 and 2015 our collateralized debt consisted of capitalized lease obligations of \$0.7 million and \$1.8 million, respectively. The underlying assets collateralize these obligations.

NOTE 11 — NOTES PAYABLE AND LINES OF CREDIT

Notes payable to banks of \$1.2 million and \$7.6 million at June 30, 2016 and 2015, respectively, represents short-term borrowings under credit lines with commercial banks. These credit lines, translated into U.S. dollars at June 30, 2016 exchange rates, totaled \$152.4 million at June 30, 2016, of which \$151.2 million was unused. The weighted average interest rate for notes payable and lines of credit was 9.0 percent and 2.0 percent at June 30, 2016 and 2015, respectively.

NOTE 12 — INCOME TAXES

(Loss) income before income taxes consisted of the following for the years ended June 30:

(in thousands)	2016	2015	2014
(Loss) income before income taxes:			
United States	\$ (228,667)	\$ (323,299)	\$ 59,160
International	30,096	(64,316)	169,649
Total (loss) income before income taxes	\$ (198,571)	\$ (387,615)	\$ 228,809
Current income taxes:			
Federal	\$ (15,039)	\$ (9,328)	\$ 15,108
State	454	816	896
International	31,570	40,433	27,488
Total current income taxes	16,985	31,921	43,492
Deferred income taxes:			
Federal	\$ 6,786	\$ (38,943)	\$ 10,157
State	8,407	(8,680)	(62)
International	(6,865)	(952)	13,024
Total deferred income taxes:	8,328	(48,575)	23,119
Provision (benefit) for income taxes	\$ 25,313	\$ (16,654)	\$ 66,611
Effective tax rate	(12.7)%	4.3%	29.1%

The reconciliation of income taxes computed using the statutory U.S. income tax rate and the provision for income taxes was as follows for the years ended June 30:

(in thousands)	2016	2015	2014
Income taxes at U.S. statutory rate	\$ (69,500)	\$ (135,665)	\$ 80,083
State income taxes, net of federal tax benefits	859	(1,748)	1,593
U.S. income taxes provided on international income	2,364	3,679	2,423
Combined tax effects of international income	(25,469)	(21,560)	(22,580)
Impact of goodwill impairment charges	6,439	134,657	—
Impact of divestiture	27,790	—	—
Change in valuation allowance and other uncertain tax positions	84,530	1,530	(2,603)
Impact of domestic production activities deduction	(2,072)	—	(942)
Research and development credit	(4,351)	(3,087)	(1,385)
Change in permanent reinvestment assertion	3,659	2,945	7,170
Other	1,064	2,595	2,852
Provision (benefit) for income taxes	\$ 25,313	\$ (16,654)	\$ 66,611

During 2016, we recorded a valuation allowance against our net domestic deferred tax assets of \$105.9 million, as discussed below. Of this amount, \$81.2 million impacted the effective tax rate and is included in the income tax reconciliation table under the caption "change in valuation allowance and other uncertain tax positions," and \$24.7 million was recorded in other comprehensive income.

During 2016 and 2015, we recorded goodwill impairment charges related to our Infrastructure segment. There was no tax benefit for a portion of charges in 2016. There was no tax benefit for a majority of charges in 2015. The federal effect of these permanent differences is included in the income tax reconciliation table under the caption "impact of goodwill impairment charges."

During 2016, we divested certain non-core businesses as described in Note 4. A portion of the loss from this divestiture was not deductible for tax purposes. The Federal effect of this permanent difference is included in the income tax reconciliation table under the caption "impact of divestiture."

During 2016 we recorded an adjustment of \$3.7 million related to a change in assertion of certain foreign subsidiaries' undistributed earnings primarily related to the transaction described in Note 4, which are no longer considered permanently reinvested. The effect of this charge is included in the income tax reconciliation table under the caption "change in permanent reinvestment assertion."

During 2015, we recorded an adjustment of \$2.9 million related to a change in assertion of certain foreign subsidiaries' undistributed earnings, which are no longer considered permanently reinvested. The effect of this charge is included in the income tax reconciliation table under the caption "change in permanent reinvestment assertion."

During 2014, we recorded an adjustment of \$2.2 million related to the effective settlement of uncertain tax positions in Europe, which reduced income tax expense. The effects of these tax benefits are included in the income tax reconciliation table under the caption "change in valuation allowance and other uncertain tax positions."

During 2014, we recorded a valuation allowance adjustment of \$1.2 million, which reduced income tax expense. The valuation allowance adjustment is related to a state tax law change. The effect of this tax benefit is included in the income tax reconciliation table under the caption "change in valuation allowance and other uncertain tax positions."

During 2014, we recorded an adjustment of \$7.2 million related to a change in assertion of a foreign subsidiary's certain undistributed earnings, which are no longer considered permanently reinvested. The effect of this charge is included in the income tax reconciliation table under the caption "change in permanent reinvestment assertion."

The components of net deferred tax assets and (liabilities) were as follows at June 30:

(in thousands)	2016		2015	
Deferred tax assets:				
Net operating loss carryforwards	\$	77,198	\$	47,289
Inventory valuation and reserves		18,865		18,023
Pension benefits		42,432		23,559
Other postretirement benefits		7,111		7,359
Accrued employee benefits		17,069		23,674
Other accrued liabilities		9,229		18,210
Hedging activities		5,507		4,354
Tax credits and other carryforwards		30,733		13,815
Intangible assets		21,575		—
Other		—		12,028
Total		229,719		168,311
Valuation allowance		(122,699)		(16,771)
Total deferred tax assets	\$	107,020	\$	151,540
Deferred tax liabilities:				
Tax depreciation in excess of book	\$	83,412	\$	102,480
Intangible assets		—		18,688
Other		149		—
Total deferred tax liabilities	\$	83,561	\$	121,168
Total net deferred tax assets (liabilities)	\$	23,459	\$	30,372

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not (greater than 50%) that a tax benefit will not be realized. In evaluating the need for a valuation allowance, we consider all potential sources of taxable income, including income available in carryback periods, future reversals of taxable temporary differences, projections of taxable income, and income from tax planning strategies, as well as all available positive and negative evidence. Positive evidence includes factors such as a history of profitable operations, and projections of future profitability within the carry forward period, including taxable income from tax planning strategies. Negative evidence includes items such as cumulative losses, projections of future losses, or carryforward periods that are not long enough to allow for the utilization of the deferred tax asset based on existing projections of income. Upon changes in facts and circumstances, we may conclude that deferred tax assets for which no valuation allowance is currently recorded may not be realized, resulting in a future charge to establish a valuation allowance. Existing valuation allowances are re-examined under the same standards of positive and negative evidence. If it is determined that it is more likely than not that a deferred tax asset will be realized, the appropriate amount of the valuation allowance, if any, is released.

In 2016, we recorded a valuation allowance of \$105.9 million against our net deferred tax assets in the U.S. Of this amount, \$81.2 million was recorded in the provision for income taxes and \$24.7 million was recorded in other comprehensive income. After weighing all available positive and negative evidence, as previously described, we determined that it was no longer more likely than not that we will realize the tax benefit of these deferred tax assets. This was driven by cumulative pre-tax domestic losses from charges related to asset impairment, restructuring and loss on divestiture, as well as an overall decrease in demand in U.S. operations. The need for this valuation allowance will be assessed on a continuous basis in future periods and, as a result, a portion or all of the valuation allowance may be reversed based on changes in facts and circumstances.

Included in deferred tax assets at June 30, 2016 is \$30.7 million associated with tax credits and other carryforward items primarily in federal and state jurisdictions. Of that amount, \$1.1 million expires through 2021, \$22.9 million expires through 2026, \$0.6 million expires through 2031, \$5.9 million expires through 2036 and the remaining \$0.2 million does not expire.

Included in deferred tax assets at June 30, 2016 is \$77.2 million associated with net operating loss carryforwards in state and foreign jurisdictions. Of that amount, \$7.2 million expires through 2021, \$3.6 million expires through 2026, \$2.1 million expires through 2031, \$39.7 million expires through 2036, and the remaining \$24.6 million does not expire. The realization of these tax benefits is primarily dependent on future taxable income in these jurisdictions.

A valuation allowance of \$122.7 million has been placed against deferred tax assets in the U.S., Europe, China, Hong Kong and Brazil, all of which would be allocated to income tax expense upon realization of the deferred tax assets. In 2016, the valuation allowance related to these deferred tax assets increased by \$105.9 million. As the respective operations generate sufficient income, the valuation allowances will be partially or fully reversed at such time we believe it will be more likely than not that the deferred tax assets will be realized.

As of June 30, 2016, unremitted earnings of our non-U.S. subsidiaries and affiliates of \$2,019.4 million, the majority of which have not been previously taxed in the U.S., are considered permanently reinvested, and accordingly, no deferred tax liability has been recorded in connection therewith. It is not practical to estimate the income tax effect that might be incurred if cumulative prior year earnings not previously taxed in the U.S. were remitted to the U.S.

A reconciliation of the beginning and ending amount of unrecognized tax benefits (excluding interest) is as follows as of June 30:

(in thousands)	2016		2015		2014	
Balance at beginning of year	\$	14,619	\$	20,366	\$	26,798
Increases for tax positions of prior years		1,197		—		1,461
Decreases for tax positions of prior years		—		(3,188)		(6,982)
Increases for tax positions related to the current year		—		—		116
Decreases related to settlement with taxing authority		(11,942)		(348)		(2,161)
Decreases related to lapse of statute of limitations		(667)		(398)		—
Foreign currency translation		(101)		(1,813)		1,134
Balance at end of year	\$	3,106	\$	14,619	\$	20,366

The total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate in 2016, 2015 and 2014 is \$3.1 million, \$2.7 million and \$2.4 million, respectively. Our policy is to recognize interest and penalties related to income taxes as a component of the provision for income taxes in the consolidated statement of income. We recognized a reduction in interest of \$0.2 million and \$0.7 million in 2016 and 2015, respectively. We recognized interest expense of \$0.8 million in 2014. As of June 30, 2016 and 2015 the amount of interest accrued was \$0.3 million and \$0.5 million, respectively. As of June 30, 2016 and 2015, the amount of penalty accrued was \$0.3 million and \$0.2 million, respectively.

In 2016, decreases for tax positions related to the current year primarily relate to one foreign tax position. We settled this position with the foreign authority. A corresponding deferred tax asset in the amount of \$11.9 million was released for the position in the U.S. and in the prior year this amount was included in the components of net deferred tax liabilities and assets table under the caption "other."

With few exceptions, we are no longer subject to income tax examinations by tax authorities for years prior to 2010. The Internal Revenue Service has audited all U.S. tax years prior to 2013 and is currently examining 2014. Various state and foreign jurisdiction tax authorities are in the process of examining our income tax returns for various tax years ranging from 2010 to 2014. We continue to execute our pan-European business model. As a result of this and other matters, we continuously review our uncertain tax positions and evaluate any potential issues that may lead to an increase or decrease in the total amount of unrecognized tax benefits recorded.

We believe that it is reasonably possible that the amount of unrecognized tax benefits could decrease by approximately \$0.6 million within the next twelve months.

NOTE 13 — PENSION AND OTHER POSTRETIREMENT BENEFITS

Pension benefits under defined benefit pension plans are based on years of service and, for certain plans, on average compensation for specified years preceding retirement. We fund pension costs in accordance with the funding requirements of the Employee Retirement Income Security Act of 1974 (ERISA), as amended, for U.S. plans and in accordance with local regulations or customs for non-U.S. plans.

We have an Executive Retirement Plan for various executives and a Supplemental Executive Retirement Plan which was closed to future participation on July 26, 2006.

We presently provide varying levels of postretirement health care and life insurance benefits to certain employees and retirees. Postretirement health care benefits are available to employees and their spouses retiring on or after age 55 with 10 or more years of service. Beginning with retirements on or after January 1, 1998, our portion of the costs of postretirement health care benefits is capped at 1996 levels. Beginning with retirements on or after January 1, 2009, we have no obligation to provide a company subsidy for retiree medical costs.

We use a June 30 measurement date for all of our plans.

Defined Benefit Pension Plans

The funded status of our pension plans and amounts recognized in the consolidated balance sheets as of June 30 were as follows:

(in thousands)	2016		2015	
Change in benefit obligation:				
Benefit obligation, beginning of year	\$	954,454	\$	969,904
Service cost		4,640		5,474
Interest cost		37,726		39,007
Participant contributions		6		12
Actuarial losses		86,425		50,464
Benefits and expenses paid		(45,074)		(73,897)
Currency translation adjustments		(19,283)		(36,377)
Plan amendments		696		—
Special termination benefits		334		459
Plan settlements		(7,991)		—
Plan curtailments		(6,565)		(592)
Benefit obligation, end of year	\$	1,005,368	\$	954,454
Change in plans' assets:				
Fair value of plans' assets, beginning of year	\$	827,337	\$	884,264
Actual return on plans' assets		50,637		20,007
Company contributions		15,876		8,703
Participant contributions		6		12
Plan settlements		(7,991)		—
Benefits and expenses paid		(45,074)		(73,897)
Currency translation adjustments		(19,116)		(11,752)
Fair value of plans' assets, end of year	\$	821,675	\$	827,337
Funded status of plans	\$	(183,693)	\$	(127,117)
Amounts recognized in the balance sheet consist of:				
Long-term prepaid benefit	\$	8,941	\$	31,274
Short-term accrued benefit obligation		(10,037)		(14,592)
Accrued pension benefits		(182,597)		(143,799)
Net amount recognized	\$	(183,693)	\$	(127,117)

The pre-tax amounts related to our defined benefit pension plans recognized in accumulated other comprehensive (loss) income were as follows at June 30:

(in thousands)	2016		2015	
Unrecognized net actuarial losses	\$	272,802	\$	196,567
Unrecognized net prior service credits		155		(953)
Unrecognized transition obligations		740		651
Total	\$	273,697	\$	196,265

Prepaid pension benefits are included in other long-term assets. The assets of our U.S. and international defined benefit pension plans consist principally of capital stocks, corporate bonds and government securities.

To the best of our knowledge and belief, the asset portfolios of our defined benefit pension plans do not contain our capital stock. We do not issue insurance contracts to cover future annual benefits of defined benefit pension plan participants. Transactions between us and our defined benefit pension plans include the reimbursement of plan expenditures incurred by us on behalf of the plans. To the best of our knowledge and belief, the reimbursement of cost is permissible under current ERISA rules or local government law. The accumulated benefit obligation for all defined benefit pension plans was \$1,003.5 million and \$943.5 million as of June 30, 2016 and 2015, respectively.

Included in the above information are plans with accumulated benefit obligations exceeding the fair value of plan assets as of June 30 as follows:

(in thousands)	2016		2015	
Projected benefit obligation	\$	877,146	\$	165,281
Accumulated benefit obligation		875,233		164,913
Fair value of plan assets		684,512		7,394

The components of net periodic pension income include the following as of June 30:

(in thousands)	2016		2015		2014	
Service cost	\$	4,640	\$	5,474	\$	6,910
Interest cost		37,726		39,007		41,084
Expected return on plans' assets		(58,523)		(59,698)		(59,527)
Amortization of transition obligation		80		78		78
Amortization of prior service cost		(417)		(361)		(234)
Special termination benefit charge		334		459		—
Curtailement loss		—		358		—
Settlement loss		227		261		—
Recognition of actuarial losses		7,286		3,671		2,642
Net periodic pension income	\$	(8,647)	\$	(10,751)	\$	(9,047)

During 2016, we recognized a special termination benefit charge of \$0.3 million and a settlement loss of \$0.2 million related to several terminated Executive Retirement Plan participants. Both of these items were recognized in restructuring expense.

During 2015, we recognized a special termination benefit charge of \$0.5 million and a curtailment loss of \$0.4 million for one of our U.S.-based defined benefit pension plans resulting from a plant closure. The special termination benefit charge was recognized in restructuring expense.

As of June 30, 2016, the projected benefit payments, including future service accruals for these plans for 2017 through 2021, are \$52.2 million, \$48.2 million, \$50.1 million, \$51.8 million and \$53.5 million, respectively, and \$283.3 million in 2022 through 2026.

The amounts of accumulated other comprehensive loss expected to be recognized in net periodic pension cost during 2016 related to net actuarial losses and transition obligations are \$8.5 million and \$0.1 million, respectively. The amount of accumulated other comprehensive income expected to be recognized in net periodic pension cost during 2016 related to prior service credit is \$0.5 million.

We expect to contribute approximately \$12.1 million to our pension plans in 2017.

Other Postretirement Benefit Plans

The funded status of our other postretirement benefit plans and the related amounts recognized in the consolidated balance sheets were as follows:

(in thousands)	2016		2015	
Change in benefit obligation:				
Benefit obligation, beginning of year	\$	21,205	\$	24,476
Service cost		—		45
Interest cost		840		934
Actuarial losses		722		1,489
Benefits paid		(2,225)		(2,155)
Curtailments		—		(3,584)
Benefit obligation, end of year	\$	20,542	\$	21,205
Funded status of plan	\$	(20,542)	\$	(21,205)
Amounts recognized in the balance sheet consist of:				
Short-term accrued benefit obligation	\$	(1,666)	\$	(1,975)
Accrued postretirement benefits		(18,876)		(19,230)
Net amount recognized	\$	(20,542)	\$	(21,205)

The pre-tax amounts related to our other postretirement benefit plans which were recognized in accumulated other comprehensive (loss) income were as follows at June 30:

(in thousands)	2016		2015	
Unrecognized net actuarial losses	\$	6,368	\$	5,969
Unrecognized net prior service credits		(150)		(172)
Total	\$	6,218	\$	5,797

The components of net periodic other postretirement benefit cost include the following for the years ended June 30:

(in thousands)	2016		2015		2014	
Service cost	\$	—	\$	45	\$	55
Interest cost		840		934		1,006
Amortization of prior service credit		(22)		(59)		(111)
Recognition of actuarial loss		324		492		317
Curtailment gain		—		(221)		—
Net periodic other postretirement benefit cost	\$	1,142	\$	1,191	\$	1,267

The curtailment gain of \$0.2 million during 2015 was a result of the plant closure discussed above.

As of June 30, 2016, the projected benefit payments, including future service accruals for our other postretirement benefit plans for 2017 through 2021, are \$2.0 million, \$1.9 million, \$1.8 million, \$1.7 million and \$1.6 million, respectively, and \$6.8 million in 2022 through 2026.

The amounts of accumulated other comprehensive loss expected to be recognized in net periodic pension cost during 2016 related to net actuarial losses are \$0.4 million. The amount of accumulated other comprehensive income expected to be recognized in net periodic pension cost during 2016 related to prior service credit is immaterial.

We expect to contribute approximately \$2.0 million to our postretirement benefit plans in 2017.

Assumptions

The significant actuarial assumptions used to determine the present value of net benefit obligations for our defined benefit pension plans and other postretirement benefit plans were as follows:

	2016	2015	2014
Discount Rate:			
U.S. plans	2.4-3.7%	3.2-4.5%	4.4%
International plans	0.9-3.2%	2.3-3.8%	2.9-4.3%
Rates of future salary increases:			
U.S. plans	3.0-4.0%	3.0-4.0%	3.0-5.0%
International plans	2.5-3.0%	2.5-3.0%	2.5-3.0%

The significant assumptions used to determine the net periodic (income) cost for our pension and other postretirement benefit plans were as follows:

	2016	2015	2014
Discount Rate:			
U.S. plans	3.2-4.5%	4.4%	4.9%
International plans	2.3-3.8%	2.9-4.3%	3.5-4.8%
Rates of future salary increases:			
U.S. plans	3.0-4.0%	3.0-5.0%	3.0-5.0%
International plans	2.5-3.0%	2.5-3.0%	2.5-3.0%
Rate of return on plans assets:			
U.S. plans	7.5%	7.5%	8.0%
International plans	5.3-5.5%	5.0-6.0%	5.0%

The rates of return on plan assets are based on historical performance, as well as future expected returns by asset class considering macroeconomic conditions, current portfolio mix, long-term investment strategy and other available relevant information.

The annual assumed rate of increase in the per capita cost of covered benefits (the health care cost trend rate) for our postretirement benefit plans was as follows:

	2016	2015	2014
Health care costs trend rate assumed for next year	8.5%	7.3%	7.5%
Rate to which the cost trend rate gradually declines	5.0%	5.0%	5.0%
Year that the rate reaches the rate at which it is assumed to remain	2027	2024	2024

A change of one percentage point in the assumed health care cost trend rates would have the following effects on the total service and interest cost components of our other postretirement cost and other postretirement benefit obligation at June 30, 2016:

(in thousands)	1% Increase		1% Decrease	
Effect on total service and interest cost components	\$	37	\$	(33)
Effect on other postretirement obligation		864		(776)

Plan Assets

The primary objective of certain of our pension plans' investment policies is to ensure that sufficient assets are available to provide the benefit obligations at the time the obligations come due. The overall investment strategy for the defined benefit pension plans' assets combine considerations of preservation of principal and moderate risk-taking. The assumption of an acceptable level of risk is warranted in order to achieve satisfactory results consistent with the long-term objectives of the portfolio. Fixed income securities comprise a significant portion of the portfolio due to their plan-liability-matching characteristics and to address the plans' cash flow requirements. Additionally, diversification of investments within each asset class is utilized to further reduce the impact of losses in single investments.

Investment management practices must comply with ERISA and all applicable regulations and rulings thereof. The use of derivative instruments is permitted where appropriate and necessary for achieving overall investment policy objectives. Currently, the use of derivative instruments is not significant when compared to the overall investment portfolio.

The Company utilizes a liability driven investment strategy (LDI) for the assets of its U.S. defined benefit pension plans in order to reduce the volatility of the funded status of these plans and to meet the obligations at an acceptable cost over the long term. This LDI strategy entails modifying the asset allocation and duration of the assets of the plans to more closely match the liability profile of these plans. The asset reallocation involves increasing the fixed income allocation, reducing the equity component and adding alternative investments. Longer duration interest rate swaps have been utilized periodically in order to increase the overall duration of the asset portfolio to more closely match the liabilities.

Our defined benefit pension plans' asset allocations as of June 30, 2016 and 2015 and target allocations for 2017, by asset class, were as follows:

	2016	2015	Target %
Equity	23%	32%	22.5%
Fixed Income	67%	65%	70.0%
Other	10%	3%	7.5%

The following sections describe the valuation methodologies used by the trustee to measure the fair value of the defined benefit pension plan assets, including an indication of the level in the fair value hierarchy in which each type of asset is generally classified (see Note 5 for the definition of fair value and a description of the fair value hierarchy).

Corporate fixed income securities Investments in corporate fixed income securities consist of corporate debt and asset backed securities. These investments are classified as level two and are valued using independent observable market inputs such as the treasury curve, swap curve and yield curve.

Common / collective trusts Investments in common / collective trusts invest primarily in publicly traded securities and are classified as level two and valued based on observable market data.

Common stock Common stocks are classified as level one and are valued at their quoted market price.

Government securities Investments in government securities consist of fixed income securities such as U.S. government and agency obligations and foreign government bonds and asset and mortgage backed securities such as obligations issued by government sponsored organizations. These investments are classified as level two and are valued using independent observable market inputs such as the treasury curve, credit spreads and interest rates.

Other fixed income securities Investments in other fixed income securities are classified as level two and valued based on observable market data.

Other Other investments consist primarily of state and local obligations and short term investments including cash, corporate notes, and various short term debt instruments which can be redeemed within a nominal redemption notice period. These investments are primarily classified as level two and are valued using independent observable market inputs.

The fair value methods described may not be reflective of future fair values. Additionally, while the Company believes the valuation methods used by the plans' trustee are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in different fair value measurement at the reporting date.

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The following table presents the fair value of the benefit plan assets classified under the appropriate level of the fair value hierarchy as of June 30, 2016:

(in thousands)	Level 1	Level 2	Level 3	Total
Corporate fixed income securities	\$ —	\$ 395,102	\$ —	\$ 395,102
Common / collective trusts:				
Value funds	—	68,731	—	68,731
Growth funds	—	38,126	—	38,126
Balanced funds	—	8,581	—	8,581
Common stock	74,163	—	—	74,163
Government securities:				
U.S. government securities	—	79,275	—	79,275
Foreign government securities	—	43,729	—	43,729
Other fixed income securities	—	31,503	—	31,503
Other	3,029	79,436	—	82,465
Total investments	\$ 77,192	\$ 744,483	\$ —	\$ 821,675

The following table presents the fair value of the benefit plan assets classified under the appropriate level of the fair value hierarchy as of June 30, 2015:

(in thousands)	Level 1	Level 2	Level 3	Total
Corporate fixed income securities	\$ —	\$ 391,275	\$ —	\$ 391,275
Common / collective trusts:				
Value funds	—	102,466	—	102,466
Growth funds	—	54,179	—	54,179
Balanced funds	—	10,090	—	10,090
Common stock	94,964	—	—	94,964
Government securities:				
U.S. government securities	—	68,628	—	68,628
Foreign government securities	—	44,474	—	44,474
Other fixed income securities	—	32,540	—	32,540
Other	3,396	25,325	—	28,721
Total investments	\$ 98,360	\$ 728,977	\$ —	\$ 827,337

Defined Contribution Plans

We sponsor several defined contribution retirement plans. Costs for defined contribution plans were \$17.2 million, \$23.1 million and \$20.4 million in 2016, 2015 and 2014, respectively.

NOTE 14 — ACCUMULATED OTHER COMPREHENSIVE (LOSS) INCOME

Total accumulated other comprehensive loss (AOCL) consists of net income and other changes in equity from transactions and other events from sources other than shareholders. It includes postretirement benefit plan adjustments, currency translation adjustments, and unrealized gains and losses from derivative instruments designated as cash flow hedges.

The components of and changes in AOCL were as follows (net of tax) for the year ended June 30, 2016 (in thousands):

Attributable to Kennametal:	Post-retirement benefit plans	Currency translation adjustment	Derivatives	Total
Balance, June 30, 2015	\$ (138,793)	\$ (97,309)	\$ (7,421)	\$ (243,523)
Other comprehensive (loss) income before reclassifications	(78,295)	(51,508)	(150)	(129,953)
Amounts Reclassified from AOCL	4,925	15,088	(1,563)	18,450
Net current period other comprehensive loss	(73,370)	(36,420)	(1,713)	(111,503)
Sale of subsidiary stock to noncontrolling interest	—	2,517	—	2,517
AOCL, June 30, 2016	\$ (212,163)	\$ (131,212)	\$ (9,134)	\$ (352,509)
Attributable to noncontrolling interests:				
Balance, June 30, 2015	\$ —	\$ (2,258)	\$ —	\$ (2,258)
Other comprehensive loss before reclassifications	—	(1,188)	—	(1,188)
Net current period other comprehensive loss	—	(1,188)	—	(1,188)
AOCL, June 30, 2016	\$ —	\$ (3,446)	\$ —	\$ (3,446)

The components of and changes in AOCL were as follows (net of tax) for the year ended June 30, 2015 (in thousands):

Attributable to Kennametal:	Post-retirement benefit plans	Currency translation adjustment	Derivatives	Total
Balance, June 30, 2014	\$ (93,742)	\$ 38,811	\$ (11,200)	\$ (66,131)
Other comprehensive (loss) income before reclassifications	(47,982)	(136,120)	6,652	(177,450)
Amounts Reclassified from AOCL	2,931	—	(2,873)	58
Net current period other comprehensive loss	(45,051)	(136,120)	3,779	(177,392)
AOCL, June 30, 2015	\$ (138,793)	\$ (97,309)	\$ (7,421)	\$ (243,523)
Attributable to noncontrolling interests:				
Balance, June 30, 2014	\$ —	\$ 1,087	\$ —	\$ 1,087
Other comprehensive income before reclassifications	—	(3,345)	—	(3,345)
Net current period other comprehensive loss	—	(3,345)	—	(3,345)
AOCL, June 30, 2015	\$ —	\$ (2,258)	\$ —	\$ (2,258)

The components of and changes in AOCL were as follows (net of tax) for the year ended June 30, 2014 (in thousands):

Attributable to Kennametal:	Post-retirement benefit plans	Currency translation adjustment	Derivatives	Total
Balance, June 30, 2013	\$ (83,936)	\$ 7,413	\$ (12,481)	\$ (89,004)
Other comprehensive income (loss) before reclassifications	(11,990)	31,398	(706)	18,702
Amounts Reclassified from AOCL	2,184	—	1,987	4,171
Net current period other comprehensive loss	(9,806)	31,398	1,281	22,873
AOCL, June 30, 2014	\$ (93,742)	\$ 38,811	\$ (11,200)	\$ (66,131)

Attributable to noncontrolling interests:

Balance, June 30, 2013	\$ —	\$ 721	\$ —	\$ 721
Other comprehensive loss before reclassifications	—	366	—	366
Net current period other comprehensive loss	—	366	—	366
AOCL, June 30, 2014	\$ —	\$ 1,087	\$ —	\$ 1,087

Reclassifications out of AOCL for the years ended June 30, 2016, 2015 and 2014 consisted of the following:

Details about AOCL components (in thousands)	Year Ended June 30,			Affected line item in the Income Statement
	2016	2015	2014	
Gains and losses on cash flow hedges:				
Forward starting interest rate swaps	\$ 2,099	\$ 2,021	\$ 1,945	Interest expense
Currency exchange contracts	(4,645)	(6,700)	1,260	Other (income) expense, net
Total before tax	(2,546)	(4,679)	3,205	
Tax expense (benefit)	983	1,806	(1,218)	Provision (benefit) for income taxes
Net of tax	\$ (1,563)	\$ (2,873)	\$ 1,987	
Post-retirement benefit plans:				
Amortization of transition obligations	\$ 80	\$ 78	78	See Note 13 for further details
Amortization of prior service credit	(439)	(420)	(345)	See Note 13 for further details
Recognition of actuarial losses	7,610	4,163	2,959	See Note 13 for further details
Total before tax	7,251	3,821	2,692	
Tax (benefit)	(2,326)	(890)	(508)	Provision (benefit) for income taxes
Net of tax	\$ 4,925	\$ 2,931	\$ 2,184	
Foreign currency translation adjustments:				
Released due to divestiture	15,088	—	—	Loss on divestiture
Total before taxes	15,088	—	—	
Tax benefit	—	—	—	Provision (benefit) for income taxes
Net of tax	\$ 15,088	\$ —	\$ —	

The amount of income tax allocated to each component of other comprehensive (loss) for the year ended June 30, 2016:

(in thousands)	Pre-tax	Tax impact	Net of tax
Unrealized loss on derivatives designated and qualified as cash flow hedges	\$ (244)	\$ 94	\$ (150)
Reclassification of unrealized gain on expired derivatives designated and qualified as cash flow hedges	(2,546)	983	(1,563)
Unrecognized net pension and other postretirement benefit loss	(84,266)	5,971	(78,295)
Reclassification of net pension and other postretirement benefit loss	7,251	(2,326)	4,925
Foreign currency translation adjustments	(52,699)	4	(52,695)
Reclassification of foreign currency translation adjustment loss realized upon sale	15,088	—	15,088
Other comprehensive (loss)	\$ (117,416)	\$ 4,726	\$ (112,690)

The amount of income tax allocated to each component of other comprehensive (loss) for the year ended June 30, 2015:

(in thousands)	Pre-tax	Tax impact	Net of tax
Unrealized gain on derivatives designated and qualified as cash flow hedges	\$ 10,834	\$ (4,182)	\$ 6,652
Reclassification of unrealized gain on expired derivatives designated and qualified as cash flow hedges	(4,679)	1,806	(2,873)
Unrecognized net pension and other postretirement benefit loss	(76,029)	28,047	(47,982)
Reclassification of net pension and other postretirement benefit loss	3,821	(890)	2,931
Foreign currency translation adjustments	(147,172)	7,707	(139,465)
Other comprehensive (loss)	\$ (213,225)	\$ 32,488	\$ (180,737)

The amount of income tax allocated to each component of other comprehensive income for the year ended June 30, 2014:

(in thousands)	Pre-tax	Tax impact	Net of tax
Unrealized loss on derivatives designated and qualified as cash flow hedges	(1,139)	433	(706)
Reclassification of unrealized loss on expired derivatives designated and qualified as cash flow hedges	3,205	(1,218)	1,987
Unrecognized net pension and other postretirement benefit loss	(15,900)	3,910	(11,990)
Reclassification of net pension and other postretirement benefit loss	2,692	(508)	2,184
Foreign currency translation adjustments	33,493	(1,730)	31,763
Other comprehensive income	22,351	887	23,238

NOTE 15 — RESTRUCTURING AND RELATED CHARGES AND ASSET IMPAIRMENT CHARGES

Restructuring and Related Charges

Phase 1

We implemented restructuring actions in conjunction with our Phase 1 restructuring program to achieve synergies across Kennametal as a result of the TMB acquisition by consolidating operations among both organizations, reducing administrative overhead and leveraging the supply chain. These restructuring actions were substantially completed in fiscal 2016 and were mostly cash expenditures.

Total restructuring and related charges since inception of \$59.3 million have been recorded for these Phase 1 programs through June 30, 2016: \$30.7 million in Industrial, \$26.2 million in Infrastructure, and \$2.4 million in Corporate.

Ongoing restructuring programs

We are currently implementing restructuring actions to streamline the Company's cost structure. These initiatives are expected to improve the alignment of our cost structure with the current operating environment through rationalization and consolidation of certain manufacturing facilities and through headcount reductions; enhancement of operational efficiencies through an enterprise-wide cost reduction program; and other employment and cost reduction programs. These restructuring actions are expected to be completed by December of fiscal 2019 and are anticipated to be mostly cash expenditures.

The total pre-tax charges for these programs are expected to be in the range of \$105 million to \$125 million, which is expected to be approximately 65 percent Industrial and 35 percent Infrastructure. Total restructuring and related charges since inception of \$71.4 million have been recorded for these programs through June 30, 2016: \$41.2 million in Industrial, \$23.3 million in Infrastructure and \$6.9 million in Corporate.

Combined

During 2016, we recognized total restructuring and related charges of \$53.5 million, of this amount, restructuring charges totaled \$30.0 million. Total restructuring-related charges of \$7.3 million were recorded in cost of goods sold and \$16.2 million in operating expense during 2016.

During 2015, we recognized total restructuring and related charges of \$58.1 million, of this amount, restructuring charges totaled \$42.1 million, of which \$1.5 million were charges related to inventory disposals and were recorded in cost of goods sold. Total restructuring-related charges of \$8.2 million were recorded in cost of goods sold and \$7.8 million in operating expense during 2015.

During 2014, we recorded \$19.1 million restructuring and related charges, of this amount, restructuring charges totaled \$17.8 million, of which \$0.2 million were charges related to inventory disposals and were recorded in cost of goods sold. Total restructuring-related charges of \$1.2 million were recorded in cost of goods sold and \$0.1 million in operating expense during 2014.

The restructuring accrual is recorded in other current liabilities in our consolidated balance sheet and the amount attributable to each segment is as follows:

(in thousands)	June 30, 2015	Expense	Asset Write-Down	Other ⁽²⁾	Translation	Cash Expenditures	June 30, 2016
Industrial							
Severance	\$ 13,456	\$ 17,322	\$ —	\$ (347)	\$ (140)	\$ (21,202)	\$ 9,089
Facilities	—	330	(780)	—	—	450	—
Other	28	297	—	—	(5)	579	899
Total Industrial	\$ 13,484	\$ 17,949	\$ (780)	\$ (347)	\$ (145)	\$ (20,173)	\$ 9,988
Infrastructure							
Severance	\$ 7,173	\$ 7,424	\$ —	\$ (201)	\$ (60)	\$ (9,035)	\$ 5,301
Facilities	131	4,515	(3,914)	—	—	(699)	33
Other	—	127	—	—	(2)	256	381
Total Infrastructure	7,304	12,066	(3,914)	(201)	(62)	(9,478)	5,715
Total	\$ 20,788	\$ 30,015	\$ (4,694)	\$ (548)	\$ (207)	\$ (29,651)	\$ 15,703

(2) Special termination benefit charge and settlement charge for one of our U.S.-based benefit pension plans resulting from executive retirement - see Note 13.

(in thousands)	June 30, 2014	Expense	Asset Write-Down	Other ⁽³⁾	Translation	Cash Expenditures	June 30, 2015
Industrial							
Severance	\$ 5,815	\$ 20,713	\$ —	\$ —	\$ (328)	\$ (12,744)	\$ 13,456
Facilities	444	2,277	(2,231)	—	(15)	(475)	—
Other	67	77	—	—	(2)	(114)	28
Total Industrial	\$ 6,326	\$ 23,067	\$ (2,231)	\$ —	\$ (345)	\$ (13,333)	\$ 13,484
Infrastructure							
Severance	\$ 2,458	\$ 14,027	\$ —	\$ (459)	\$ (223)	\$ (8,630)	\$ 7,173
Facilities	190	4,969	(3,638)	—	(32)	(1,358)	131
Other	28	—	—	—	(3)	(25)	—
Total Infrastructure	2,676	18,996	(3,638)	(459)	(258)	(10,013)	7,304
Total	\$ 9,002	\$ 42,063	\$ (5,869)	\$ (459)	\$ (603)	\$ (23,346)	\$ 20,788

(3) Special termination benefit charge for one of our U.S.-based benefit pension plans resulting from a plant closure - see Note 13.

Asset Impairment Charges

See discussion on goodwill and other intangible asset impairment charges in Note 2.

During 2016, we identified specific machinery and equipment that was no longer being utilized in the manufacturing organization of which we disposed by abandonment. As a result of this review, we recorded property, plant, and equipment impairment charges of \$5.4 million during 2016, which has been presented in restructuring and asset impairment charges in our consolidated statement of income.

NOTE 16 — FINANCIAL INSTRUMENTS

The methods used to estimate the fair value of our financial instruments are as follows:

Cash and Equivalents, Current Maturities of Long-Term Debt and Notes Payable to Banks The carrying amounts approximate their fair value because of the short maturity of the instruments.

Long-Term Debt Fixed rate debt had a fair market value of \$704.0 million and \$698.0 million at June 30, 2016 and 2015, respectively. The fair value is determined based on the quoted market price of this debt as of June 30 and were classified in Level 2 of the fair value hierarchy.

Foreign Exchange Contracts The notional amount of outstanding foreign exchange contracts, translated at current exchange rates, was \$53.3 million and \$53.8 million at June 30, 2016 and 2015, respectively. We would have received \$0.3 million and \$2.6 million at June 30, 2016 and 2015, respectively, to settle these contracts representing the fair value of these agreements. The carrying value equaled the fair value for these contracts at June 30, 2016 and 2015. Fair value was estimated based on quoted market prices of comparable instruments.

Concentrations of Credit Risk Financial instruments that potentially subject us to concentrations of credit risk consist primarily of temporary cash investments and trade receivables. By policy, we make temporary cash investments with high credit quality financial institutions and limit the amount of exposure to any one financial institution. With respect to trade receivables, concentrations of credit risk are significantly reduced because we serve numerous customers in many industries and geographic areas.

We are exposed to counterparty credit risk for nonperformance of derivatives and, in the unlikely event of nonperformance, to market risk for changes in interest and currency exchange rates, as well as settlement risk. We manage exposure to counterparty credit risk through credit standards, diversification of counterparties and procedures to monitor concentrations of credit risk. We do not anticipate nonperformance by any of the counterparties. As of June 30, 2016 and 2015, we had no significant concentrations of credit risk.

NOTE 17 — STOCK-BASED COMPENSATION*Stock Options*

The assumptions used in our Black-Scholes valuation related to grants made during 2016, 2015 and 2014 were as follows:

	2016	2015	2014
Risk-free interest rate	1.4%	1.5%	1.3%
Expected life (years) ⁽⁴⁾	4.5	4.5	4.5
Expected volatility ⁽⁵⁾	31.7%	32.5%	40.3%
Expected dividend yield	2.1%	1.7%	1.7%

(4) Expected life is derived from historical experience.

(5) Expected volatility is based on the implied historical volatility of our stock.

Changes in our stock options for 2016 were as follows:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Life (years)	Aggregate Intrinsic value (in thousands)
Options outstanding, June 30, 2015	2,094,037	\$ 36.08		
Granted	885,403	28.29		
Exercised	(39,177)	24.96		
Lapsed and forfeited	(392,454)	34.93		
Options outstanding, June 30, 2016	2,547,809	\$ 33.72	4.9	\$ 602
Options vested and expected to vest, June 30, 2016	2,501,094	\$ 33.79	4.8	\$ 589
Options exercisable, June 30, 2016	1,625,728	\$ 35.38	2.7	\$ 89

During 2016, 2015 and 2014, compensation expense related to stock options was \$3.3 million, \$3.2 million and \$4.3 million, respectively. As of June 30, 2016, the total unrecognized compensation cost related to options outstanding was \$2.5 million and is expected to be recognized over a weighted average period of 1.9 years.

Weighted average fair value of options granted during 2016, 2015 and 2014 was \$6.45, \$10.16 and \$13.76, respectively. Fair value of options vested during 2016, 2015 and 2014 was \$2.3 million, \$7.6 million and \$5.1 million, respectively.

Tax benefits relating to excess stock-based compensation deductions, are presented in the statement of cash flow as financing cash inflows. Tax benefits resulting from stock-based compensation deductions were less than the amounts reported for financial reporting purposes by \$1.9 million in 2016, and exceeded amounts reported for financial reporting purposes by \$1.3 million and \$6.0 million in 2015 and 2014, respectively.

The amount of cash received from the exercise of capital stock options during 2016, 2015 and 2014 was \$1.0 million, \$11.7 million and \$20.6 million, respectively. The related tax benefit was immaterial in 2016, and was \$2.0 million and \$4.6 million in 2015 and 2014, respectively. The total intrinsic value of options exercised was immaterial in 2016, and was \$5.3 million and \$14.8 million in 2015 and 2014, respectively.

Under the provisions of the A/R 2010 Plan, participants may deliver stock, owned by the holder for at least six months, in payment of the option price and receive credit for the fair market value of the shares on the date of delivery. The fair market value of shares delivered during 2016, 2015 and 2014 were immaterial.

Restricted Stock Units – Time Vesting and Performance Vesting

Performance vesting restricted stock units are earned pro rata each year if certain performance goals are met over a three-year period, and are also subject to a service condition that requires the individual to be employed by the Company at the payment date after the three-year performance period, with the exception of retirement eligible grantees, who upon retirement are entitled to receive payment for any units that have been earned, including a prorated portion in the partially completed fiscal year in which the retirement occurs. Time vesting stock units are valued at the market value of the stock on the grant date. Performance vesting stock units with a market condition are valued using a Monte Carlo model.

Changes in our time vesting and performance vesting restricted stock units for 2016 were as follows:

	Performance Vesting Stock Units	Performance Vesting Weighted Average Fair Value	Time Vesting Stock Units	Time Vesting Weighted Average Fair Value
Unvested performance vesting and time vesting restricted stock units, June 30, 2015	101,245	\$ 43.00	689,268	\$ 41.53
Granted	117,589	31.60	760,443	27.46
Vested	—	—	(300,191)	40.68
Performance metric not achieved	(42,697)	31.60	—	—
Forfeited	(60,670)	32.70	(134,776)	35.80
Unvested performance vesting and time vesting restricted stock units, June 30, 2016	115,467	\$ 36.96	1,014,744	\$ 31.97

During 2016, 2015 and 2014, compensation expense related to time vesting and performance vesting restricted stock units was \$14.6 million, \$13.5 million and \$13.1 million, respectively. As of June 30, 2016, the total unrecognized compensation cost related to unvested time vesting and performance vesting restricted stock units was \$14.1 million and is expected to be recognized over a weighted average period of 2.1 years.

NOTE 18— ENVIRONMENTAL MATTERS

The operation of our business has exposed us to certain liabilities and compliance costs related to environmental matters. We are involved in various environmental cleanup and remediation activities at certain of our locations.

Superfund Sites Among other environmental laws, we are subject to the Comprehensive Environmental Response Compensation and Liability Act of 1980 (Superfund), under which we have been designated by the United States Environmental Protection Agency (USEPA) as a potentially responsible party (PRP) with respect to environmental remedial costs at certain Superfund sites. We have evaluated our claims and liabilities associated with these Superfund sites based upon best currently available information. We believe our environmental accruals are adequate to cover our portion of the environmental remedial costs at the Superfund sites where we have been designated a PRP, to the extent these expenses are probable and reasonably estimable.

Other Environmental Matters We establish and maintain reserves for other potential environmental issues. At June 30, 2016 and 2015, the balance of these reserves was \$12.5 million and \$12.6 million, respectively. These reserves represent anticipated costs associated with the remediation of these issues.

The reserves we have established for environmental liabilities represent our best current estimate of the costs of addressing all identified environmental situations, based on our review of currently available evidence, and taking into consideration our prior experience in remediation and that of other companies, as well as public information released by the USEPA, other governmental agencies and by the PRP groups in which we are participating. Although the reserves currently appear to be sufficient to cover these environmental liabilities, there are uncertainties associated with environmental liabilities, and we can give no assurance that our estimate of any environmental liability will not increase or decrease in the future. The reserved and unreserved liabilities for all environmental concerns could change substantially due to factors such as the nature and extent of contamination, changes in remedial requirements, technological changes, discovery of new information, the financial strength of other PRPs, the identification of new PRPs and the involvement of and direction taken by the government on these matters.

We maintain a Corporate Environmental Health and Safety (EHS) Department to monitor compliance with environmental regulations and to oversee remediation activities. In addition, we have designated EHS coordinators who are responsible for each of our global manufacturing facilities. Our financial management team periodically meets with members of the Corporate EHS Department and the Corporate Legal Department to review and evaluate the status of environmental projects and contingencies. On a quarterly basis, we review financial provisions and reserves for environmental contingencies and adjust these reserves when appropriate.

NOTE 19 — COMMITMENTS AND CONTINGENCIES

Legal Matters Various lawsuits arising during the normal course of business are pending against us. In our opinion, the ultimate liability, if any, resulting from these matters will have no significant effect on our consolidated financial positions or results of operations.

Lease Commitments We lease a wide variety of facilities and equipment under operating leases, primarily for warehouses, production and office facilities and equipment. Lease expense under these rentals amounted to \$28.6 million, \$29.4 million and \$31.9 million in 2016, 2015 and 2014, respectively. Future minimum lease payments for non-cancelable operating leases are \$18.6 million, \$13.0 million, \$9.9 million, \$8.0 million and \$6.8 million for the years 2017 through 2021 and \$20.9 million thereafter.

Purchase Commitments We have purchase commitments for materials, supplies and machinery and equipment as part of the ordinary conduct of business. Some of these commitments extend beyond one year and are based on minimum purchase requirements. We believe these commitments are not at prices in excess of current market.

Other Contractual Obligations We do not have material financial guarantees or other contractual commitments that are reasonably likely to adversely affect our liquidity.

Related Party Transactions Sales to affiliated companies were immaterial in 2016, 2015 and 2014. We do not have any other related party transactions that affect our operations, results of operations, cash flow or financial condition.

NOTE 20 — SEGMENT DATA

The Company manages and reports its business in the following two segments: Industrial and Infrastructure. The Company's reportable operating segments have been determined in accordance with the Company's internal management structure, which is organized based on operating activities, the manner in which we organize segments for making operating decisions and assessing performance and the availability of separate financial results. We do not allocate certain corporate expenses related to executive retirement plans, the Company's Board of Directors and strategic initiatives, as well as certain other costs and report them in Corporate. Neither of our two reportable operating segments represent the aggregation of two or more operating segments.

Sales to a single customer did not aggregate 4 percent or more of total sales in 2016, 2015 and 2014. Export sales from U.S. operations to unaffiliated customers were \$65.3 million, \$71.0 million and \$82.2 million in 2016, 2015 and 2014, respectively.

INDUSTRIAL The Industrial segment generally serves customers that operate in industrial end markets such as transportation, general engineering, aerospace and defense. The customers in these end markets manufacture engines, airframes, automobiles, trucks, ships and various types of industrial equipment. The technology and customization requirements for customers we serve vary by customer, application and industry. The value we deliver to our Industrial segment customers centers on our application expertise and our diverse offering of products and services.

INFRASTRUCTURE The Infrastructure segment generally serves customers that operate in the earthworks and energy sectors who support primary industries such as oil and gas, power generation, underground, surface and hard-rock mining, highway construction and road maintenance. Generally, we rely on customer intimacy to serve this segment. By gaining an in-depth understanding of our customers' engineering and development needs, we are able to offer complete system solutions and high-performance capabilities to optimize and add value to their operations.

Segment data is summarized as follows:

(in thousands)	2016	2015	2014
Sales:			
Industrial	\$ 1,269,162	\$ 1,461,744	\$ 1,524,075
Infrastructure	829,274	1,185,451	1,313,115
Total sales	\$ 2,098,436	\$ 2,647,195	\$ 2,837,190
Operating (loss) income:			
Industrial	\$ 81,243	\$ 160,894	\$ 177,040
Infrastructure	(246,306)	(509,381)	94,940
Corporate	(9,880)	(9,336)	(8,548)
Total operating (loss) income	\$ (174,943)	\$ (357,823)	\$ 263,432
Interest expense	\$ 27,752	\$ 31,466	\$ 32,451
Other (income) expense, net	(4,124)	(1,674)	2,172
(Loss) income before income taxes	\$ (198,571)	\$ (387,615)	\$ 228,809
Depreciation and amortization:			
Industrial	\$ 62,942	\$ 64,188	\$ 65,820
Infrastructure	54,459	67,413	64,339
Corporate	65	63	63
Total depreciation and amortization	\$ 117,466	\$ 131,664	\$ 130,222
Equity income:			
Industrial	\$ —	\$ —	\$ 34
Infrastructure	(10)	6	50
Total equity income	\$ (10)	\$ 6	\$ 84
Total assets:			
Industrial	\$ 1,215,226	\$ 1,259,270	\$ 1,449,688
Infrastructure	849,447	1,279,608	1,986,724
Corporate	304,120	310,651	431,674
Total assets	\$ 2,368,793	\$ 2,849,529	\$ 3,868,086
Capital expenditures:			
Industrial	\$ 80,560	\$ 64,497	\$ 71,628
Infrastructure	30,137	36,442	45,748
Total capital expenditures	\$ 110,697	\$ 100,939	\$ 117,376
Investments in affiliated companies:			
Industrial	\$ —	\$ —	\$ —
Infrastructure	2	361	495
Total investments in affiliated companies	\$ 2	\$ 361	\$ 495

Geographic information for sales, based on country of origin, and assets is as follows:

(in thousands)	2016	2015	2014
Sales:			
United States	\$ 897,399	\$ 1,176,622	\$ 1,198,541
Germany	334,366	442,009	511,209
China	210,124	246,953	248,212
India	77,934	85,193	81,455
Italy	69,821	85,530	107,511
France	56,264	59,772	63,473
Canada	55,812	73,912	78,163
United Kingdom	50,723	70,600	105,041
Other	345,993	406,604	443,585
Total sales	\$ 2,098,436	\$ 2,647,195	\$ 2,837,190

Total assets:			
United States	\$ 1,075,330	\$ 1,338,594	\$ 1,842,453
Germany	327,679	394,491	538,661
China	233,200	274,774	341,949
Switzerland	189,498	194,139	264,928
India	91,544	97,463	94,897
Canada	57,174	60,492	133,481
Italy	50,352	94,978	178,141
United Kingdom	48,507	71,342	79,657
Other	295,509	323,256	393,919
Total assets:	\$ 2,368,793	\$ 2,849,529	\$ 3,868,086

Approximate sales by end markets as a percentage of consolidated sales are as follows:

	2016	2015	2014
End markets:			
General engineering	38%	36%	31%
Transportation	21	21	21
Energy	17	19	23
Earthworks	16	17	19
Aerospace and defense	8	7	6
Total	100%	100%	100%

NOTE 21 — SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

For the quarter ended (in thousands, except per share data)	September 30	December 31	March 31	June 30
2016				
Sales	\$ 555,354	\$ 524,021	\$ 497,837	\$ 521,224
Gross profit	151,224	140,806	157,353	166,684
Net (loss) income attributable to Kennametal	(6,226)	(169,227)	16,000	(66,515)
Basic (loss) earnings per share attributable to Kennametal ⁽⁶⁾				
Net income	(0.08)	(2.12)	0.20	(0.83)
Diluted (loss) earnings per share attributable to Kennametal ⁽⁶⁾				
Net income	(0.08)	(2.12)	0.20	(0.83)
2015				
Sales	\$ 694,941	\$ 675,631	\$ 638,970	\$ 637,653
Gross profit	218,009	199,458	199,470	188,966
Net income (loss) attributable to Kennametal	39,489	(388,302)	(46,229)	21,146
Basic earnings (loss) per share attributable to Kennametal ⁽⁶⁾				
Net income	0.50	(4.89)	(0.58)	0.27
Diluted earnings (loss) per share attributable to Kennametal ⁽⁶⁾				
Net income	0.49	(4.89)	(0.58)	0.26

⁽⁶⁾ Earnings per share amounts attributable to Kennametal for each quarter are computed using the weighted average number of shares outstanding during the quarter. Earnings per share amounts attributable to Kennametal for the full year are computed using the weighted average number of shares outstanding during the year. Thus, the sum of the four quarters' earnings per share attributable to Kennametal does not always equal the full-year earnings per share attributable to Kennametal.

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

None.

ITEM 9A — CONTROLS AND PROCEDURES

(a) Evaluation of Disclosure Controls and Procedures

The Company's management evaluated, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, the effectiveness of the Company's disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) as of June 30, 2016. The Company's disclosure controls were designed to provide a reasonable assurance that information required to be disclosed in reports that we file or submit under the Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission. It should be noted that the design of any system of controls is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions, regardless of how remote. However, the controls have been designed to provide reasonable assurance of achieving the controls' stated goals. Based on that evaluation, the Company's Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures are effective to provide reasonable assurance at June 30, 2016 to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is (i) accumulated and communicated to management, including the Company's Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure and (ii) recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission.

(b) Management's Report on Internal Control over Financial Reporting

Management's Report on Internal Control over Financial Reporting is included in Item 8 of this Form 10-K and incorporated herein by reference.

(c) Attestation Report of the Independent Registered Public Accounting Firm

The effectiveness of Kennametal's internal control over financial reporting as of June 30, 2016 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report included in Item 8 of this annual report on Form 10-K, which is incorporated herein by reference.

(d) Changes in Internal Control over Financial Reporting

There have been no changes in internal control over financial reporting that occurred during the fourth quarter of 2016 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B — OTHER INFORMATION

None.

PART III

ITEM 10 — DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

EXECUTIVE OFFICERS OF THE REGISTRANT

Information regarding the executive officers of Kennametal Inc. is as follows: Name, Age, Position, and Experience During the Past Five Years ⁽¹⁾.

Ronald M. De Feo, 64

President and Chief Executive Officer

President and Chief Executive Officer since February 2016; Director since November 2001; Formerly, Chairman of the Board and Chief Executive Officer of Terex Corporation (provides machinery and industrial products), from March 1998 and March 1995, respectively, until December 2015.

Judith L. Bacchus, 54

Vice President and Chief Human Resources and Corporate Relations Officer

Vice President and Chief Human Resources and Corporate Relations Officer since December 2015; Vice President and Chief Human Resources Officer from June 2011 to November 2015.

Charles M. Byrnes, Jr., 51

Vice President, Kennametal Inc. and President, Industrial Business Segment

Vice President, Kennametal Inc. and President, Industrial Business Segment since May 2016; Vice President and Executive Vice President, Industrial Business Segment from December 2015 to May 2016; Formerly President at General Bearing Corporation (provides bearing components and bearing products) from March 2014 to December 2015; Senior Vice President - Sales and Marketing at Accuride Corporation (provides commercial vehicle components) from September 2011 to February 2014; and Senior Vice President - Business Development at Accuride Corporation from June 2011 to September 2011.

Robert J. Clemens, 59

Vice President and Chief Technical Officer

Vice President and Chief Technical Officer since March 2013; Formerly, Vice President, Corporate Technology at Eastman Chemical Company (specialty chemical company) from January 2008 to February 2013.

Peter A. Dragich, 53

Vice President, Kennametal Inc. and President, Infrastructure Business Segment

Vice President, Kennametal Inc. and President, Infrastructure Business Segment since May 2016; Vice President and Executive Vice President, Infrastructure Business Segment from October 2015 to May 2016; Vice President Integrated Supply Chain and Logistics from October 2012 to October 2015. Formerly, Vice President, Global Field Operations, Climate, Controls, and Security for United Technologies Corporation (provides products and services to aerospace and building systems industries) from May 2010 to October 2012.

Martha Fusco, 42

Vice President Finance and Corporate Controller

Vice President Finance and Corporate Controller since December 2009; Interim Chief Financial Officer from February 2015 to August 2015.

Jan Kees van Gaalen, 59

Vice President and Chief Financial Officer

Vice President and Chief Financial Officer since September 2015; Formerly, Executive Vice President and Chief Financial Officer of Dresser-Rand Group Inc. (provides custom-engineered rotating equipment for applications in the oil, gas, process, power, and other industries) from April 2013 to June 2015; Vice President and Treasurer of Baker Hughes Inc. (oil field services) from January 2008 to April 2013.

Michelle Keating, 40

Vice President, Secretary and Interim General Counsel

Vice President, Secretary and Interim General Counsel since July 2016; Vice President, Associate General Counsel & Assistant Secretary from March 2016 to July 2016; Assistant General Counsel & Assistant Secretary from August 2011 to February 2016.

(1) Each executive officer has been elected by the Board of Directors to serve until removed or until a successor is elected and qualified. Unless otherwise noted, none of the executive officers (i) has an arrangement or understanding with any other person(s) pursuant to which he or she was selected as an officer, (ii) has any family relationship with any director or executive officer of the Company, or (iii) is involved in any legal proceeding which would require disclosure under this item.

Incorporated herein by reference is the information provided under the captions “Proposal I. Election of Directors” and “Section 16(a) Beneficial Ownership Reporting Compliance” in our definitive proxy statement to be filed with the Securities and Exchange Commission within 120 days after June 30, 2016 (2016 Proxy Statement). Also incorporated herein by reference is the information set forth under the caption “Ethics and Corporate Governance-Code of Business Ethics and Conduct” and “Ethics and Corporate Governance-Corporate Governance” in the 2016 Proxy Statement.

The Company has a separately designated standing Audit Committee established in accordance with Section 3(a) (58) (A) of the Exchange Act. The members of the Audit Committee are: Timothy R. McLevish (Chair); Cindy L. Davis; William M. Lambert and Steven H. Wunning. Incorporated herein by reference is the information provided under the caption “Board of Directors and Board Committees-Committee Functions-Audit Committee” in the 2016 Proxy Statement.

ITEM 11 — EXECUTIVE COMPENSATION

Incorporated herein by reference is certain information in the “Executive Compensation, Compensation Discussion and Analysis” section of the 2016 Proxy Statement including, without limitation, Compensation Committee Report, Analysis of Risk Inherent in our Compensation Policies and Practices, the Executive Compensation Tables and Potential Payments Upon Termination or Change in Control. Also incorporated herein by reference is certain information in “Board of Directors Compensation and Benefits” and “Board of Directors and Board Committees.”

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

Incorporated herein by reference from our 2016 Proxy Statement are: (i) the information set forth under the caption “Equity Compensation Plans” (ii) the information set forth under the caption “Ownership of Capital Stock by Directors, Nominees and Executive Officers” with respect to the directors’ and officers’ shareholdings; and (iii) the information set forth under the caption “Principal Holders of Voting Securities” with respect to other beneficial owners.

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

Incorporated herein by reference is certain information set forth under the captions “Ethics and Corporate Governance-Corporate Governance-Board of Director Review and Approval of Related Person Transactions,” “Executive Compensation,” “Executive Compensation Tables” and “Ethics and Corporate Governance-Corporate Governance-Board Composition and Independence” in the 2016 Proxy Statement.

ITEM 14 — PRINCIPAL ACCOUNTING FEES AND SERVICES

Incorporated herein by reference is the information with respect to pre-approval policies set forth under the caption “Proposal II. Ratification of PricewaterhouseCoopers LLP as our Independent Registered Public Accounting Firm for the Fiscal Year ending June 30, 2017-Audit Committee Pre-Approval Policy” and the information with respect to principal accountant fees and services set forth under “Proposal II. Ratification of PricewaterhouseCoopers LLP as our Independent Registered Public Accounting Firm for the Fiscal Year ending June 30, 2017-Fees and Services” in the 2016 Proxy Statement.

SIGNATURES

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

KENNAMETAL INC.

Date: August 11, 2016

By: /s/ Martha Fusco
Martha Fusco
Vice President Finance and Corporate Controller

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.

SIGNATURE	TITLE	DATE
<u>/s/ RONALD M. DE FEO</u> Ronald M. De Feo	President and Chief Executive Officer	August 11, 2016
<u>/s/ JAN KEES VAN GAALEN</u> Jan Kees van Gaalen	Vice President and Chief Financial Officer	August 11, 2016
<u>/s/ MARTHA FUSCO</u> Martha Fusco	Vice President Finance and Corporate Controller	August 11, 2016
<u>/s/ LAWRENCE W. STRANGHOENER</u> Lawrence W. Stranghoener	Chairman of the Board	August 11, 2016
<u>/s/ CINDY L. DAVIS</u> Cindy L. Davis	Director	August 11, 2016
<u>/s/ PHILIP A. DUR</u> Philip A. Dur	Director	August 11, 2016
<u>/s/ WILLIAM J. HARVEY</u> William J. Harvey	Director	August 11, 2016
<u>/s/ WILLIAM M. LAMBERT</u> William M. Lambert	Director	August 11, 2016
<u>/s/ TIMOTHY R. MCLEVISH</u> Timothy R. McLevish	Director	August 11, 2016
<u>/s/ STEVEN H. WUNNING</u> Steven H. Wunning	Director	August 11, 2016

PART IV

ITEM 15 — EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) Documents filed as part of this Form 10-K report.

1. Financial Statements included in Part II, Item 8
2. Financial Statement Schedule

The financial statement schedule required by Part II, Item 8 of this document is filed as part of this report. All of the other schedules are omitted as the required information is inapplicable or the information is presented in our consolidated financial statements or related notes.

FINANCIAL STATEMENT SCHEDULE

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Schedule II—Valuation and Qualifying Accounts and Reserves for the Years Ended June 30, 2016, 2015 and 2014

3. Exhibits

2 Plan of Acquisition, Reorganization, Arrangement, Liquidation or Succession

- | | | |
|-----|--|---|
| 2.1 | Share Sale and Purchase Agreement relating to Deloro Stellite Holdings 1 Limited dated 2012 | Exhibit 2.1 of the Form 10-Q filed February 8, 2012 (File No. 001-05318) is incorporated herein by reference. |
| 2.2 | Warranty Agreement relating to Deloro Stellite Holdings 1 Limited dated January 13, 2012 | Exhibit 2.2 of the Form 10-Q filed February 8, 2012 (File No. 001-05318) is incorporated herein by reference. |
| 2.3 | Tax Deed Covenant relating to Deloro Stellite Holdings 1 Limited dated March 1, 2012 | Exhibit 2.1 of the Form 10-Q filed May 9, 2012 (File No. 001-05318) is incorporated herein by reference. |
| 2.4 | Purchase Agreement relating to the Tungsten Materials Business of Allegheny Technologies Incorporated dated as of September 13, 2013 | Exhibit 2.1 of the Form 10-Q filed November 7, 2013 (File No. 001-05318) is incorporated herein by reference. |

3 Articles of Incorporation and Bylaws

- | | | |
|-----|--|--|
| 3.1 | Articles of Incorporation of Kennametal Inc., as amended and restated through October 28, 2014 | Exhibit 3.(i) of the Form 8-K filed October 30, 2014 (File No. 001-05318) is incorporated herein by reference. |
| 3.2 | By-Laws of Kennametal Inc., as amended and restated through July 26, 2016 | Exhibit 10.1 of the Form 8-K filed July 28, 2016 (File No. 001-05318) is incorporated herein by reference. |

4 Instruments Defining the Rights of Security Holders, Including Indentures

- | | | |
|-----|--|---|
| 4.1 | Indenture, dated as of June 19, 2002, by and between the Registrant and Bank One Trust Company, N.A., as trustee | Exhibit 4.1 of the Form 8-K filed June 20, 2002 (File No. 001-05318) is incorporated herein by reference. |
| 4.2 | First Supplemental Indenture, dated as of June 19, 2002, by and between the Registrant and Bank One Trust Company, N.A., as trustee | Exhibit 4.2 of the Form 8-K filed June 20, 2002 (File No. 001-05318) is incorporated herein by reference. |
| 4.3 | Indenture dated February 14, 2012 between Kennametal Inc. and U.S. Bank National Association | Exhibit 4.1 of the Form 8-K filed February 14, 2012 (File No. 001-05318) is incorporated herein by reference. |
| 4.4 | First Supplemental Indenture dated February 14, 2012 between Kennametal Inc. and U.S. Bank National Association (including Form of 3.875% Note due 2022) | Exhibit 4.2 of the Form 8-K filed February 14, 2012 (File No. 001-05318) is incorporated herein by reference. |
| 4.5 | Second Supplemental Indenture dated November 7, 2012 between Kennametal Inc. and U.S. Bank National Association (including Form of 2.65% Note due 2019) | Exhibit 4.4 of the Form 8-K filed November 7, 2012 (File No. 001-05318) is incorporated herein by reference. |

10 Material Contracts

- | | | |
|-------|--|--|
| 10.1* | Kennametal Inc. Management Performance Bonus Plan | Appendix A to the 2011 Proxy Statement filed September 12, 2011 (File No. 001-05318) is incorporated herein by reference. |
| 10.2* | Deferred Fee Plan for Outside Directors, as amended and restated effective December 30, 2008 | Exhibit 10.1 of the December 31, 2008 Form 10-Q filed February 4, 2009 (File No. 001-05318) is incorporated herein by reference. |
| 10.3* | Executive Deferred Compensation Trust Agreement | Exhibit 10.5 of the June 30, 1988 Form 10-K (File No. 001-05318) is incorporated herein by reference. |

10.4*	Directors Stock Incentive Plan, as amended and restated effective December 30, 2008	Exhibit 10.2 of the December 31, 2008 Form 10-Q filed February 4, 2009 (File No. 001-05318) is incorporated herein by reference.
10.5*	Performance Bonus Stock Plan of 1995, as amended and restated effective December 30, 2008	Exhibit 10.3 of the December 31, 2008 Form 10-Q filed February 4, 2009 (File No. 001-05318) is incorporated herein by reference.
10.6*	Kennametal Inc. Stock and Incentive Plan of 2002 (as amended on October 21, 2008)	Appendix A to the 2008 Proxy Statement filed September 8, 2008 (File No. 001-05318) is incorporated herein by reference.
10.7*	Forms of Award Agreements under the Kennametal Inc. Stock and Incentive Plan of 2002, as amended	Exhibit 10.18 of the June 30, 2004 Form 10-K filed September 10, 2004 (File No. 001-05318) is incorporated herein by reference.
10.8*	Form of Kennametal Inc. Restricted Unit Award (granted under the Kennametal Inc. Stock and Incentive Plan of 2002, as amended)	Exhibit 10.1 of the September 30, 2009 Form 10-Q filed November 5, 2009 (File No. 001-05318) is incorporated herein by reference.
10.9*	Form of Kennametal Inc. Performance Unit Award (granted under the Kennametal Inc. Stock and Incentive Plan of 2002, as amended)	Exhibit 10.1 of Form 10-Q filed November 5, 2010 (File No. 001-05318) is incorporated herein by reference.
10.10*	Form of Officer's Employment Agreement with Ronald M. De Feo	Exhibit 10.1 to Form 8-K filed February 5, 2016 (File No. 001-05318) is incorporated herein by reference.
10.11*	Form of Amended and Restated Employment Agreement with certain Named Executive Officers	Exhibit 10.6 of the December 31, 2008 Form 10-Q filed February 4, 2009 (File No. 001-05318) is incorporated herein by reference.
10.12*	Schedule of Named Executive Officers who have entered into the Form of Amended and Restated Employment Agreement and Form of Amendment as set forth in Exhibit 10.11	Filed herewith.
10.13*	Form of Officer's Employment Agreement with certain Named Executive Officers	Exhibit 10.16 of the Form 10-K filed August 13, 2015 (File No. 001-05318) is incorporated herein by reference.
10.14*	Schedule of Named Executive Officers who have entered into the Form of Officer's Employment Agreement as set forth in Exhibit 10.13	Exhibit 10.17 of the Form 10-K filed August 13, 2015 (File No. 001-05318) is incorporated herein by reference.
10.15*	Form of Indemnification Agreement for Named Executive Officers	Exhibit 10.2 of the Form 8-K filed March 22, 2005 (File No. 001-05318) is incorporated herein by reference.
10.16*	Schedule of Named Executive Officers who have entered into the Form of Indemnification Agreement as set forth in Exhibit 10.15	Filed herewith.
10.17*	Form of Employment Agreement with Donald A. Nolan	Exhibit 10.1 of the Form 8-K filed November 17, 2015 (File No. 001-05318) is incorporated herein by reference.
10.18*	Kennametal Inc. Executive Retirement Plan (for Designated Others) (as amended effective December 30, 2008)	Exhibit 10.8 of the December 31, 2008 Form 10-Q filed February 4, 2009 (File No. 001-05318) is incorporated herein by reference.
10.19*	Amendment No. 1 to Kennametal Inc. Executive Retirement Plan (dated January 27, 2015)	Exhibit 10.2 to the Form 8-K dated February 2, 2015 (File No. 001-05318) is incorporated herein by reference.
10.20*	Amendment No. 2 to Kennametal Inc. Executive Retirement Plan (dated June 18, 2015)	Exhibit 10.1 of the Form 8-K filed June 23, 2015 (File No. 001-05318) is incorporated herein by reference.
10.21*	Kennametal Inc. Supplemental Executive Retirement Plan (as amended effective December 30, 2008)	Exhibit 10.9 of the December 31, 2008 Form 10-Q filed February 4, 2009 (File No. 001-05318) is incorporated herein by reference.
10.22*	Amendment No. 1 to the Kennametal Inc. Supplemental Executive Retirement Plan (as amended effective December 30, 2008) (dated June 18, 2015)	Exhibit 10.2 of the Form 8-K filed June 23, 2015 (File No. 001-05318) is incorporated herein by reference.
10.23*	Description of Compensation Payable to Non-Employee Directors	Filed herewith.

10.24	Third Amended and Restated Credit Agreement dated as of June 25, 2010 among Kennametal Inc., Kennametal Europe GmbH, Bank of America, N.A., London Branch (as Euro Swingline Lender), PNC Bank, National Association and JPMorgan Chase Bank, N.A. (as Co-Syndication Agents), Citizens Bank of Pennsylvania and Bank of Tokyo- Mitsubishi UFJ Trust Company (as Co-Documentation Agents), Bank of America, N.A. (as the Administrative Agent), and the following lenders: Bank of America, N.A., PNC Bank, National Association, JPMorgan Chase Bank, N.A., Bank of Tokyo-Mitsubishi UFJ Trust Company, Citizens Bank of Pennsylvania, Mizuho Corporate Bank, Ltd., Comerica Bank, Commerzbank AG New York and Grand Cayman Branches, HSBC Bank USA, National Association, Intesa Sanpaolo S.p.A New York Branch, U.S. Bank National Association, First Commonwealth Bank and TriState Capital Bank	Exhibit 10.1 of Form 8-K filed June 30, 2010 (File No. 001-05318) is incorporated herein by reference.
10.25	Amendment No. 1, dated as of October 21, 2011, to the Third Amended and Restated Credit Agreement by and among Kennametal Inc., Kennametal Europe GmbH, Bank of America, N.A., Bank of America, N.A., London Branch, PNC Bank, National Association, JPMorgan Chase Bank, N.A., The Bank of Tokyo-Mitsubishi UFJ, Ltd., Citizens Bank of Pennsylvania, Mizuho Corporate Bank, Ltd., HSBC Bank USA, N.A., U.S. Bank National Association, Comerica Bank, Commerzbank AG New York and Grand Cayman Branches, The Huntington National Bank, First Commonwealth Bank and Intesa Sanpaolo S.p.A	Exhibit 10.1 of Form 8-K filed October 27, 2011 (File No. 001-05318) is incorporated herein by reference.
10.26	Amendment No. 2, dated as of April 5, 2013, to the Third Amended and Restated Credit Agreement by and among Kennametal Inc., Kennametal Europe GmbH, Bank of America, N.A., Bank of America, N.A., London Branch, PNC Bank, National Association, JPMorgan Chase Bank, N.A., The Bank of Tokyo-Mitsubishi UFJ, Ltd., Citizens Bank of Pennsylvania, Mizuho Corporate Bank, Ltd., HSBC Bank USA, N.A., U.S. Bank National Association, Commerzbank AG New York and Grand Cayman Branches, The Huntington National Bank, Compass Bank and First Commonwealth Bank.	Exhibit 10.1 of Form 8-K filed April 11, 2013 (File No. 001-05318) is incorporated herein by reference.
10.27	Form of Third Amended and Restated Guarantee (in connection with the Third Amended and Restated Credit Agreement)	Exhibit 10.26 of Form 10-K filed August 12, 2010 (File No. 001-05318) is incorporated herein by reference.
10.28	Fourth Amended and Restated Credit Agreement dated as of April 15, 2016 among Kennametal Inc. and Kennametal Europe GmbH (the “Borrowers”), the several banks and other financial institutions or entities from time to time parties to the Agreement (“Lenders”), Bank of America, N.A., London Branch (as Euro Swingline Lender), PNC Bank, National Association and JPMorgan Chase Bank, N.A. (as Co-Syndication Agents), Citizens Bank of Pennsylvania, The Bank of Tokyo-Mitsubishi UFJ Trust Company and Mizuho Bank, Ltd. (as Co-Documentation Agents), Bank of America, N.A. (as the Administrative Agent).	Exhibit 10.1 of Form 8-K filed April 19, 2016 (File No. 001-05318) is incorporated herein by reference.
10.29*	Stock and Incentive Plan of 2010	Exhibit A of the 2010 Proxy Statement filed September 13, 2010 (File No. 001-05318) is incorporated herein by reference.
10.30*	Form of Kennametal Inc. Performance Unit Award (granted under the Kennametal Inc. Stock and Incentive Plan of 2010)	Exhibit 10.2 of Form 10-Q filed February 8, 2011 (File No. 001-05318) is incorporated herein by reference.
10.31*	Form of Kennametal Inc. Restricted Unit Award (granted under the Kennametal Inc. Stock and Incentive Plan of 2010)	Exhibit 10.3 of Form 10-Q filed February 8, 2011 (File No. 001-05318) is incorporated herein by reference.
10.32*	Form of Kennametal Inc. Restricted Unit Award for Non-Employee Directors (granted under the Kennametal Inc. Stock and Incentive Plan of 2010)	Exhibit 10.4 of Form 10-Q filed February 8, 2011 (File No. 001-05318) is incorporated herein by reference.
10.33*	Form of Kennametal Inc. Nonstatutory Stock Option Award (granted under the Kennametal Inc. Stock and Incentive Plan of 2010)	Exhibit 10.5 of Form 10-Q filed February 8, 2011 (File No. 001-05318) is incorporated herein by reference.

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10.34*	Form of Kennametal Inc. Nonstatutory Stock Option Award for Non-Employee Directors (granted under the Kennametal Inc. Stock and Incentive Plan of 2010)	Exhibit 10.6 of Form 10-Q filed February 8, 2011 (File No. 001-05318) is incorporated herein by reference
10.35*	Form of Performance Unit Award (granted under Kennametal Inc. Stock and Incentive Plan 2010)	Exhibit 10.2 of Form 10-Q filed November 8, 2011 (File No. 001-05318) is incorporated herein by reference
10.36*	Form of Officer's Employment Agreement with certain Named Executive Officers	Exhibit 10.1 of Form 8-K filed May 13, 2011 (File No. 001-05318) is incorporated herein by reference.
10.37*	Schedule of Executive Officers who have entered into the Form of Officer's Employment Agreement as set forth in Exhibit 10.36	Filed herewith.
10.38*	Form of Kennametal Inc. Restricted Unit Award - President and CEO (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.3 to Form 8-K filed February 5, 2016 (File No. 001-05318) is incorporated herein by reference
10.39*	Form of Kennametal Inc. Nonstatutory Stock Option Award - President and CEO (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.2 to Form 8-K filed February 5, 2016 (File No. 001-05318) is incorporated herein by reference
10.40*	Form of Kennametal Inc. Restricted Unit Award - President and CEO (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Filed herewith.
10.41*	Form of Kennametal Inc. Performance Unit Award - President and CEO (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Filed herewith.
10.42*	Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013)	Appendix A of the 2013 Proxy Statement filed September 17, 2013 (File No. 001-05318) is incorporated herein by reference.
10.43*	Form of Kennametal Inc. Performance Unit Award (granted under the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.38 of Form 10-K filed August 13, 2014 (File No. 001-05318) is incorporated herein by reference.
10.44*	Form of Kennametal Inc. Restricted Unit Award (granted under the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.39 of Form 10-K filed August 13, 2014 (File No. 001-05318) is incorporated herein by reference.
10.45*	Form of Kennametal Inc. Restricted Unit Award for Non-Employee Directors (granted under the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.40 of Form 10-K filed August 13, 2014 (File No. 001-05318) is incorporated herein by reference.
10.46*	Form of Kennametal Inc. Nonstatutory Stock Option Award (granted under the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.41 of Form 10-K filed August 13, 2014 (File No. 001-05318) is incorporated herein by reference.
10.47*	Form of Kennametal Inc. Nonstatutory Stock Option Award for Non-Employee Directors (granted under the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.42 of Form 10-K filed August 13, 2014 (File No. 001-05318) is incorporated herein by reference.
10.48*	Form of Kennametal Inc. Cash Settled Share-Based Award for China-based Employees (granted under the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.43 of Form 10-K filed August 13, 2014 (File No. 001-05318) is incorporated herein by reference.
10.49*	Form of Kennametal Inc. Stock Appreciation Right Award for China-based Employees (granted under the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.44 of Form 10-K filed August 13, 2014 (File No. 001-05318) is incorporated herein by reference.
10.50*	Form of Kennametal Inc. Restricted Unit Award - Alternate Form (granted under the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.45 of Form 10-K filed August 13, 2014 (File No. 001-05318) is incorporated herein by reference.
10.51*	Form of Kennametal Inc. Nonstatutory Stock Option Award - Alternate Form (granted under the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.46 of Form 10-K filed August 13, 2014 (File No. 001-05318) is incorporated herein by reference.

10.52*	Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013)	Exhibit 10.1 to the Form 8-K dated February 2, 2015 (File No. 001-05318) is incorporated herein by reference.
10.53*	Form of Kennametal Inc. Performance Unit Award (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.3 to the Form 8-K dated February 2, 2015 (File No. 001-05318) is incorporated herein by reference.
10.54*	Form of Kennametal Inc. Restricted Unit Award (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.4 to the Form 8-K dated February 2, 2015 (File No. 001-05318) is incorporated herein by reference.
10.55*	Form of Kennametal Inc. Restricted Unit Award for Non-Employee Directors (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.5 to the Form 8-K dated February 2, 2015 (File No. 001-05318) is incorporated herein by reference.
10.56*	Form of Kennametal Inc. Restricted Unit Award - Alternate Form (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.6 to the Form 8-K dated February 2, 2015 (File No. 001-05318) is incorporated herein by reference.
10.57*	Form of Kennametal Inc. Nonstatutory Stock Option Award (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.8 to the Form 8-K dated February 2, 2015 (File No. 001-05318) is incorporated herein by reference.
10.58*	Form of Kennametal Inc. Nonstatutory Stock Option Award for Non-Employee Directors (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.9 to the Form 8-K dated February 2, 2015 (File No. 001-05318) is incorporated herein by reference.
10.59*	Form of Kennametal Inc. Nonstatutory Stock Option Award - Alternate Form (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.10 to the Form 8-K dated February 2, 2015 (File No. 001-05318) is incorporated herein by reference.
10.60*	Form of Kennametal Inc. Cash Settled Share-Based Award for China-based Employees (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.12 to the Form 8-K dated February 2, 2015 (File No. 001-05318) is incorporated herein by reference.
10.61*	Form of Kennametal Inc. Stock Appreciation Right Award for China-based Employees (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.13 to the Form 8-K dated February 2, 2015 (File No. 001-05318) is incorporated herein by reference.
10.62*	Form of Kennametal Inc. Performance Unit Award (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.1 to the Form 8-K dated July 30, 2015, (File No. 001-05318) is incorporated herein by reference.
10.63*	Form of Kennametal Inc. Restricted Unit Award (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.3 to the Form 8-K dated July 30, 2015, (File No. 001-05318) is incorporated herein by reference.
10.64*	Form of Kennametal Inc. Restricted Unit Award - Alternate Form (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.5 to the Form 8-K dated July 30, 2015, (File No. 001-05318) is incorporated herein by reference.
10.65*	Form of Kennametal Inc. Cash Settled Share-Based Award for China-based Employees (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.6 to the Form 8-K dated July 30, 2015, (File No. 001-05318) is incorporated herein by reference.
10.66*	Form of Kennametal Inc. Nonstatutory Stock Option Award (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.7 to the Form 8-K dated July 30, 2015, (File No. 001-05318) is incorporated herein by reference.
10.67*	Form of Kennametal Inc. Nonstatutory Stock Option Award - Alternate Form (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.9 to the Form 8-K dated July 30, 2015, (File No. 001-05318) is incorporated herein by reference.

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10.68*	Form of Kennametal Inc. Stock Appreciation Right Award for China-based Employees (granted under Amendment No. 1 to the Kennametal Inc. Stock and Incentive Plan of 2010 (As Amended and Restated October 22, 2013))	Exhibit 10.10 to the Form 8-K dated July 30, 2015, (File No. 001-05318) is incorporated herein by reference.
21	Subsidiaries of the Registrant	Filed herewith.
23	Consent of Independent Registered Public Accounting Firm	Filed herewith.
31	Certifications	
31.1	Certification executed by Ronald M. De Feo, President and Chief Executive Officer of Kennametal Inc.	Filed herewith.
31.2	Certification executed by Jan Kees van Gaalen, Vice President and Chief Financial Officer of Kennametal Inc.	Filed herewith.
32	Section 1350 Certifications	
32.1	Certification Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, executed by Ronald M. De Feo, President and Chief Executive Officer of Kennametal Inc., and Jan Kees van Gaalen, Vice President and Chief Financial Officer of Kennametal Inc.	Filed herewith.

*Denotes management contract or compensatory plan or arrangement.

101	XBRL	
101.INS	XBRL Instance Document.	Filed herewith.
101.SCH	XBRL Taxonomy Extension Schema Document.	Filed herewith.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.	Filed herewith.
101.DEF	XBRL Taxonomy Definition Linkbase	Filed herewith.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.	Filed herewith.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.	Filed herewith.

SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS AND RESERVES

(In thousands) For the year ended June 30	Balance at Beginning of Year	Charges to Costs and Expenses	Charged to Other Comprehensive (Loss) Income	Recoveries	Other Adjustments	Deductions from Reserves	Balance at End of Year
2016							
Allowance for doubtful accounts	\$ 13,560	\$ 4,827	\$ —	\$ 31	\$ (601) ⁽¹⁾	\$ (5,093) ⁽²⁾	\$ 12,724
Reserve for excess and obsolete inventory	45,020	5,393	—	—	(3,372) ⁽¹⁾	(10,328) ⁽³⁾	36,713
Deferred tax asset valuation allowance	16,771	85,361 ⁽⁵⁾	24,666 ⁽⁵⁾	—	(4,099) ⁽¹⁾	—	122,699
2015							
Allowance for doubtful accounts	\$ 14,027	\$ 3,602	\$ —	\$ 40	\$ (1,095) ⁽¹⁾	\$ (3,014) ⁽²⁾	\$ 13,560
Reserve for excess and obsolete inventory	52,737	8,666	—	—	(5,613) ⁽¹⁾	(10,770) ⁽³⁾	45,020
Deferred tax asset valuation allowance	17,860	1,846	—	—	(2,935) ⁽¹⁾	—	16,771
2014							
Allowance for doubtful accounts	\$ 11,949	\$ 2,880	\$ —	\$ 207	\$ 111 ⁽¹⁾	\$ (1,120) ⁽²⁾	\$ 14,027
Reserve for excess and obsolete inventory	52,739	9,252	—	—	1,317 ⁽¹⁾	(10,571) ⁽³⁾	52,737
Deferred tax asset valuation allowance	15,569	3,001	24	—	505 ⁽¹⁾	(1,239) ⁽⁴⁾	17,860

- (1) Represents foreign currency translation adjustment and reserves divested through business combinations.
- (2) Represents uncollected accounts charged against the allowance.
- (3) Represents scrapped inventory and other charges against the reserve.
- (4) Represents a forfeited net operating loss deduction.
- (5) Represents primarily effects from recording of a valuation allowance against our net deferred tax assets in the U.S.

SCHEDULE OF NAMED EXECUTIVE OFFICERS WHO HAVE ENTERED INTO THE FORM OF AMENDED AND RESTATED EMPLOYMENT AGREEMENT AS SET FORTH IN EXHIBIT 10.11

John H. Jacko, Jr.

SCHEDULE OF NAMED EXECUTIVE OFFICERS WHO HAVE ENTERED INTO THE FORM OF INDEMNIFICATION AGREEMENT AS SET FORTH IN EXHIBIT 10.15

NAME

Judith L. Bacchus
Charles M. Byrnes
Ronald M. De Feo
Peter A. Dragich
Martha Fusco
John H. Jacko, Jr.
Donald A. Nolan
Jan Kees van Gaalen

Overview of Director Compensation

We do not pay any additional cash compensation to management employees who serve as directors. In addition, no director who is employed by the Company may serve on any Board committee. Currently, Mr. Nolan, our President and Chief Executive Officer, is the only employee of the Company that serves as a director. The compensation paid to Mr. Nolan, in his capacity as our President and Chief Executive Officer, is included in the Summary Compensation Table and the related text and compensation tables. Our non-employee directors receive a combination of cash and equity compensation for their services as a director or committee member as described below.

Cash Compensation for Non-Employee Directors

Our non-employee directors are entitled to receive the following cash compensation:

Annual Cash Retainer	
All Non-Employee Directors	\$80,000
Additional Annual Cash Retainer	
Non-Executive Chairman of the Board	\$100,000
Audit Committee Chair	\$15,000
Compensation Committee Chair	\$10,000
Nominating/Corporate Governance Committee Chair	\$8,000

Equity Compensation

Equity compensation for our non-employee directors consists of:

Annual Grant of Restricted Stock, Restricted Stock Units or Deferred Stock Credits (1)	\$ 120,000
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(1) For newly-elected Directors, the annual grant of Restricted Stock Units will be prorated dependent upon and subject to the time at which a Director is elected or appointed to the Board.

Perquisites and Personal Benefits

All non-employee directors receive \$50,000 of life insurance coverage, which is paid for by the Company. Directors do not receive tax reimbursements for income imputed to them for the premiums we pay for life insurance coverage. We reimburse directors for customary travel and related expenses for their attendance at Board and committee meetings, as well as continuing education programs, as appropriate.

Deferred Fee Plan

We have a Deferred Fee Plan for outside directors (the "Deferred Fee Plan"). On an annual basis, our non-employee directors may elect to defer payment of all or a portion of the cash fees they are entitled to receive from the Company for their services as a director and committee member all of which amounts will be credited as stock credits under the Directors Stock Incentive Plan (described below).

Directors Stock Incentive Plan

Under the Directors Stock Incentive Plan, any non-employee director may elect (i) to receive shares of the Company's capital stock in lieu of all or any portion of cash compensation they are otherwise entitled to receive; or (ii) to have stock credits (representing an equivalent amount of the cash being deferred) credited to an account established by the Company for such participating director.

If a non-employee director elects to receive shares of the Company's capital stock in lieu of all or any portion of the cash compensation otherwise payable to such director, the director will receive, on the date that the compensation otherwise would have been paid, the number of shares of capital stock of the Company that could have been purchased on that date based on the amount of cash compensation being deferred pursuant to the election and the fair market value of the Company's capital stock on that date.

If a non-employee director makes a stock credit election, an account established for the non-employee director is credited with a number of stock credits equal to the number of shares of capital stock that could have been purchased with the amount of cash compensation being deferred based on the fair market value of the Company's capital stock on the day that the compensation would have been paid to the non-employee director. Dividend equivalents are credited to the account of any director who has elected to receive stock credits in lieu of cash compensation. Dividend equivalents are calculated at the same rate as the current dividend; there is no preferential or above-market earnings potential for deferrals into stock credits. In the event of a change in control, issued and outstanding shares of capital stock equal to the aggregate number of stock credits in each non-employee director's stock credit account would be contributed to a deferred compensation trust (a "Rabbi Trust") established by the Company and administered by an independent trustee. Generally, unless a director has selected a different payment option, as permitted under the plan, the director will receive upon his/her Separation from Service (as defined in the plan) that number of shares of the Company's capital stock equal to the number of stock credits in such director's account multiplied by the fair market value of the Company's capital stock as of the date of the director's Separation from Service.

Matching Gifts Program

Directors are eligible to participate in our Matching Gifts Program, which is also generally available to all U.S. employees. Under the program, the Kennametal Foundation will match gifts to qualified institutions on a dollar-for-dollar basis up to \$5,000 per calendar year.

SCHEDULE OF NAMED EXECUTIVE OFFICERS WHO HAVE ENTERED INTO THE FORM OF EMPLOYMENT AGREEMENT AS SET FORTH IN EXHIBIT 10.36

Judith L. Bacchus

Charles M. Byrnes

Peter A. Dragich

Jan Kees van Gaalen

KENNAMETAL INC.**RESTRICTED UNIT AWARD****(FOR PRESIDENT AND CEO)****Grant Date:** August 1, 2016

Kennametal Inc. (the "Company") hereby grants to [NAME] (the "Awardee"), as of the Grant Date listed above, this Restricted Unit Award (the "Award") for [TARGET NUMBER OF STOCK UNITS] Stock Units, subject to the terms and conditions of the Kennametal Inc. Stock and Incentive Plan of 2010, as Amended and Restated on October 22, 2013, as further amended on January 27, 2015 (the "Plan"), and the additional terms listed below. Capitalized terms used herein, but not otherwise defined herein, shall have the same meaning ascribed to them in Schedule A or the Plan.

1. Each Stock Unit represents the right to receive one Share of the Company's Capital Stock, par value \$1.25 per share, subject to the Forfeiture Restrictions (defined below). Notwithstanding, Stock Units as initially awarded have no independent economic value, but rather are mere units of measurement used for the purpose of calculating the number of Shares, if any, to be delivered under the Award.
2. The prohibition against transfer and the obligation to forfeit and surrender the Stock Units to the Company are herein referred to as "Forfeiture Restrictions." The Stock Units may not be sold, assigned, pledged, exchanged, hypothecated, gifted or otherwise transferred, encumbered or disposed of, except as described in the Plan, to the extent then subject to the Forfeiture Restrictions. The Forfeiture Restrictions will be binding upon, and enforceable against, any permitted transferee of the Stock Units.
3. Provided that the Awardee's employment is not terminated for "cause" (as defined in the Plan) and that Awardee does not breach any restrictive covenant to which he may be bound by the Company from the Grant Date through the lapse date, the Forfeiture Restrictions will lapse as follows: (a) on the first anniversary of the Grant Date, one-third (1/3) of the Stock Units will vest and the Forfeiture Restrictions will lapse as to those Stock Units; (b) on the second anniversary of the Grant Date, an additional one-third (1/3) of the Stock Units will vest and the Forfeiture Restrictions will lapse as to those Stock Units; and (c) on the third anniversary of the Grant Date, the remaining one-third (1/3) of the Stock Units will vest and the Forfeiture Restrictions will lapse as to those Stock Units.
4. The Stock Units, to the extent then subject to the Forfeiture Restrictions, will be forfeited to the Company upon termination of Awardee's employment for "cause" (as defined in the Plan) or breach by Awardee of any restrictive covenant to which he may be bound by the Company. Upon any other Separation from Service other than termination for "cause," the Forfeiture Restrictions will lapse in accordance with the schedule set forth below:
 - Between the grant date and September 30, 2016: forfeit all shares.
 - Between October 1, 2016 and December 31, 2016: forfeiture of two-thirds of shares with the remaining one-third of shares to follow the normal vesting schedule set forth above in Section 3.
 - Between January 1, 2017 and March 17, 2017: forfeiture of one-third of shares with the remaining two-thirds of shares to follow the normal vesting schedule set forth above in Section 3.
 - Upon turning age 65 on March 18, 2017 and thereafter: all awards will immediately vest.
5. Except as otherwise provided herein, the shares of Company Capital Stock (the "Shares") underlying Stock Units which are no longer subject to Forfeiture Restrictions shall be issued to the Awardee on the lapse date (or as soon as reasonably practicable thereafter but in no event later than the 15th day of the third month following such date), subject to the Awardee's satisfaction of all applicable income and employment withholding taxes.
6. The Shares underlying Stock Units shall not be sold or otherwise disposed of in any manner that would constitute a violation of any applicable federal or state securities laws. The Company may refuse to register a transfer of the Shares on the stock transfer records of the Company if the transfer constitutes a violation of any applicable securities law and the Company may give related instructions to its transfer agent, if any, to stop registration of the transfer of the Shares.

7. This Restricted Unit Award is intended to comply with Section 409A of the Internal Revenue Code (which deals with nonqualified deferred compensation) or an exception thereto and the regulations promulgated thereunder and will be construed accordingly. The Company reserves the right to administer, amend or modify the Award or to take any other action necessary or desirable to enable the Award to be interpreted and construed accordingly. Notwithstanding the foregoing, the Awardee acknowledges and agrees that Section 409A may impose upon the Awardee certain taxes or interest charges for which the Awardee is and shall remain solely responsible. Notwithstanding the foregoing or any provision of this Award to the contrary, if this Award is subject to Section 409A (and not excepted therefrom) and a Change of Control is a distribution event for purposes of the Award, the definition of Change in Control shall be interpreted, administered and construed in a manner necessary to ensure that the occurrence of any such event shall result in a Change of Control only if such event qualifies as a change in the ownership or effective control of a corporation, or a change in the ownership of a substantial portion of the assets of a corporation, as applicable, within the meaning of Treas. Reg. § 1.409A-3(i)(5).

8. Notwithstanding anything to the contrary in this Award or the Plan, in the event that this Award is not accepted by the Awardee on or before the date that is 180 days from the grant date noted herein (the "Forfeiture Date"), then this Award shall become null and void and all Stock Units subject to this Award shall be forfeited by the Awardee as of the Forfeiture Date. For acceptance to be valid, the Awardee must accept this Award in the manner specified by the Company. Any Shares underlying the Stock Units covered by this Award that are forfeited by the Awardee shall be returned to the Plan and resume the status of shares available for grant.

9. All other terms and conditions applicable to this Award are contained in the Plan. A copy of the Plan and related Prospectus is available on your accounts page at netbenefits.fidelity.com under Plan Information and Documents, as well as on The Hub under Human Resources.

KENNAMETAL INC.

By: Michelle R. Keating
Title: Vice President, Secretary and Interim General Counsel

KENNAMETAL INC.**PERFORMANCE UNIT AWARD****(FOR PRESIDENT AND CEO)****Grant Date:** August 1, 2016

Kennametal Inc. (the "Company") hereby grants to [NAME] (the "Awardee"), as of the Grant Date listed above, this Performance Unit Award (the "Award") for [TARGET NUMBER OF STOCK UNITS] Stock Units, subject to the terms and conditions of the Kennametal Inc. Stock and Incentive Plan of 2010, as Amended and Restated on October 22, 2013, as further amended January 27, 2015 (the "Plan") and the additional terms listed below. Capitalized terms used herein, but not otherwise defined, shall have the same meaning ascribed to them in the Plan.

1. Each Stock Unit represents the right to receive one Share of the Company's Capital Stock, par value \$1.25 per share, subject to the satisfaction of the Service Condition described herein and the Performance Conditions attached hereto as **Exhibit A**. Stock Units as initially awarded have no independent economic value, but rather are mere units of measurement used for purposes of calculating the number of Shares, if any, to be delivered under this Award. The maximum amount of Stock Units that may be earned under this Award is equal to two times the target number of Stock Units listed in the preamble above.

2. Except as otherwise provided in this Award, Awardee must be actively employed by the Company on the Payment Date (defined below) to be eligible to receive Shares in payment of any Stock Units earned under this Award (the "Service Condition"). However, if the Awardee separates from service other than (i) termination for "cause" (as defined in the Plan); or (ii) breach of a restrictive covenant to which he may be bound by the Company from the Grant Date through the lapse date, the Forfeiture Restrictions will lapse in accordance with the schedule set forth below:

- Between the grant date and September 30, 2016: forfeit all shares.
- Between October 1, 2016 and December 31, 2016: forfeiture of two-thirds of shares with the remaining one-third of shares to follow the normal vesting schedule as set forth in Exhibit A.
- Between January 1, 2017 and March 17, 2017: forfeiture of one-third of shares with the remaining two-thirds of shares to follow the normal vesting schedule as set forth in Exhibit A.
- Upon turning age 65 on March 18, 2017 and thereafter: shares to follow the normal vesting schedule as set forth in Exhibit A.

3. In addition to satisfaction of the Service Condition, payment under this Award is subject to, and contingent upon, achievement of the annual Performance Conditions during the Performance Period. The amount of this Award payable to Awardee will be determined by the level of achievement of the annual Performance Conditions as set forth in **Exhibit A**. Achievement of the Performance Conditions, including the level of achievement, if any, for each fiscal year in the

Performance Period shall be determined by the Compensation Committee of the Board of Directors (the "Compensation Committee"), in its sole discretion, and Awardee agrees to be bound by such determination; provided, however, the Compensation Committee shall not use its discretionary authority reserved to it under Section 6(g) of the Plan to reduce the number of Stock Units earned, if any, based on the achievement of the Performance Conditions pursuant to the terms and conditions of this Award. For each fiscal year of the Performance Period, any Stock Units that are not earned will be cancelled and forfeited at the end of such fiscal year.

4. Issuance and Distribution.

a. At the end of each fiscal year of the Performance Period to which this Award relates, the Compensation Committee will certify in writing the extent to which the applicable annual Performance Conditions have been achieved. For purposes of this provision, and for so long as the Code permits, the approved minutes of the Committee meeting in which the certification is made may be treated as written certification.

b. Subject to the terms and conditions of this Award and unless otherwise specifically provided herein, Stock Units earned by an Awardee will be settled and paid in Shares of the Company's Capital Stock as soon as practicable following the end of the three-year Performance Period on a date determined in the Company's discretion, but in no event later than the last day of the "applicable 2½ month period" specified in Treas. Reg. §1.409A-1(b)(4) (the "Payment Date").

5. Change in Awardee's Status; Change in Control.

a. Death or Disability. In the event an Awardee Separates from Service before the Payment Date on account of death or Disability, the Service Condition will be waived. For completed fiscal years, Awardee shall be entitled to receive payment for any Stock Units that have been earned based on the achievement of the Performance Conditions applicable to such fiscal year. For fiscal years not completed, the Performance Conditions will be deemed to have been achieved at the target level and the Awardee will be deemed to have earned for each such fiscal year a number of Stock Units that were able to be earned for such fiscal year.

Subject to the terms and conditions of this Award and unless otherwise specifically provided herein, in the event an Awardee Separates from Service on account of death or Disability, the Stock Units, to the extent earned by the Awardee, shall be paid as soon as practicable following the date of such Separation from Service, but in no event later than the last day of the "applicable 2½ month period" specified in Treas. Reg. §1.409A-1(b)(4).

b. Change of Control. In the event there is a Change in Control during the Performance Period, and unless otherwise specifically provided herein, payment under this Award will remain subject to the satisfaction of the Service Condition. For completed fiscal years prior to the Change in Control, Awardee shall remain eligible to receive payment for any Stock Units that have been earned based on the achievement of the Performance Conditions applicable to such fiscal year. For fiscal years not completed prior to the Change in Control, the Performance Conditions will be deemed to have been achieved at the target level and the Awardee will remain eligible to earn for each such fiscal year a number of Stock Units that were able to be earned for such fiscal year.

c. Change in Control Separation. In the event an Awardee Separates from Service prior to the Payment Date on account of an involuntary termination by the Company without cause or Awardee voluntarily terminates employment for Good Reason (as defined herein) (a) within the six-month period immediately preceding a Change in Control in contemplation of such Change in Control (and the Change in Control actually occurs) or (b) during the two-year period following a Change in Control (a "Change in Control Separation"), the Service Condition will be waived. For completed fiscal years prior to the Change in Control, Awardee shall be entitled to receive payment for any Stock Units that have been earned based on the achievement of the Performance Conditions applicable to such fiscal year. For fiscal years not completed prior to the Change in Control, the Performance Conditions will be deemed to have been achieved at the target level and the Awardee will be deemed to have earned for each such fiscal year a number of Stock Units that were able to be earned for such fiscal year.

Subject to the terms and conditions of this Award and unless otherwise specifically provided herein, in the event of an Change in Control Separation, the Stock Units, to the extent earned by the Awardee, shall be paid as soon as practicable following the date of such Change in Control Separation, but in no event later than the last day of the "applicable 2½ month period" specified in Treas. Reg. §1.409A-1(b)(4); provided that, in the Committee's discretion, the Stock Units may be settled in cash and/or securities or other property.

The term "Good Reason" for purposes of this Award shall mean the occurrence of any of the following in connection with a Change in Control:

- (i) without the Awardee's express written consent, the material diminution of responsibilities or the assignment to the Awardee of any duties materially and substantially inconsistent with his positions, duties, responsibilities and status with Company immediately prior to a Change in Control, or a material change in his or her reporting responsibilities, titles or offices as in effect immediately prior to a Change in Control, or any removal of the Awardee from or any failure to re-elect the Awardee to any of such positions, except in connection with the termination of the Awardee's employment due to Cause (as hereinafter defined) or as a result of the Awardee's death;
- (ii) a material reduction by Company in the Awardee's base salary as in effect immediately prior to any Change in Control;
- (iii) a failure by Company to continue to provide incentive compensation, under the rules by which incentives are provided, on a basis not materially less favorable to that provided by Company immediately prior to any Change in Control;
- (iv) a material reduction in the overall level of employee benefits, including any benefit or compensation plan, stock option plan, retirement plan, life insurance plan, health and accident plan or disability plan in which Awardee is actively participating immediately prior to a Change in Control (provided, however, that there shall not be deemed to be any such failure if Company substitutes for the discontinued plan, a plan providing Awardee with substantially similar benefits) or the taking of any action by Company which would adversely affect Awardee's participation in or materially reduce Awardee's overall level of benefits under such plans or deprive Awardee of any material fringe benefits enjoyed by Awardee immediately prior to a Change-in-Control;
- (v) the breach of this Agreement caused by the failure of Company to obtain the assumption of this Agreement by any successor; and
- (vi) the relocation of the Awardee to a facility or a location more than 50 miles from the Awardee's then present location, without the Awardee's prior written consent.

Notwithstanding the forgoing, in order for the Awardee to terminate for Good Reason: (a) the Awardee must give written notice to Company or its successor of the Awardee's intention to terminate employment for Good Reason within sixty (60) days after the event or omission which constitutes Good Reason, and any failure to give such written notice within such period will result in a waiver by the Awardee of his right to terminate for Good Reason as a result of such act or omission, (b) the event must remain uncorrected by the Company for thirty (30) days following such notice (the "Notice Period"), and (c) such termination must occur within sixty (60) days after the expiration of the Notice Period.

d. Retirement. In the event a Retirement Eligible Awardee (as defined below) Separates from Service on account of Retirement during the Performance Period, the shares will follow the normal vesting schedule as set forth in Exhibit A.

Notwithstanding any other provision of this Award to the contrary, with respect to an Awardee who is or becomes eligible to Separate from Service on account of Retirement during the Performance Period (a "Retirement Eligible Awardee"), any payment made to such Retirement Eligible Awardee under this Award by reason of (i) a Separation from Service on account of death shall be paid in the month following the month containing the date of such Separation from Service; (ii) a Separation from Service on account of Disability shall be paid in the month following the month containing the 6-month anniversary of the date of such Separation from Service (or, if earlier, the date specified in (iv) below); (iii) a Change in Control Separation shall be paid in the month following the month containing the 6-month anniversary of the date of such Change in Control Separation (or, if earlier, the date specified in (iv) below); or (iv) achievement of the annual Performance Conditions during the Performance Period as specified herein (and regardless of whether Retirement Eligible Awardee Separates from Service on account of Retirement) shall be paid in [August 20XX].

e. All Other Separations from Service. In the event an Awardee Separates from Service for any other reason (other than death, Disability, Retirement or Change in Control Separation), including, but not limited to, involuntarily by the Company with cause, prior to the Payment Date, all Stock Units granted to the Awardee shall be cancelled and forfeited, whether payable or not, without payment by the Company or any Affiliate.

6. The Stock Units will be entitled to receive Dividend Equivalents, which will be subject to all conditions and restrictions applicable to the underlying Stock Units to which they relate. Dividend Equivalents will accrue during the Performance Period. At the end of each fiscal year, Dividend Equivalents will be earned only for Stock Units that are earned or deemed earned under this Award for that fiscal year. With respect to Stock Units that are not earned for a fiscal year (because the applicable Performance Conditions are not satisfied or otherwise), Dividend Equivalents that were accrued for those Stock Units will be cancelled and forfeited along with the Stock Units and underlying Shares, without payment by the Company or any Affiliate. Dividend Equivalents will be paid in cash at such time as the underlying Stock Units to which they relate are paid.

7. The Stock Units may not be sold, assigned, pledged, exchanged, hypothecated, gifted or otherwise transferred, encumbered or disposed of prior to the Payment Date, except as described herein or in the Plan.

8. The Shares underlying the Stock Units shall not be sold or otherwise disposed of in any manner that would constitute a violation of any applicable federal or state securities laws. The Company may refuse to register a transfer of the Shares on the stock transfer records of the Company if the transfer constitutes a violation of any applicable

securities law and the Company may give related instructions to its transfer agent, if any, to stop registration of the transfer of the Shares.

9. This Performance Unit Award is intended to comply with Section 409A of the Internal Revenue Code (which deals with nonqualified deferred compensation) or an exception thereto and the regulations promulgated thereunder and will be construed accordingly. To the extent a payment is subject to Section 409A and not excepted therefrom, such payment shall be treated as made on the specified date of payment if such payment is made at such date or a later date in the same calendar year or, if later, by the 15th day of the third calendar month following the specified date of payment, as provided and in accordance with Treas. Reg. § 1.409A-3(d). An Awardee shall have no right to designate the date of any payment under this Award. The Company reserves the right to administer, amend or modify the Award or to take any other action necessary or desirable to enable the Award to be interpreted and construed accordingly. Notwithstanding the foregoing, the Awardee acknowledges and agrees that Section 409A may impose upon the Awardee certain taxes or interest charges for which the Awardee is and shall remain solely responsible.

10. Notwithstanding anything to the contrary in this Award or the Plan, in the event that this Award is not accepted by the Awardee on or before the date that is 180 days from the grant date noted herein (the "Forfeiture Date"), then this Award shall become null and void and all Stock Units subject to this Award shall be forfeited by the Awardee as of the Forfeiture Date. For acceptance to be valid, the Awardee must accept this Award in the manner specified by the Company. Any Shares underlying the Stock Units covered by this Award that are forfeited by the Awardee shall be returned to the Plan and resume the status of shares available for grant.

11. All other terms and conditions applicable to this Award are contained in the Plan. A copy of the Plan and related Prospectus is available on your accounts page at netbenefits.fidelity.com under Plan Information and Documents, as well as on The Hub under Human Resources.

KENNAMETAL INC.

By: Michelle R. Keating

Title: Vice President, Secretary and Interim General Counsel

Exhibit A

Performance Conditions for FY16 LTIP Performance Unit Awards

I. RETURN ON INVESTED CAPITAL (ROIC) COMPONENT: WEIGHTED AT 100%:

ROIC			
	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>
Maximum	11%	11%	11%
Target	8.6%	8.6%	8.6%
Threshold	6.5%	6.5%	6.5%

Note: The table sets forth the three year period beginning July 1, 2016 and ending June 30, 2019 ("Performance Period") referenced in the Performance Unit Award Agreement to which this Exhibit A is attached.

Performance Conditions Payout Table for ROIC Component			
	Threshold	Target	Maximum
Performance Goal	6.5%	8.6%	11%
Payout Range	50%	100%	150%

Note: Interpolation between values shown in the above table will be made on a straight line basis. There will be no payment for performance below Threshold, and no additional payment for performance above Maximum.

Subject to the terms and conditions of this Award, up to 150% of the number of Stock Units granted pursuant to this agreement may be earned for the Performance Period (ROIC Earned Stock Units,

II. RELATIVE TOTAL SHAREHOLDER RETURN (RELATIVE TSR) VESTING MULTIPLE COMPONENT:

(a) The total ROIC Earned Stock Units above may have a Relative TSR Vesting Multiple applied to them based on (i) the Corporation's Total Shareholder Return, as described below, relative to the Peer Group's (as set forth in Attachment) Total Shareholder Return for the cumulative three year performance period of time ending on June 30, 2019 ("Performance Period") and (ii) satisfaction of the condition of employment, as set forth below.

(i) "Total Shareholder Return" (or "TSR") over the Performance Period shall be calculated in accordance with the following formula: $((\text{Final Price} + \text{all cash dividends paid during the specified period, included as of the applicable ex-dividend date}) / \text{Initial Price}) - 1$, expressed as a percentage.

(ii) "Final Price" shall mean the average of the closing prices of the Common Stock of each peer company and the Company for the final thirty trading days of the specified period plus all cash dividends paid during the final thirty (30) trading days. For purposes of this Agreement, this shall mean the final thirty (30) trading days in fiscal 2019.

(iii) "Initial Price" shall mean the average of the closing prices of the Common Stock of each peer company and the Company for the last thirty (30) trading days preceding the beginning of the specified period plus all cash dividends paid during the last thirty (30) trading days. For purposes of this Agreement, the Initial Price shall be calculated based on the average of the closing stock prices over the thirty days ending on June 30, 2016.

(iv) The Company's Total Shareholder Return for the Performance Period shall be measured as a percentile ranking in comparison with the index of the Peer Group Total Shareholder Return (the "Index").

(b) The Relative TSR Vesting Multiple to be applied to the total number of ROIC Earned Stock Units to determine the total number of shares of Common Stock to be received pursuant to this agreement shall be the "Award Shares" and shall be calculated as follows:

If the Company's TSR rank against the Peer Group is:	Relative TSR Vesting Multiple (% of ROIC Earned Stock Units)
at the 25th percentile (Threshold)	80%
at the 50th percentile (Target)	100%
at the 75th percentile or more (Maximum)	120%

The percentile rank calculation shall be calculated without including the Company.

The Relative TSR Vesting Multiple is based on the Company's Total Shareholder Return for the Performance Period relative to the Index.

The Relative TSR Vesting Multiple shall be interpolated on a straight-line basis between the percentile levels in the above table, but no amounts will be payable if the Company's TSR rank against the Peer Group is below the Threshold level and no multiples over 120% will be applied if the Company's TSR rank against the Peer Group is above the Maximum level.

The Index group companies shall consist of those companies that comprise the S&P 400 Capital Goods Index on the date of grant. A detailed list of the companies that comprise the Index as of July 11, 2016 is attached. Peer Group companies will be adjusted as follows for activity during the Performance Period:

- If the Company or a member of the Peer Group splits its stock, such company's TSR will be adjusted for the stock split
- If a member of the Peer Group is acquired by another company, the acquired Peer Group company will be removed from the Peer Group for the entire Performance Period

- If a member of the Peer Group sells, spins-off, or disposes of a portion of its business representing more than 50% of such Company's total assets during the Performance Period, such Company will be removed from the Peer Group
- If a member of the Peer Group acquires another company, the acquiring Peer Group company will remain in the Peer Group for the Performance Period
- If a member of the Peer Group is delisted on all major stock exchanges, such delisted company will be removed from the Peer Group for the entire Performance Period
- Members of the Peer Group that file for bankruptcy, liquidation or similar reorganization during the Performance Period will remain in the Peer Group, positioned below the lowest performing nonbankrupt member of the Peer Group

Any adjustments resulting in the removal of a peer company will not impact completed measurement periods during an outstanding performance period.

The Compensation Committee shall have the authority to make adjustments in response to a change in circumstances that results in a member of the peer group no longer satisfying the criteria for which such member was originally selected.

INDEX PEER GROUP COMPANIES
(as of July 11, 2016)

S&P 400 Capital Goods Index

Company Name	Exchange:Ticker
AECOM Technology Corporation	NYSE: ACM
AGCO Corporation	NYSE: AGCO
AO Smith Corp.	NYSE: AOS
B/E Aerospace Inc.	NasdaqGS: BEAV
Carlisle Companies Incorporated	NYSE: CSL
CLARCOR Inc.	NYSE: CLC
Crane Co.	NYSE: CR
Curtiss-Wright Corporation	NYSE: CW
Donaldson Company, Inc.	NYSE: DCI
EMCOR Group Inc.	NYSE: EME
Esterline Technologies Corp.	NYSE: ESL
GATX Corp.	NYSE: GMT
Graco Inc.	NYSE: GGG
Granite Construction Incorporated	NYSE: GVA
Hubbell Inc.	NYSE: HUB.B
Huntington Ingalls Industries, Inc.	NYSE: HII
IDEX Corporation	NYSE: IEX
ITT Corporation	NYSE: ITT
Joy Global, Inc.	NYSE: JOY
KBR, Inc.	NYSE: KBR
KLX Inc.	NasdaqGS: KLXI
Lennox International, Inc.	NYSE: LII
Lincoln Electric Holdings Inc.	NasdaqGS: LECO
MSC Industrial Direct Co. Inc.	NYSE: MSM
Nordson Corporation	NasdaqGS: NDSN
NOW Inc.	NYSE: DNOW
Orbital ATK, Inc.	NYSE: OA
Oshkosh Corporation	NYSE: OSK
Regal Beloit Corporation	NYSE: RBC
Teledyne Technologies Inc.	NYSE: TDY
Terex Corp.	NYSE: TEX
The Timken Company	NYSE: TKR
The Toro Company	NYSE: TTC
Trinity Industries Inc.	NYSE: TRN
Triumph Group, Inc.	NYSE: TGI
Valmont Industries, Inc.	NYSE: VMI
Watsco Inc.	NYSE: WSO
Westinghouse Air Brake Technologies Corporation	NYSE: WAB
Woodward, Inc.	NasdaqGS: WWD

CORPORATE DIRECTORY

Our consolidated subsidiaries and affiliated companies as of June 30, 2016 are:

Consolidated Subsidiaries and Affiliated Companies of Kennametal Inc.

ISIS GHH Limited

Kennametal (Malaysia) Sdn. Bhd.

Kennametal (Singapore) Pte. Ltd.

Kennametal (Thailand) Co., Ltd.

Kennametal Australia Pty. Ltd.

Kennametal de Mexico, S.A. de C.V.

Kennametal Distribution Services Asia Pte. Ltd.

Kennametal Hardpoint (Taiwan) Inc.

Kennametal Holdings Europe Inc.

Kennametal Hungary Finance Services Kft.

Kennametal Hungary Holdings Inc.

Kennametal International S.A. (Panama)

Kennametal Japan Ltd.

Kennametal Korea Ltd.

Kennametal Shared Services Private Limited

Kennametal South Africa (Pty.) Ltd.

Affiliated Subsidiary of Kennametal South Africa (Pty.) Ltd.

Kennametal Manufacturing S.A. (Pty) Ltd.

Consolidated Subsidiaries of Kennametal Holdings Europe Inc.

Deloro Stellite Holdings Corporation

Kennametal Holdings, LLC

Kennametal Holdings, LLC Luxembourg S.C.S.

Consolidated Subsidiaries of Deloro Stellite Holdings Corporation

DSGP LLC

DS Verwaltungsgesellschaft GmbH (Real Estate)

Kennametal Stellite, L.P.

Kennametal Stellite Holding GmbH & Co. KG (partnership)

Kennametal Stellite Inc.

Kennametal Stellite (Shanghai) Co., Ltd. (Joint Venture)

Consolidated Subsidiary of Kennametal Holdings, LLC Luxembourg S.C.S.

Kennametal Luxembourg Holding S.à r.l.

Consolidated Subsidiaries of Kennametal Luxembourg Holding S.à r.l.

Kennametal Argentina S.A.

Kennametal Chile Ltda.

Kennametal do Brasil Ltda.

Kennametal Europe Holding GmbH

Kennametal Luxembourg S.à r.l.

Comercializadora Kennametal Bolivia S.R.L.

Consolidated Subsidiaries of Kennametal Luxembourg S.à r.l.

Kennametal Asia (HK) Ltd.

Kennametal Ltd.

Kennametal Sintec Holding GmbH

Consolidated Subsidiaries of Kennametal Asia (HK) Ltd.

Kennametal (Baotou) Company Ltd.
Kennametal (China) Co. Ltd.
Kennametal Hardpoint (Shanghai) Co., Ltd.
Kennametal (Xuzhou) Company, Ltd.

Consolidated Subsidiary of Kennametal Sintec Holding GmbH

Kennametal Sintec Keramik Asia Ltd.

Consolidated Subsidiary of Kennametal Sintec Keramik Asia Ltd.

Sunshine Power-Tech (Shanghai) Ltd.

Consolidated Company of Kennametal Europe Holding GmbH

Kennametal Europe GmbH

Consolidated Subsidiaries of Kennametal Kennametal Luxembourg Holding S.à r.l.

Hanita Metal Works, Ltd.
Kennametal Holding GmbH
Kennametal Nederland B.V.
Kennametal Stellram Limited
OOO Kennametal

Consolidated Subsidiary of Hanita Metal Works, Ltd.

Hanita Cutting Tools, Inc.

Consolidated Subsidiary of Kennametal Stellram Limited

Kennametal Stellram SaRL

Consolidated Subsidiaries of Kennametal Holding GmbH

Kennametal GmbH
Kennametal Hungaria Kft.
Kennametal Logistics GmbH
Kennametal Shared Services GmbH
Kennametal Sintec Keramik GmbH
Kennametal Widia Beteiligungs GmbH
Widia GmbH

Consolidated Subsidiaries and Affiliated Companies of Kennametal GmbH

Kenci S.L.
Kennametal Belgium S.p.r.l.
Kennametal Deutschland GmbH
Kennametal France S.A.S.
Kennametal Infrastructure GmbH
Kennametal Italia S.p.A.
Kennametal Kesici Takimlar Sanayi Ve Ticaret Anonim Sirketi
Kennametal Polska Sp. z o.o.
Kennametal Produktions GmbH & Co. KG. (partnership)
Kennametal Sp. z o.o.
Kennametal Stellram S.r.L.
Kennametal UK Limited
Ruebig Real Estate GmbH & Co. KG

Consolidated Subsidiary of Kennametal Italia S.p.A.

Kennametal Italia Produzione S.R.L.

Consolidated Affiliated Company of Kennametal Produktions GmbH & Co. KG (partnership)

Kennametal Real Estate GmbH & Co. KG (partnership)

Consolidated Affiliated Company of Kennametal Deutschland GmbH
Kennametal (Deutschland) Real Estate GmbH & Co. KG (partnership)

Consolidated Subsidiary of Kennametal Sp. z o.o
Kennametal Produkcja Sp. z o.o.

Consolidated Subsidiaries and Affiliated Companies of Widia GmbH
Kennametal Widia Produktions GmbH & Co. KG (partnership)
Kennametal Widia Real Estate GmbH & Co. KG (partnership)
Meturit AG

Consolidated Subsidiary of Meturit AG
Kennametal India Ltd.

Consolidated Subsidiaries of Kenci S.L.
Kenci Lda.
Kennametal Manufacturing Barcelona S.L.

Consolidated Subsidiaries of Kennametal UK Limited
Kennametal Logistics UK Ltd.
Kennametal Manufacturing UK Ltd.
Kennametal Sintec Keramik UK Ltd.

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 33-55768, No. 33-55766, No. 33-65023, No. 333-18423, No. 333-18429, No. 333-18437, No. 333-77411, No. 333-88049, No. 333-30454, No. 333-30448 , No. 333-53562, No. 333-100867, No. 333-120314, No. 333-124774, No. 333-142727, No. 333-154705, No. 333-170348, No. 333-193782) and on Form S-3 (No. 333-40809, No. 333-154703, No. 333-184617) of Kennametal Inc. of our report dated August 11, 2016 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
PricewaterhouseCoopers LLP
Pittsburgh, Pennsylvania
August 11, 2016

I, Ronald M. De Feo, certify that:

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

Date: August 11, 2016

/s/ Ronald M. De Feo

Ronald M. De Feo
President and Chief Executive Officer

I, Jan Kees van Gaalen, certify that:

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

Date: August 11, 2016

/s/ Jan Kees van Gaalen

Jan Kees van Gaalen

Vice President and Chief Financial Officer

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

In connection with the Annual Report of Kennametal Inc. (the "Corporation") on Form 10-K for the period ended June 30, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Corporation certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

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

/s/ Ronald M. De Feo
Ronald M. De Feo
President and Chief Executive Officer
August 11, 2016

/s/ Jan Kees van Gaalen
Jan Kees van Gaalen
Vice President and Chief Financial Officer
August 11, 2016

*This certification is made solely for purposes of 18 U.S.C. Section 1350, subject to the knowledge standard contained therein, and not for any other purpose.