ALLEGHENY TECHNOLOGIES INC
Form 10-K
February 27, 2014

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K
(Mark One)
x Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the fiscal year ended December 31, 2013
OR
¨ Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the transition period from to
Commission file number 1-12001
ALLEGHENY TECHNOLOGIES INCORPORATED
(Exact name of registrant as specified in its charter)

Delaware	25-1792394
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
1000 Six PPG Place, Pittsburgh, Pennsylvania	15222-5479
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (412) 394-2800
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.10 Par Value	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None
Indicate by check mark whether the Registrant is well known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes x 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 x
Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days. Yes x No ¨
Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	x	Accelerated filer	¨
Non-accelerated filer	¨ (Do not check if a smaller reporting company)	Smaller reporting company	¨

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x
On February 14, 2014, the Registrant had outstanding 107,946,809 shares of its Common Stock.

The aggregate market value of the Registrant's voting stock held by non-affiliates at June 30, 2013 was approximately $2.8 billion, based on the closing price per share of Common Stock on June 28, 2013 of $26.31 as reported on the New York Stock Exchange. Shares of Common Stock known by the Registrant to be beneficially owned by directors and officers of the Registrant subject to the reporting and other requirements of Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), are not included in the computation. The Registrant, however, has made no determination that such persons are "affiliates" within the meaning of Rule 12b-2 under the Exchange Act.

Documents Incorporated By Reference

Selected portions of the Proxy Statement for the Annual Meeting of Stockholders to be held on May 1, 2014 are incorporated by reference into Part III of this Report.

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PART I

Item 1. Business

The Company

Allegheny Technologies Incorporated (ATI) is a Delaware corporation with its principal executive offices located at 1000 Six PPG Place, Pittsburgh, Pennsylvania 15222-5479, telephone number (412) 394-2800, Internet website address http://www.atimetals.com. References to “Allegheny Technologies,” “ATI,” the “Company,” the “Registrant,” “we,” “ and “us” and similar terms mean Allegheny Technologies Incorporated and its subsidiaries, unless the context otherwise requires.

Our Business

We are one of the largest and most diversified specialty materials and components producers in the world. Our high-value products include titanium and titanium alloys, nickel-based alloys and specialty steels, precision forgings, castings and machined components, zirconium and related alloys, precision and engineered stainless steel strip, and grain-oriented electrical steel. Our standard products include specialty stainless sheet, stainless steel sheet, and stainless steel plate. Our specialty materials are produced in a wide range of alloys and product forms and are selected for use in applications that demand materials having exceptional hardness, toughness, strength, resistance to heat, corrosion or abrasion, or a combination of these characteristics.

In the fourth quarter of 2013, we completed the sale of our tungsten materials business in our former Engineered Products segment. We also completed a strategic review of our iron castings and fabricated components businesses, which were also part of the Engineered Products segment. Based on current and forecasted financial results, these businesses were not projected to meet our long-term profitable growth and return on capital employed expectations. The fabricated components business was closed in the third quarter 2013, and the casting service business is classified as held for sale at December 31, 2013. These businesses, and the divested tungsten materials business, are reported as discontinued operations, and are not reported within our sales, results of continuing operations, or business segment results.

We restructured the remaining operations of the former Engineered Products business segment, which represented less than 3% of total sales from continuing operations. The previously standalone specialty steel forgings business was integrated into our forged products operations in the High Performance Metals business segment, and our precision titanium and specialty alloy flat-rolled finishing business was integrated into the specialty plate operations in the Flat-Rolled Products business segment. Segment results for High Performance Metals and Flat-Rolled Products reflect these changes for all periods presented. Our specialty materials are produced in a wide range of alloys and product forms and are selected for use in applications that demand metals having exceptional hardness, toughness, strength, resistance to heat, corrosion or abrasion, or a combination of these characteristics. The acquisition of Ladish Co., Inc. (now ATI Ladish) in May 2011 added advanced forgings, titanium investment castings and precision finishing capabilities to ATI’s product portfolio. Results for ATI Ladish, which principally serves the aerospace and defense market, are included in the High Performance Metals segment from the acquisition date. ATI is a fully integrated supplier from raw material (for titanium) and melt (for other specialty alloy systems) through highly engineered finished components.

In February 2014, we acquired Dynamic Flowform Corp., which has been renamed ATI Flowform Products, adding precision flowforming process technologies to ATI's capabilities to produce specialty materials parts and components. Flowforming produces thin-walled components in net or near-net shapes across multiple alloys systems, including nickel-based alloys and superalloys, titanium and titanium alloys, zirconium alloys, and specialty and stainless alloys. Major markets for these products are aerospace and defense, and oil and gas/chemical process industry.

We focus our advanced specialty materials technology, unsurpassed manufacturing capabilities, and innovative products to serve global end use markets with highly diversified and specialized product offerings. Strategic end use markets for our products include:

Aerospace and Defense. We are a world leader in the production of premium titanium alloys, nickel-based and cobalt-based alloys and superalloys, and vacuum-melted specialty alloys used in the manufacture of components for both commercial and military jet engines, as well as replacement parts for those engines. We also produce titanium alloys, vacuum-melted specialty alloys, and high-strength stainless alloys for use in commercial and military

airframes, airframe components and missiles.

Titanium and titanium alloys are critical metals in aerospace and defense applications. Titanium and titanium alloys possess an extraordinary combination of properties, including superior strength-to-weight ratio, good elevated temperature resistance, low coefficient of thermal expansion, and extreme corrosion resistance. These metals are used to produce jet engine components

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such as blades, vanes, discs, and casings, and airframe components such as structural members, landing gear, hydraulic systems, and fasteners. The latest and next-generation airframes and jet engines use even more titanium and titanium alloys in component parts in order to minimize weight and maximize fuel efficiency.

Our nickel-based alloys and superalloys and specialty alloys are also widely used in aerospace and defense applications. Nickel-based alloys and superalloys remain extremely strong at high temperatures and resist degradation under extreme conditions. Typical aerospace applications for nickel-based alloys and superalloys and advanced powder alloys include jet engine shafts, discs, blades, vanes, rings and casings. The latest, next generation, and future-generation jet engines use new generations of nickel-based superalloys and advanced powder alloys in large part due to increased fuel efficiency requirements that require hotter-burning engines. Our specialty alloys include vacuum-melted maraging steels used in the manufacture of aircraft landing gear and structural components, as well as jet engine components.

Our titanium alloy, nickel-based alloy, and specialty alloy precision forgings and titanium investment castings are used in aerospace jet engine and airframe applications. We are a technology leader with advanced isothermal forging, hot-die forging and our patented Supercooler™ capability.

We continuously seek to develop innovative new alloys to better serve the needs of this end use market. For example, we developed ATI 718Plus® alloy, a new nickel-based superalloy that can withstand higher temperatures than the standard 718 superalloy, for use in legacy jet engines and the next generation of fuel efficient jet engines. Rene 65 alloy, a future-generation alloy, is the newest nickel-based superalloy in our portfolio. We also developed ATI 425® alloy sheet, a new cold-rollable titanium alloy, that is an alternative to the most popular high-strength titanium alloys, for use in airframe components and defense applications.

Oil and Gas and Chemical Process Industry. The environments in which oil and gas can be found in commercial quantities have become more challenging, involving deep offshore wells, high pressure and high temperature conditions in sour wells and unconventional sources, such as shale oil and gas, and oil sands. Challenging offshore environments are in deepwater remote locations that are further off the continental shelf, including arctic and tropical locations, often one mile or more below the water’s surface, and up to two miles below the ocean floor. The requirements for equipment, which could operate for up to 30 years in these environments, require the specialty metals that we produce.

Both of our business segments produce specialty metals that are critical to the oil and gas industry and the chemical process industry. Our specialty metals, including titanium and titanium alloys, nickel-based alloys, zirconium alloys, stainless and duplex alloys and other specialty alloys have the strength, wear corrosion-resistant properties necessary for difficult environments.

Our Datalloy2® and DatalloyHP™ specialty stainless is used for non-magnetic drill collars that enable the most advanced directional and horizontal drilling techniques to be guided to the exact position desired for the reservoir. We have developed a family of duplex alloys, including ATI 2003® and ATI 2102® lean duplex alloys, for use in subsea and deepwater oil and gas applications. Several of our strip, plate and cast products are NORSOK qualified. The NORSOK standards are developed by the Norwegian petroleum industry and are intended to identify materials used in oil and gas applications that are safe and cost-effective.

Electrical Energy. Our specialty materials are widely used in the global electric power generation and distribution industry. We believe energy needs and environmental policies and the electrification of developing countries will continue to drive demand for our specialty materials and products for use in this industry.

For electrical power generation, our specialty materials, including corrosion-resistant alloys (CRAs), are used in coal, nuclear, and natural gas applications. In coal-fired plants, our CRAs are used for pipe, tube, and heat exchanger applications in water systems in addition to pollution control scrubbers. Our CRAs are also used in water systems, fuel cladding components, and process equipment for nuclear power plants. For nuclear power plants, we are an industry pioneer in producing reactor-grade zirconium and hafnium alloys used in nuclear fuel cladding and structural components. We have developed Nushield™ products, a new line of borated stainless alloys that begin with our advanced powder metals and are used for spent nuclear fuel applications. We are a technology leader for large diameter nickel-based superalloys used in natural gas land-based turbines for power generation. For renewable energy generation, our alloys are used for solar, fuel cell and geothermal applications.

For electrical power distribution, our grain-oriented electrical steel (GOES) is used in distribution and power transformers, where low loss magnetic properties are important. In January 2010, the U.S. Department of Energy (DOE) began requiring more efficient transformers, which increases premium grade GOES demand. In February 2011, the U.S. DOE published a revised preliminary rule that would further raise transformer efficiency standards effective January 2016. This new rule will result in the continued use of GOES in transformer manufacturing and will further increase the demand for premium grades.

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Medical. ATI’s advanced specialty metals are used in medical device products that save and enhance the quality of lives.

Our zirconium-niobium, titanium- and cobalt-based alloys are used for knees, hips and other prosthetic devices. These replacement devices offer the potential of lasting much longer than previous implant options.

Our biocompatible nickel-titanium shape memory alloy is used for stents to support collapsed or clogged blood vessels. Reduced in diameter for insertion, these stents expand to the original tube-like shape due to the metal’s superelasticity. Our ultra fine diameter (0.002 inch/0.051 mm) titanium wire is used for screens to prevent blood clots from entering critical areas of the body. In addition, our titanium bar and wire are used to make surgical screws for bone repairs.

Manufacturers of magnetic resonance imaging (MRI) devices rely on our niobium superconducting wire to help produce electromagnetic fields that allow physicians to safely scan the body’s soft tissue.

Enhancing and Expanding Our Manufacturing Capabilities. We have undertaken a multi-phase program to enhance and expand our capabilities to produce premium specialty materials aimed at these strategic markets. Since 2004, we have invested approximately $4.3 billion in capital investments and acquisitions which includes construction of what we believe to be the world’s most advanced and powerful Hot-Rolling and Processing Facility (HRPF) in the specialty metals flat-rolled products industry. Our HRPF was placed into service at the end of 2013. Cold-commissioning has begun, and hot-commissioning is expected to be completed by the end of the third quarter 2014. This capital project, which is on schedule and on budget at $1.2 billion excluding capitalized interest costs, is designed to be the most powerful mill in the world for production of specialty metals. It is designed to produce thinner and wider hot-rolled coils of exceptional quality and reduced cost with shorter lead times, with lower working capital requirements. The HRPF is designed to provide unsurpassed manufacturing capability and versatility in the production of a wide range of flat-rolled specialty metals, including ATI's diversified product mix of nickel-based and specialty alloys, titanium and titanium alloys, zirconium alloys, Precision Rolled Strip® products, and stainless sheet and coiled plate products. The HRPF is also designed to produce high-strength carbon steel alloys. It is designed to roll and process exceptional quality hot bands of up to 78.62 inches, or 2 meters, wide, and is expected to be producing all of ATI's flat-rolled products by the end of 2014.

In October 2013, we began the premium-quality (PQ) qualification program at our Rowley, UT titanium sponge production facility. We continued to achieve improvements in key operational areas at Rowley, such as cake size and yield. Completion of the PQ qualification program, which is expected to continue through 2015, is an important step in fulfilling the strategic vision and purpose of this investment to provide a secure, domestic supply source for PQ titanium sponge for use in jet engine rotating parts. As originally designed, the Rowley facility had a projected annual production capacity of 24 million pounds, with infrastructure in place to further expand annual capacity by approximately 18 million pounds, for a total potential capacity of 42 million pounds of titanium sponge. We believe our operational improvements in yield and cake size will enable an annual production level in excess of 24 million pounds once we achieve full production levels, which is expected following PQ qualification.

Additional recent investments include expansions of our: premium titanium alloy melt and remelt capability; nickel-based alloy and superalloy melt and remelt capability; titanium and specialty alloy plate production capability; and premium titanium and nickel-based superalloy forging capability. Also, we purchased assets that added advanced nickel-based alloy and titanium alloy powders to our product portfolio. We acquired the capability to manufacture high performance forgings and castings. In February 2014, we acquired flowforming process technologies to expand our capabilities in the aerospace and defense and oil and gas/chemical process industry markets. We believe these investments strengthen and enhance ATI’s leadership position in the production of advanced specialty materials.

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Business Segments

We operate in the following two business segments, which accounted for the following percentages of total revenues of $4.04 billion, $4.67 billion, and $4.81 billion for the years ended December 31, 2013, 2012, and 2011, respectively. Segment results reflect all changes discussed above for all periods presented.

	2013		2012		2011	
High Performance Metals	48	%	50	%	43	%
Flat-Rolled Products	52	%	50	%	57	%

Information with respect to our business segments is presented below and in Note 14 of the Notes to the Consolidated Financial Statements.

High Performance Metals Segment

Our High Performance Metals segment produces, converts and distributes a wide range of high performance materials, including titanium and titanium-based alloys, nickel- and cobalt-based alloys and superalloys, zirconium and related alloys including hafnium and niobium, advanced powder alloys and other specialty metals, in long product forms such as ingot, billet, bar, rod, wire, shapes and rectangles, and seamless tubes, plus precision forgings and castings, and machined parts. These products are designed for the high performance requirements of such major end markets as aerospace and defense, oil and gas/ chemical process industry, electrical energy, and medical. We are integrated from raw materials (sponge) to melt, remelt, finish processing, forging, investment casting, and machining in our titanium and titanium alloys, and zirconium and hafnium alloy products. The major end markets served by our High Performance Metals segment are aerospace and defense, oil and gas, chemical process industry, electrical energy, and medical. Most of the products in this segment are sold directly to end-use customers, and a significant portion of our High Performance Metals segment products are sold under multi-year agreements. The business units in this segment include ATI Allvac, ATI Wah Chang and ATI Ladish.

Approximately 64% of High Performance Metals segment revenue is derived from the aerospace and defense market. Demand for our products is driven primarily by the commercial aerospace cycle. Large aircraft and aircraft engines are manufactured by a small number of companies, such as The Boeing Company, Airbus S.A.S. (an Airbus Group company), Bombardier Aerospace (a division of Bombardier Inc.), and Embraer (Empresa Brasileira de Aeronáutica S.A.) for airframes, and GE Aviation (a division of General Electric Company), Rolls-Royce plc, Pratt & Whitney (a division of United Technologies Corporation), Snecma (SAFRAN Group), and various joint ventures that manufacture jet engines. These companies and their suppliers form a substantial part of our customer base in this business segment. ATI supplies the aerospace and defense supply chain with nickel- and cobalt-based alloys and superalloys, titanium alloys, vacuum-melted specialty alloys, and advanced powder alloys for commercial and military jet engines, for both original engines and spare parts. For commercial and military airframe and structural parts, ATI manufactures titanium alloys, vacuum-melted specialty alloys, and high-strength stainless alloys. The loss of one or more of our customers in the aerospace and defense market could have a material adverse effect on ATI’s results of operations and financial condition.

Flat-Rolled Products Segment

Our Flat-Rolled Products segment produces, converts and distributes stainless steel, nickel-based alloys, specialty alloys, and titanium and titanium-based alloys, in a variety of product forms including plate, sheet, engineered strip, and Precision Rolled Strip® products, as well as grain-oriented electrical steel. The major end markets for our flat-rolled products are oil and gas/ chemical process industry, electrical energy, automotive, food processing equipment and appliances, construction and mining, electronics, communication equipment and computers, and aerospace and defense. The operations in this segment are ATI Allegheny Ludlum, and the Chinese joint venture company known as Shanghai STAL Precision Stainless Steel Company Limited (STAL), in which we hold a 60% interest. Segment results also include our 50% interest in the industrial titanium joint venture known as Uniti LLC. Stainless steel, nickel-based alloys and titanium sheet products are used in a wide variety of industrial and consumer applications. In 2013, approximately 50% by volume of our stainless sheet products were sold to independent service centers, which have slitting, cutting or other processing facilities, with the remainder sold directly to end-use customers.

Engineered strip and very thin Precision Rolled Strip® products are used by customers to fabricate a variety of products primarily in the automotive, construction, and electronics markets. In 2013, approximately 90% by volume of our engineered strip and Precision Rolled Strip products were sold directly to end-use customers or through our own distribution network, with the remainder sold to independent service centers.

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Stainless steel, nickel-based alloy and titanium plate products are primarily used in industrial markets. In 2013, approximately 55% by volume of our plate products were sold to independent service centers, with the remainder sold directly to end-use customers.

Grain-oriented electrical steel is used in power transformers where electrical conductivity and magnetic properties are important. Nearly all of our grain-oriented electrical steel products are sold directly to end-use customers.

Competition

Markets for our products and services in both of our business segments are highly competitive. We compete with many producers and distributors who, depending on the product involved, range from large diversified enterprises to smaller companies specializing in particular products. Factors that affect our competitive position are the quality of our products, service and delivery capabilities, our capabilities to produce a wide range of specialty materials in various alloys and product forms, our technological capabilities including our research and development efforts, our marketing strategies, the prices for our products and services, our manufacturing costs, and industry manufacturing capacity.

We face competition from both domestic and foreign companies. Some of our foreign competitors are either directly or indirectly subsidized by governments. In 1999, the United States imposed anti-dumping and countervailing duties on dumped and subsidized imports of stainless steel sheet and strip in coils and stainless steel plate in coils from companies in ten foreign countries. The anti-dumping and countervailing duty orders were reviewed in 2011 by the U.S. Department of Commerce and the U.S. International Trade Commission to determine whether the orders should remain in place for another five years. The agencies decided that eight such orders against five countries will continue in effect. We continue to monitor unfairly traded imports from foreign producers for appropriate action.

Major Competitors

Nickel-based alloys and superalloys and specialty steel alloys

- Carpenter Technology Corporation: A
- Special Metals Corporation, a Precision Castparts Corp. company: C
- Haynes International, Inc.: B
- Outokumpu VDM GmbH, a company of ThyssenKrupp AG (Germany): C

Titanium and titanium-based alloys

- Titanium Metals Corporation, a Precision Castparts Corp. company: C
- RMI Titanium, an RTI International Metals company: C
- VSMPO—AVISMA (Russia): A

Precision forgings and titanium investment castings

- Precision Castparts Corp.: A
- Firth Rixson Limited (United Kingdom): A
- Aubert & Duval, a group member of Eramet (France): A

Zirconium and related alloys

- Cezus, a group member of AREVA (France): A
- H.C. Starck: A
- Western Zirconium Plant of Westinghouse Electric Company, owned by Toshiba Corporation: A

Stainless steel

- AK Steel Corporation: B
- North American Stainless (NAS), owned by Acerinox S.A. (Spain): B
- Outokumpu Stainless Coil Americas (Finland): B
- Imports from
- Aperam (formerly part of Arcelor Mittal) (France, Belgium and Germany): B
- Outokumpu Oyj (Finland) including Mexinox S.A. de C.V., group member (Mexico): B
- Ta Chen International Corporation (Taiwan): B
- Various Chinese producers: B

KEY – A = Primarily High Performance Metals segment, B = Primarily Flat-Rolled Products segment, C = Both High Performance Metals and Flat-Rolled Products segments

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Raw Materials and Supplies

Substantially all raw materials and supplies required in the manufacture of our products are available from more than one supplier and the sources and availability of raw materials essential to our businesses are currently adequate. The principal raw materials we use in the production of our specialty materials are scrap (including iron-, nickel-, chromium-, titanium-, and molybdenum-bearing scrap), nickel, titanium sponge, zirconium sand and sponge, ferrochromium, ferrosilicon, molybdenum and molybdenum alloys, manganese and manganese alloys, cobalt, niobium, vanadium and other alloying materials.

Purchase prices of certain principal raw materials have been volatile. As a result, our operating results may be subject to significant fluctuation. We use raw materials surcharge and index mechanisms to offset the impact of changes in raw material costs; however, competitive factors in the marketplace may limit our ability to institute such mechanisms, and there can be a delay between the change in the price of raw materials and the impact of such mechanisms. For example, in 2013 we used approximately 100 million pounds of nickel; therefore a hypothetical change of a $1.00 per pound increase in nickel prices would result in increased costs of approximately $100 million. We also used approximately 760 million pounds of ferrous scrap in the production of our flat-rolled products; a hypothetical change of a $0.01 per pound increase would result in increased costs of approximately $8 million.

While we have increased our manufacturing capacity to produce titanium sponge, the major raw material for our titanium products, a portion of our needs, together with certain other raw materials, such as nickel, cobalt, and ferrochromium, are available to us and our specialty materials industry competitors primarily from foreign sources. Some of these foreign sources are located in countries that may be subject to unstable political and economic conditions, which could disrupt supplies or affect the price of these materials.

We purchase our nickel requirements principally from producers in Australia, Canada, Norway, Russia, and the Dominican Republic. Zirconium raw materials are primarily purchased from the U.S. and China. Cobalt is purchased primarily from producers in Canada. More than 80% of the world’s reserves of ferrochromium are located in South Africa, Zimbabwe, Albania, and Kazakhstan. Niobium is purchased primarily from producers in Brazil. We also purchase titanium sponge from sources in Russia, Kazakhstan and Japan.

Export Sales and Foreign Operations

Direct international sales represented approximately 39% of our total annual sales in 2013, 38% of our total sales in 2012, and 37% of our total sales in 2011. These figures include direct export sales by our U.S.-based operations to customers in foreign countries, which accounted for approximately 29% of our total sales in 2013, and 28% of our total sales in both 2012 and 2011. Our overseas sales, marketing and distribution efforts are aided by our international marketing and distribution offices, ATI Europe, ATI Europe Distribution, and ATI Asia, or by independent representatives at various locations throughout the world. We believe that at least 50% of ATI’s 2013 sales were driven by global markets when we consider exports of our customers. Direct sales by geographic area in 2013, and as a percentage of total sales, were as follows:

(In millions)			
United States	$2,458.4	61	%
Europe	929.6	23	%
Asia	417.0	10	%
Canada	141.0	4	%
South America, Middle East and other	97.5	2	%
Total sales	$4,043.5	100	%

Our ATI Allvac business has manufacturing capabilities for melting, remelting, forging and finishing nickel-based alloys and specialty alloys in the United Kingdom. Our ATI Ladish business has manufacturing capabilities for precision forging and machining in Poland, primarily serving the construction, transportation and aerospace markets. Our STAL joint venture in the People’s Republic of China produces Precision Rolled Strip products, which enables us to offer these products more effectively to markets in China and other Asian countries. Our Uniti LLC joint venture allows us to offer titanium products to industrial markets more effectively worldwide.

Backlog, Seasonality and Cyclicality

Our backlog of confirmed orders was approximately $1.6 billion at both December 31, 2013 and 2012. We expect that approximately 85% of confirmed orders on hand at December 31, 2013 will be filled during the year ending December 31, 2014. Backlog of confirmed orders of our High Performance Metals segment was approximately $1.3 billion at both December 31, 2013 and 2012. We expect that approximately 84% of the confirmed orders on hand at both December 31, 2013

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for this segment will be filled during the year ending December 31, 2014. Backlog of confirmed orders of our Flat-Rolled Products segment was approximately $0.3 billion at both December 31, 2013 and 2012. We expect that more than 90% of the confirmed orders on hand at December 31, 2013 for this segment will be filled during the year ending December 31, 2014.

Generally, our sales and operations are not seasonal. However, demand for our products is cyclical over longer periods because specialty materials customers operate in cyclical industries and are subject to changes in general economic conditions and other factors both external and internal to those industries.

Research, Development and Technical Services

We believe that our research and development capabilities give ATI an advantage in developing new products and manufacturing processes that contribute to the profitable growth potential of our businesses on a long-term basis. We conduct research and development at our various operating locations both for our own account and, on a limited basis, for customers on a contract basis. Research and development expenditures for the years ended December 31, 2013, 2012, and 2011 included the following:

(In millions)	2013	2012	2011
Company-Funded:			
High Performance Metals	$11.7	$16.5	$10.8
Flat-Rolled Products	4.3	5.8	6.2
Corporate	0.1	—	—
	$16.1	$22.3	$17.0
Customer-Funded:			
High Performance Metals	$2.7	$1.5	$1.5
Total Research and Development	$18.8	$23.8	$18.5

Our research, development and technical service activities are closely interrelated and are directed toward cost reduction and process improvement, process control, quality assurance and control, system development, the development of new manufacturing methods, the improvement of existing manufacturing methods, the improvement of existing products, and the development of new products.

We own hundreds of United States patents, many of which are also filed under the patent laws of other nations. Although these patents, as well as our numerous trademarks, technical information, license agreements, and other intellectual property, have been and are expected to be of value, we believe that the loss of any single such item or technically related group of such items would not materially affect the conduct of our business.

Environmental, Health and Safety Matters

We are subject to various domestic and international environmental laws and regulations that govern the discharge of pollutants, and disposal of wastes, and which may require that we investigate and remediate the effects of the release or disposal of materials at sites associated with past and present operations. We could incur substantial cleanup costs, fines, civil or criminal sanctions, third party property damage or personal injury claims as a result of violations or liabilities under these laws or non-compliance with environmental permits required at our facilities. We are currently involved in the investigation and remediation of a number of our current and former sites as well as third party sites.

We consider environmental compliance to be an integral part of our operations. We have a comprehensive environmental management and reporting program that focuses on compliance with applicable federal, state, regional and local environmental laws and regulations. Each operating company has an environmental management system that includes mechanisms for regularly evaluating environmental compliance and managing changes in business operations while assessing environmental impact.

Our Corporate Guidelines for Business Conduct and Ethics address compliance with environmental laws as well as employment and workplace safety laws, and also describe our commitment to equal opportunity and fair treatment of employees. We continued to focus on safety across ATI’s operations during 2013. As a result of our continuing focus on and commitment to safety, in 2013 our OSHA Total Recordable Incident Rate was 2.14 and our Lost Time Case Rate was 0.40, which we believe to be competitive with world class performance for our industry.

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Employees

We have approximately 9,500 full-time employees, of which approximately 15% are located outside the United States. Approximately 50% of our workforce is covered by various collective bargaining agreements, predominantly with the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union ("USW").

Available Information

Our Internet website address is http://www.atimetals.com. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as well as proxy and information statements and other information that we file, are available free of charge through our Internet website as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the United States Securities and Exchange Commission ("SEC"). Our Internet website and the content contained therein or connected thereto are not intended to be incorporated into this Annual Report on Form 10-K. You may read and copy materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet website at http://www.sec.gov, which contains reports, proxy and information statements and other information that we file electronically with the SEC.

Executive Management, Including Executive Officers under Federal Securities Laws

The following are members of the Company's executive management, including executive officers under the federal securities laws, as of February 14, 2014:

Name	Age	Title
Richard J. Harshman*	57	Chairman, President and Chief Executive Officer
Patrick J. DeCourcy*	51	Senior Vice President, Finance and Chief Financial Officer
Hunter R. Dalton*	59	Executive Vice President, Long Products and President, ATI Allvac
Terry L. Dunlap*	54	Executive Vice President, Flat-Rolled Products and President, ATI Allegheny Ludlum
John D. Sims *	54	Executive Vice President, High Performance Forgings and Castings, Primary Titanium Operations, and Engineered Alloys, and President, ATI Ladish
Elliot S. Davis*	52	Senior Vice President, General Counsel, Chief Compliance Officer and Corporate Secretary
Kevin B. Kramer	54	Senior Vice President, Chief Commercial and Marketing Officer
Carl R. Moulton	66	Senior Vice President, International
Karl D. Schwartz*	50	Controller and Chief Accounting Officer

* Such individuals are subject to the reporting and other requirements of Section 16 of the Securities Exchange Act of 1934, as amended.

Set forth below are descriptions of the business background for the past five years of the Company's executive officers and management.

Richard J. Harshman became Chairman, President and Chief Executive Officer on May 1, 2011. Mr. Harshman was President and Chief Operating Officer from August 2010 to May 2011. Prior to that, he served as Executive Vice President, Finance and Chief Financial Officer from 2003 to August 2010. Mr. Harshman was Senior Vice President, Finance and Chief Financial Officer from 2001 to 2003 and Vice President, Finance from 2000 to 2001. Prior to that, he was Vice President, Investor Relations and Corporate Communications. Previously, he had served in a number of financial management roles for the Company.

Patrick J. DeCourcy, 51, has served as Senior Vice President, Finance and Chief Financial Officer since December 2013. He was Interim Chief Financial Officer from July 2013 to December 2013. From 2011 to July 2013, Mr. DeCourcy provided assistance to ATI executive management with business integration and strategic investments until he was named Senior Director, Strategic Projects and Business Integration, from March 2012 to July 2013. From 2000 to April 2010, he served as Vice President, Finance and Administration of ATI Allvac.

Hunter R. Dalton became Executive Vice President, Long Products on May 1, 2011. He has served as President, ATI Allvac since April 2008. Previously, he served as Group President, ATI Long Products from 2008 to May 2011. From

2003 to 2008, Mr. Dalton served as Senior Vice President of Sales and Marketing for ATI Allvac.

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Terry L. Dunlap became Executive Vice President, Flat-Rolled Products in May 2011. He has served as President, ATI Allegheny Ludlum since 2002. Previously, he served as Group President, ATI Flat-Rolled Products from 2008 to May 2011.

John D. Sims became Executive Vice President, High Performance Forgings and Castings, Primary Titanium Operations, and Engineered Alloys, and President, ATI Ladish in September 2013. Previously, he was Executive Vice President, Primary Titanium Operations, and Engineered Alloys and Products beginning in February 2013. Prior to that, Mr. Sims served as Executive Vice President, Primary Metals and Exotic Alloys from May 2011 to February 2013 and President, ATI Wah Chang from 2008 to February 2013. Previously, he was Group President, ATI Primary Metals and Exotic Alloys from February 2011 to May 2011.

Elliot S. Davis became Senior Vice President, General Counsel, Chief Compliance Officer and Corporate Secretary in May 2011. Previously, Mr. Davis was Vice President and General Counsel from August 2010 to May 2011. Mr. Davis served as Assistant General Counsel from 2008, when he joined the Company, to August 2010. Mr. Davis had previously been a partner of K&L Gates LLP, where he practiced for nearly 20 years in its corporate, mergers and acquisitions and securities group.

Kevin B. Kramer, was named Senior Vice President, Chief Commercial and Marketing Officer when he joined ATI in February 2014. Prior to joining ATI, Mr. Kramer was President - Stoneridge Wiring Division and Vice President of Stoneridge, Inc., a designer and manufacturer of highly engineered electrical and electronic components, modules and systems for global commercial vehicle, automotive, agricultural and off-highway vehicle markets, from May 2012 through January 2014. Prior to that, Mr. Kramer worked at Alcoa Inc. from 2004 to 2012, where he had served as President - Growth Initiatives and President - Wheel and Transportation Products.

Carl R. Moulton was named Senior Vice President, International in May 2011. Previously, Mr. Moulton served as Vice President, International since March 2009. Prior to that, Mr. Moulton was President of Uniti LLC since its formation in 2003.

Karl D. Schwartz is Controller and Chief Accounting Officer and has served in that role since May 2011. Previously, Mr. Schwartz served as Controller and Principal Accounting Officer since August 2010. Prior to that, Mr. Schwartz had served as Assistant Controller since 2002, when he joined the Company.

Item 1A. Risk Factors

There are inherent risks and uncertainties associated with our business that could adversely affect our operating performance and financial condition. Set forth below are descriptions of those risks and uncertainties that we currently believe to be material, but the risks and uncertainties described are not the only risks and uncertainties that could affect our business. See the discussion under “Forward-Looking Statements” in Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, in this Annual Report on Form 10-K.

Cyclical Demand for Products. The cyclical nature of the industries in which our customers operate causes demand for our products to be cyclical, creating potential uncertainty regarding future profitability. Various changes in general economic conditions may affect the industries in which our customers operate. These changes could include decreases in the rate of consumption or use of our customers’ products due to economic downturns. Other factors that may cause fluctuation in our customers’ positions are changes in market demand, lower overall pricing due to domestic and international overcapacity, currency fluctuations, lower priced imports and increases in use or decreases in prices of substitute materials. As a result of these factors, our profitability has been and may in the future be subject to significant fluctuation.

Worldwide economic conditions deteriorated significantly in the recent past and could remain weak in the future. These conditions have had, and may continue to have, an adverse effect on demand for our customers’ products and, in turn, on demand for our products. If these conditions persist or worsen, our results of operations and financial condition could be materially adversely affected.

Product Pricing. From time-to-time, reduced demand, intense competition and excess manufacturing capacity have resulted in reduced prices, excluding raw material surcharges, for many of our products. These factors have had and may have an adverse impact on our revenues, operating results and financial condition.

Although inflationary trends in recent years have been moderate, during most of the same period certain critical raw material costs, such as nickel, titanium sponge, chromium, and molybdenum and scrap containing iron, nickel,

titanium, chromium, and molybdenum have been volatile. While we have been able to mitigate some of the adverse impact of volatile raw material costs through raw material surcharges or indices to customers, rapid changes in raw material costs may adversely affect our results of operations.

We change prices on certain of our products from time-to-time. The ability to implement price increases is dependent on market conditions, economic factors, raw material costs and availability, competitive factors, operating costs and other factors, some of

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which are beyond our control. The benefits of any price increases may be delayed due to long manufacturing lead times and the terms of existing contracts.

Risks Associated with Commercial Aerospace. A significant portion of the sales of our High Performance Metals segment represents products sold to customers in the commercial aerospace industry. The commercial aerospace industry has historically been cyclical due to factors both external and internal to the airline industry. These factors include general economic conditions, airline profitability, consumer demand for air travel, varying fuel and labor costs, execution of projected build rates, price competition, and international and domestic political conditions such as military conflict and the threat of terrorism. The length and degree of cyclical fluctuation are influenced by these factors and therefore are difficult to predict with certainty. Demand for our products in this segment is subject to these cyclical trends. A downturn in the commercial aerospace industry has had, and may in the future have, an adverse effect on the prices at which we are able to sell these and other products, and our results of operations, business and financial condition could be materially adversely affected.

Risks Associated with Strategic Capital Projects. From time-to-time, we undertake strategic capital projects in order to enhance, expand and/or upgrade our facilities and operational capabilities. For instance, over the past five years we have undertaken major expansions of our titanium and premium-melt nickel-based alloy, superalloy and specialty alloy production capabilities, and commenced construction of a new advanced specialty metals hot rolling and processing facility. Our ability to achieve the anticipated increased revenues or otherwise realize acceptable returns on these investments or other strategic capital projects that we may undertake is subject to a number of risks, many of which are beyond our control, including a variety of market, operational, permitting, and labor-related factors. In addition, the cost to implement any given strategic capital project ultimately may prove to be greater than originally anticipated. If we are not able to achieve the anticipated results from the implementation of any of our strategic capital projects, or if we incur unanticipated implementation costs or delays, our results of operations and financial position may be materially adversely affected.

Dependence on Critical Raw Materials Subject to Price and Availability Fluctuations. We rely to a substantial extent on third parties to supply certain raw materials that are critical to the manufacture of our products. Purchase prices and availability of these critical raw materials are subject to volatility. At any given time we may be unable to obtain an adequate supply of these critical raw materials on a timely basis, on price and other terms acceptable, or at all.

If suppliers increase the price of critical raw materials, we may not have alternative sources of supply. In addition, to the extent that we have quoted prices to customers and accepted customer orders for products prior to purchasing necessary raw materials, or have existing contracts, we may be unable to raise the price of products to cover all or part of the increased cost of the raw materials.

The manufacture of some of our products is a complex process and requires long lead times. As a result, we may experience delays or shortages in the supply of raw materials. If unable to obtain adequate and timely deliveries of required raw materials, we may be unable to timely manufacture sufficient quantities of products. This could cause us to lose sales, incur additional costs, delay new product introductions, or suffer harm to our reputation.

We acquire certain important raw materials that we use to produce specialty materials, including nickel, zirconium, niobium, chromium, cobalt, and titanium sponge, from foreign sources. Some of these sources operate in countries that may be subject to unstable political and economic conditions. These conditions may disrupt supplies or affect the prices of these materials.

Volatility of Raw Material Costs. The prices for many of the raw materials we use have been extremely volatile. Since we value most of our inventory utilizing the last-in, first-out (LIFO) inventory costing methodology, a rapid rise in raw material costs has a negative effect on our operating results. Under the LIFO inventory valuation method, changes in the cost of raw materials and production activities are recognized in cost of sales in the current period even though these material and other costs may have been incurred at significantly different values due to the length of time of our production cycle. For example, in 2013, 2012 and 2011, the effect of falling raw material costs on our LIFO inventory valuation method resulted in cost of sales which were $80.9 million, $75.6 million and $25.9 million lower than would have been recognized had we utilized the FIFO methodology to value our inventory. In a period of rising prices, cost of sales expense recognized under LIFO is generally higher than the cash costs incurred to acquire the inventory sold. Conversely, in a period of declining raw material prices, cost of sales recognized under LIFO is

generally lower than cash costs incurred to acquire the inventory sold.

Availability of Energy Resources. We rely upon third parties for our supply of energy resources consumed in the manufacture of our products. The prices for and availability of electricity, natural gas, oil and other energy resources are subject to volatile market conditions. These market conditions often are affected by political and economic factors beyond our control. Disruptions in the supply of energy resources could temporarily impair the ability to manufacture products for customers. Further, increases in energy costs, or changes in costs relative to energy costs paid by competitors, has and may continue to adversely affect our profitability. To the extent that these uncertainties cause suppliers and customers to be more cost sensitive, increased energy prices may have an adverse effect on our results of operations and financial condition.

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Risks Associated with Environmental Matters. We are subject to various domestic and international environmental laws and regulations that govern the discharge of pollutants, and disposal of wastes, and which may require that we investigate and remediate the effects of the release or disposal of materials at sites associated with past and present operations. We could incur substantial cleanup costs, fines and civil or criminal sanctions, third party property damage or personal injury claims as a result of violations or liabilities under these laws or non-compliance with environmental permits required at our facilities. We are currently involved in the investigation and remediation of a number of our current and former sites as well as third party sites. We also could be subject to future laws and regulations that govern greenhouse gas emissions and various matters related to climate change, which could increase our operating costs.

With respect to proceedings brought under the federal Superfund laws, or similar state statutes, we have been identified as a potentially responsible party (PRP) at approximately 42 of such sites, excluding those at which we believe we have no future liability. Our involvement is limited or de minimis at approximately 25 of these sites, and the potential loss exposure with respect to any of the remaining 17 individual sites is not considered to be material. We are a party to various cost-sharing arrangements with other PRPs at the sites. The terms of the cost-sharing arrangements are subject to non-disclosure agreements as confidential information. Nevertheless, the cost-sharing arrangements generally require all PRPs to post financial assurance of the performance of the obligations or to pre-pay into an escrow or trust account their share of anticipated site-related costs. In addition, the Federal government, through various agencies, is a party to several such arrangements.

We believe that we operate our businesses in compliance in all material respects with applicable environmental laws and regulations. However, from time-to-time, we are a party to lawsuits and other proceedings involving alleged violations of, or liabilities arising from, environmental laws. When our liability is probable and we can reasonably estimate our costs, we record environmental liabilities in our financial statements. In many cases, we are not able to determine whether we are liable or if liability is probable to reasonably estimate the loss or range of loss. Estimates of our liability remain subject to additional uncertainties, including the nature and extent of site contamination, available remediation alternatives, the extent of corrective actions that may be required, and the participation number and financial condition of other PRPs, as well as the extent of their responsibility for the remediation. We intend to adjust our accruals to reflect new information as appropriate. Future adjustments could have a material adverse effect on our results of operations in a given period, but we cannot reliably predict the amounts of such future adjustments. At December 31, 2013, our reserves for environmental matters totaled approximately $14 million. Based on currently available information, we do not believe that there is a reasonable possibility that a loss exceeding the amount already accrued for any of the sites with which we are currently associated (either individually or in the aggregate) will be an amount that would be material to a decision to buy or sell our securities. Future developments, administrative actions or liabilities relating to environmental matters, however, could have a material adverse effect on our financial condition or results of operations.

Risks Associated with Current or Future Litigation and Claims. A number of lawsuits, claims and proceedings have been or may be asserted against us relating to the conduct of our currently and formerly owned businesses, including those pertaining to product liability, patent infringement, commercial, government contracting, employment, employee and retiree benefits, taxes, environmental, health and safety and occupational disease, and stockholder and corporate governance matters. Due to the uncertainties of litigation, we can give no assurance that we will prevail on all claims made against us in the lawsuits that we currently face or that additional claims will not be made against us in the future. While the outcome of litigation cannot be predicted with certainty, and some of these lawsuits, claims or proceedings may be determined adversely to us, we do not believe that the disposition of any such pending matters is likely to have a material adverse effect on our financial condition or liquidity, although the resolution in any reporting period of one or more of these matters could have a material adverse effect on our results of operations for that period. Also, we can give no assurance that any other matters brought in the future will not have a material effect on our financial condition, liquidity or results of operations.

Labor Matters. We have approximately 9,500 full-time employees, of which approximately 15% are located outside the United States. Approximately 50% of our workforce is covered by various collective bargaining agreements, predominantly with the USW. At various times, our collective bargaining agreements expire and are subject to

renegotiation. Generally, collective bargaining agreements that expire may be terminated after notice by the union. After termination, the union may authorize a strike. A strike by the employees covered by one or more of the collective bargaining agreements could have a material adverse effect on our operating results. There can be no assurance that we will succeed in concluding collective bargaining agreements with the unions to replace those that expire.

Export Sales. We believe that export sales will continue to account for a significant percentage of our future revenues. Risks associated with export sales include: political and economic instability, including weak conditions in the world's economies; accounts receivable collection; export controls; changes in legal and regulatory requirements; policy changes affecting the markets for our products; changes in tax laws and tariffs; trade duties; and exchange rate fluctuations (which may affect sales to

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international customers and the value of profits earned on export sales when converted into dollars). Any of these factors could materially adversely affect our results for the period in which they occur.

Risks Associated with Retirement Benefits. At December 31, 2013, our U.S. qualified defined benefit pension plan was approximately 88% funded as calculated in accordance with U.S. generally accepted accounting principles, and we are not required to make any contribution to this plan in 2014. However, we may be required to fund the U.S. qualified defined benefit pension plan in the years beyond 2014 depending upon the value of plan investments and obligations in the future and changes in laws or regulations that govern pension plan funding. Depending on the timing and amount, a requirement that we fund our U.S. qualified defined benefit pension plan could have a material adverse effect on our results of operations and financial condition.

Risks Associated with Acquisition and Disposition Strategies. We intend to continue to strategically position our businesses in order to improve our ability to compete. Strategies we employ to accomplish this may include seeking new or expanding existing specialty market niches for our products, expanding our global presence, acquiring businesses complementary to existing strengths, and continually evaluating the performance and strategic fit of our existing business units. From time-to-time, management holds discussions with management of other companies to explore acquisitions, joint ventures, and other business combination opportunities as well as possible business unit dispositions. As a result, the relative makeup of the businesses comprising our Company is subject to change. Acquisitions, joint ventures, and other business combinations involve various inherent risks, such as: assessing accurately the value, strengths, weaknesses, contingent and other liabilities and potential profitability of acquisition or other transaction candidates; the potential loss of key personnel of an acquired business; our ability to achieve identified financial and operating synergies anticipated to result from an acquisition or other transaction; and unanticipated changes in business and economic conditions affecting an acquisition or other transaction. International acquisitions and other transactions could be affected by export controls, exchange rate fluctuations, domestic and foreign political conditions and a deterioration in domestic and foreign economic conditions.

Risks Associated with Information Technology. Information technology infrastructure is critical to supporting business objectives; failure of our information technology infrastructure to operate effectively could adversely affect our business. We depend heavily on information technology infrastructure to achieve our business objectives. If a problem occurs that impairs this infrastructure, the resulting disruption could impede 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. As we integrate, implement and deploy new information technology processes and information infrastructure across our operations, we could experience disruptions in our business that could have an adverse effect on our business, financial condition, results of operations and cash flow.

Internal Controls Over Financial Reporting. 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.

Insurance. We have maintained various forms of insurance, including insurance covering claims related to our properties and risks associated with our operations. Our existing property and liability insurance coverages contain exclusions and limitations on coverage. From time-to-time, in connection with renewals of insurance, we have experienced additional exclusions and limitations on coverage, larger self-insured retentions and deductibles, and significantly higher premiums. As a result, in the future our insurance coverage may not cover claims to the extent that it has in the past and the costs that we incur to procure insurance may increase significantly, either of which could have an adverse effect on our results of operations.

Political and Social Turmoil. The war on terrorism as well as political and social turmoil could put pressure on economic conditions in the United States and worldwide. These political, social and economic conditions could make it difficult for us, our suppliers, and our customers to forecast accurately and plan future business activities, and could adversely affect the financial condition of our suppliers and customers and affect customer decisions as to the amount and timing of purchases from us. As a result, our business, financial condition and results of operations could be materially adversely affected.

Risks Associated with Government Contracts. Some of our operating units perform contractual work directly for the U.S. Government. Various claims (whether based on U.S. Government or Company audits and investigations or otherwise) could be asserted against us related to our U.S. Government contract work. Depending on the circumstances and the outcome, such proceedings could result in fines, penalties, compensatory and treble damages or the cancellation or suspension of payments under one or more U.S. Government contracts. Under government regulations, a company, or one or more of its operating divisions or units, can also be suspended or debarred from government contracts based on the results of investigations.

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Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our principal domestic facilities for our high performance materials include titanium sponge production, melting operations, and production facilities that include processing and finishing operations. Our titanium sponge production facility is located in Rowley, UT. Domestic melting operations are located in Monroe, NC, Bakers, NC, and Lockport, NY (vacuum induction melting, vacuum arc re-melt, electro-slag re-melt, plasma melting), Richland, WA (electron beam melting), and Albany, OR (vacuum arc re-melt). Production of high performance materials, most of which are in long product form, takes place at our domestic facilities in Monroe, NC, Bakers, NC, Lockport, NY, Richburg, SC, Albany, OR and Oakdale, PA. Our production of zirconium and related specialty alloys takes place at facilities located in Albany, OR, Huntsville, AL, and Frackville, PA. Our production of highly engineered forgings, castings, and machined components takes place at facilities in Cudahy and Coon Valley, WI, Windsor, CT, Albany, OR, Irvine, CA, Portland, IN and Lebanon, KY.

Our principal domestic locations for melting stainless steel and other flat-rolled specialty materials are located in Brackenridge, Midland and Latrobe, PA. Hot rolling, including the new HRPF which was placed into service at the end of 2013, is performed at our domestic facility in Brackenridge, PA. Hot rolling is also performed at our domestic facilities in Washington and Houston, PA. Finishing of our flat-rolled products takes place at our domestic facilities located in Brackenridge, Bagdad, Vandergrift, Midland, Washington, Rochester, Monaca and Zelienople, PA, and in Wallingford and Waterbury, CT, New Bedford, MA, and Louisville, OH.

Substantially all of our properties are owned, and three of our properties are subject to mortgages or similar encumbrances securing borrowings under certain industrial development authority financings.

We also own or lease facilities in a number of foreign countries, including France, Germany, the United Kingdom, Poland, and the People’s Republic of China. We own and/or lease and operate facilities for melting and re-melting, machining and bar mill operations, laboratories and offices located in Sheffield, England. We own highly engineered forging and machining operations in Stalowa Wola, Poland. Through our STAL joint venture, we operate facilities for finishing Precision Rolled Strip products in the Xin-Zhuang Industrial Zone, Shanghai, China.

Our executive offices, located in PPG Place in Pittsburgh, PA, are leased.

Although our facilities vary in terms of age and condition, we believe that they have been well maintained and are in sufficient condition for us to carry on our activities.

Item 3. Legal Proceedings

In December 2008, the Environmental Protection Agency (EPA) sent a subsidiary of the Company a notice of violation (NOV) alleging violations of rules governing the management of hazardous wastes at the entity’s Albany, Oregon facility. In May 2010, the EPA sent a second NOV alleging additional violations of hazardous waste rules arising out of related circumstances, and a separate NOV to another subsidiary, which alleged violations of the hazardous waste rules at its Albany, Oregon facility. In December 2013, EPA filed a civil action against the Company relating to the NOVs, along with a Consent Decree requiring the Company to pay a civil penalty of $825,000 and to take other action. EPA published the Consent Decree for public comment and provided no adverse comments are received, EPA will ask the court to enter the Consent Decree to resolve the NOVs and the civil action.

We become involved from time-to-time in various lawsuits, claims and proceedings relating to the conduct of our current and formerly owned businesses, including those pertaining to product liability, patent infringement, commercial, government contracting, employment, employee and retiree benefits, taxes, environmental, health and safety and occupational disease, and stockholder and corporate governance matters. While we cannot predict the outcome of any lawsuit, claim or proceeding, our management believes that the disposition of any pending matters is not likely to have a material adverse effect on our financial condition or liquidity. The resolution in any reporting period of one or more of these matters, including those described above, however, could have a material adverse effect on our results of operations for that period.

Information relating to legal proceedings is included in Note 18. Commitments and Contingencies of the Notes to Consolidated Financial Statements and incorporated herein by reference.

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Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Common Stock Prices

Our common stock is traded on the New York Stock Exchange (symbol ATI). At February 6, 2014, there were 4,162 record holders of Allegheny Technologies Incorporated common stock. We paid a quarterly cash dividend of $0.18 per share of common stock outstanding for each quarter of 2013 and 2012. The ranges of high and low sales prices for shares of our common stock for the quarterly periods ended on the dates indicated were as follows:

2013	March 31	June 30	September 30	December 31
High	$34.18	$31.92	$32.74	$35.89
Low	$28.97	$25.60	$25.60	$29.49

2012	March 31	June 30	September 30	December 31
High	$53.00	$44.17	$37.02	$33.95
Low	$39.78	$27.61	$27.68	$25.35

Cumulative Total Stockholder Return

The graph set forth below shows the cumulative total stockholder return (i.e., price change plus reinvestment of dividends) on our common stock from December 31, 2008 through December 31, 2013 as compared to the S&P 500 Index and a Peer Group of companies. We believe the Peer Group of companies, which is defined below, is representative of companies in our industry that serve similar markets during the applicable periods. The total stockholder return for the Peer Group is weighted according to the respective issuer's stock market capitalization at the beginning of each period. The graph assumes that $100 was invested on December 31, 2008.

Company / Index	Dec 2008	Dec 2009	Dec 2010	Dec 2011	Dec 2012	Dec 2013
ATI	100.00	179.33	224.09	196.85	127.74	153.55
S&P 500 Index	100.00	126.46	145.51	148.59	172.37	228.19
Peer Group	100.00	143.16	162.11	137.73	153.61	204.48

Source: Standard & Poor's

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Peer Group companies for the cumulative five year total return period ended December 31, 2013 were as follows:

AK Steel Holding Corporation	Materion Corp	Steel Dynamics, Inc.
ALCOA Inc.	Nucor Corp.	The Timken Company
Carpenter Technology Corporation	Precision Castparts Corp.	United States Steel Corporation
Castle (A M) & Co.	Reliance Steel & Aluminum Co.	Universal Stainless & Alloy Products, Inc.
Commercial Metals Company	RTI International Metals, Inc.	Worthington Industries, Inc.
Kennametal Inc.	Schnitzer Steel Industries, Inc.	

Item 6. Selected Financial Data

(In millions)

For the Years Ended December 31,	2013	2012	2011	2010	2009
Revenue by Market:					
Aerospace & Defense	$1,394.5	$1,584.5	$1,441.6	$998.3	$931.0
Oil & Gas/Chemical Process Industry	706.8	837.6	996.0	705.1	524.1
Electrical Energy	459.4	571.5	741.8	645.7	563.7
Medical	207.7	211.5	243.6	223.7	112.9
Subtotal - Key Markets	2,768.4	3,205.1	3,423.0	2,572.8	2,131.7
Automotive	348.3	363.7	356.2	292.5	192.3
Construction/Mining	287.5	364.2	305.3	267.0	140.7
Food Equipment & Appliances	251.7	215.4	236.8	273.5	176.8
Electronics/Computers/Communication	153.1	170.0	161.1	127.7	83.0
Transportation	136.3	196.1	209.0	153.3	64.8
Conversion Services and Other	98.2	152.4	120.9	79.4	78.1
Total	$4,043.5	$4,666.9	$4,812.3	$3,766.2	$2,867.4

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(In millions, except per share amounts) For the Years Ended December 31,	2013	2012	2011	2010	2009
Sales:					
High Performance Metals	$1,944.8	$2,314.0	$2,081.0	$1,422.8	$1,346.7
Flat-Rolled Products	2,098.7	2,352.9	2,731.3	2,343.4	1,520.7
Total Sales	$4,043.5	$4,666.9	$4,812.3	$3,766.2	$2,867.4
Operating profit (loss):					
High Performance Metals	$209.1	$385.4	$377.1	$266.0	$230.9
Flat-Rolled Products	(44.7)	127.8	217.6	89.0	75.8
Total operating profit	$164.4	$513.2	$594.7	$355.0	$306.7
Income (loss) from continuing operations before income taxes	$(154.8)	$232.3	$322.1	$124.2	$89.4
Income tax provision (benefit)	(63.6)	72.4	110.4	46.5	35.9
Income (loss) from continuing operations	(91.2)	159.9	211.7	77.7	53.5
Income (loss) from discontinued operations, net of tax	252.8	7.9	11.4	1.0	(15.5)
Net income	161.6	167.8	223.1	78.7	38.0
Less: Net income attributable to noncontrolling interests	7.6	9.4	8.8	8.0	6.3
Net income attributable to ATI	$154.0	$158.4	$214.3	$70.7	$31.7
Basic net income (loss) per common share					
Continuing operations attributable to ATI per common share	$(0.93)	$1.42	$1.98	$0.72	$0.49
Discontinued operations attributable to ATI per common share	2.37	0.07	0.11	0.01	(0.16)
Basic net income attributable to ATI per common share	$1.44	$1.49	$2.09	$0.73	$0.33
Diluted net income (loss) per common share					
Continuing operations attributable to ATI per common share	$(0.93)	$1.36	$1.87	$0.71	$0.48
Discontinued operations attributable to ATI per common share	2.37	0.07	0.10	0.01	(0.16)
Diluted net income attributable to ATI per common share	$1.44	$1.43	$1.97	$0.72	$0.32

(In millions, except per share amounts and ratios) As of and for the Years Ended December 31,	2013	2012	2011	2010	2009
Dividends declared per common share	$0.72	$0.72	$0.72	$0.72	$0.72
Ratio of earnings to fixed charges	—	2.8x	3.6x	2.2x	1.8x
Working capital	$1,739.8	$1,639.1	$1,707.7	$1,324.1	$1,373.0
Total assets	6,898.5	6,247.8	6,046.9	4,493.6	4,346.0
Long-term debt	1,527.4	1,463.0	1,482.0	921.9	1,037.6
Total debt	1,947.3	1,480.1	1,509.3	1,063.3	1,071.1
Cash and cash equivalents	1,026.8	304.6	380.6	432.3	708.8
Total ATI Stockholders' equity	2,894.2	2,479.6	2,475.3	2,040.8	2,012.2
Noncontrolling interests	100.5	107.5	96.3	88.6	77.4
Total Stockholders' equity	2,994.7	2,587.1	2,571.6	2,129.4	2,089.6

The information presented in Selected Financial Data should be read in conjunction with the information provided in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, and in Item 8. Financial Statements and Supplementary Data.

In 2013, we completed the sale of our tungsten materials business and after a strategic review, determined that we would exit our iron castings and fabricated components businesses. These three businesses, which were part of the former Engineered Products business segment, are classified as discontinued operations for all periods presented above. We received cash proceeds, net of transaction costs, of $600.9 million for the sale of the tungsten materials business, and recognized a $428.3 million pretax ($261.4 million after tax) gain which is reported in discontinued operations. In addition, results of discontinued

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operations for 2013 include $19.5 million pre-tax ($11.9 million after-tax) of charges associated with the iron castings and fabricated components operations. See Note 2 of the notes to the consolidated financial statements for further explanation.

We restructured the remaining operations of the former Engineered Products business segment, which represented less than 3% of total sales from continuing operations. The previously standalone specialty steel forgings business was integrated into our forged products operations in the High Performance Metals business segment, and our precision titanium and specialty alloy flat-rolled finishing business was integrated into the specialty plate operations in the Flat-Rolled Products business segment. Segment results for High Performance Metals and Flat-Rolled Products reflect these changes for all periods presented.

For the year ended December 31, 2013, we recorded pre-tax restructuring charges in continuing operations of $67.5 million ($41.2 million after-tax or $0.39 per share) which are not included in segment results. These pre-tax charges were comprised of $55.1 million in non-cash long-lived asset impairment charges, $4.2 million in facility closure costs and $8.2 million in employee severance and termination benefit charges. See Note 15 of the notes to the consolidated financial statements for further explanation.

In July 2013, we issued $500 million of 5.875% Senior Notes due in 2023 for general corporate purposes.

In May 2011, we acquired Ladish Co., Inc. (Ladish) for $897.6 million, comprised of the issuance of 7.3 million shares of ATI common stock, which increased stockholders' equity by $513.6 million, and the payment of $384 million in cash. Results are included in the High Performance Metals segment from the date of the acquisition.

In January 2011, we issued $500 million of 5.95% Senior Notes due in 2021. A portion of the proceeds from this transaction was used to fund the cash portion of the Ladish acquisition. Additionally in 2011, we retired the remaining $117 million of our outstanding 8.375% Notes due in December 2011.

Total ATI stockholders' equity for 2013 included a net increase of $241.0 million for the year-end remeasurements of pensions and other postretirement benefits, primarily due to the use of a higher discount rate to measure the benefit obligations. Total ATI stockholders' equity for 2012 and 2011 included net decreases of $164.1 million and $320.0 million, respectively, primarily due to the use of lower discount rates to measure the benefit obligations.

In 2009, we issued $350 million of 9.375% Senior Notes due 2019 and $402.5 million of 4.25% Convertible Senior Notes due 2014. Proceeds from these transactions were used to retire $183.3 million of our outstanding 8.375% Notes due 2011 and to fund a voluntary pre-tax $350 million cash contribution to our domestic pension plan to significantly improve its funded position.

For purposes of determining the ratio of earnings to fixed charges, earnings include pre-tax income (loss) from continuing operations plus fixed charges (excluding capitalized interest). Fixed charges consist of interest on all indebtedness (including capitalized interest) plus that portion of operating lease rentals representative of the interest factor (deemed to be one-third of operating lease rentals). For the year ended December 31, 2013, fixed charges exceeded earnings by $192.8 million.

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

Certain statements contained in this Management's Discussion and Analysis of Financial Condition and Results of Operations are forward-looking statements. Actual results or performance could differ materially from those encompassed within such forward-looking statements as a result of various factors, including those described below. Net income and net income per share amounts referenced below are attributable to Allegheny Technologies Incorporated and Subsidiaries.

Overview of 2013 Financial Performance

We are one of the largest and most diversified specialty materials and components producers in the world. Our high-value products include titanium and titanium alloys, nickel-based alloys and specialty steels, precision forgings, castings and machined components, zirconium and related alloys, precision and engineered stainless steel strip, and grain-oriented electrical steel. Our standard products include specialty stainless sheet, stainless steel sheet, and stainless steel plate. Our specialty materials are produced in a wide range of alloys and product forms and are selected for use in applications that demand materials having exceptional hardness, toughness, strength, resistance to heat, corrosion or abrasion, or a combination of these characteristics.

Our High Performance Metals segment produces, converts and distributes a wide range of high performance materials, including titanium and titanium-based alloys, nickel- and cobalt-based alloys and superalloys, zirconium and related alloys including hafnium and niobium, advanced powder alloys and other specialty metals, in long product forms such as ingot, billet, bar, rod, wire, shapes and rectangles, and seamless tubes, plus precision forgings and castings, and machined parts. These products are designed for the high performance requirements of such major end markets as aerospace and defense, oil and gas,

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chemical process industry, electrical energy, and medical. Our Flat-Rolled Products segment produces, converts and distributes stainless steel, nickel-based alloys, specialty alloys, and titanium and titanium-based alloys, in a variety of product forms including plate, sheet, engineered strip, and Precision Rolled Strip products, as well as grain-oriented electrical steel. The major end markets for our flat-rolled products are oil and gas, chemical process industry, electrical energy, automotive, food processing equipment and appliances, construction and mining, electronics, communication equipment and computers, and aerospace and defense.

In 2013, we took significant steps to restructure our operations and made important progress on our strategic capital projects and other business objectives during challenging market conditions in which we were adversely impacted by weak demand and low base-selling prices for many products. In September 2013, we announced the sale of our tungsten materials business in our former Engineered Products segment for approximately $605 million in an all-cash transaction, which was completed in the fourth quarter and resulted in a pre-tax gain of approximately $428 million. In the third quarter 2013, we completed a strategic review of our iron castings and fabricated components businesses, which were also part of the former Engineered Products segment. Based on current and forecasted financial results, these businesses were not projected to meet our long-term profitable growth and return on capital employed expectations. The fabricated components business was closed in the third quarter 2013, and the casting service business is classified as held for sale at December 31, 2013. We recorded $19.5 million of pre-tax charges ($11.9 million after tax) in 2013 primarily related to impairment of long-lived assets associated with these operations. These businesses, and the divested tungsten materials business, are reported as discontinued operations for all periods presented, and are not reported within our sales, results of continuing operations, or business segment results.

We restructured the remaining operations of the former Engineered Products business segment, which represented less than 3% of total sales from continuing operations. The previously standalone specialty steel forgings business was integrated into our forged products operations in the High Performance Metals business segment, and our precision titanium and specialty alloy flat-rolled finishing business was integrated into the specialty plate operations in the Flat-Rolled Products business segment. Segment results for High Performance Metals and Flat-Rolled Products reflect these changes for all periods presented.

Throughout most of 2013, and particularly in the second half of the year, we experienced soft demand from many of our major end markets. Sales in 2013 decreased 13% to $4.04 billion, compared to $4.67 billion in 2012. In our key end markets of aerospace and defense, oil and gas, chemical process industry, electrical energy and medical, sales were down 14% and represented 68% of our total 2013 sales. Direct international sales were $1.59 billion and represented 39% of our total sales. For 2013, the High Performance Metals segment generated 53% of our direct international sales, and the Flat-Rolled Products segment generated 47% of our direct international sales.

We reported a loss from continuing operations attributable to ATI of $98.8 million, or $(0.93) per share for 2013, compared to income from continuing operations attributable to ATI of $150.5 million, or $1.36 per share for 2012. Lower shipments of many high-value and standard products, low base-selling prices for many products, and the impact of higher raw material input costs for products with longer manufacturing cycle times not aligned with falling raw material surcharges and indices were significant factors affecting 2013 results. Additionally, we recorded a $67.5 million restructuring charge in continuing operations in 2013, including $59.3 million of long-lived asset impairment charges and costs associated with facility closures, which were excluded from business segment results.

Income from discontinued operations attributable to ATI was $252.8 million, or $2.37 per share, in 2013, compared to $7.9 million, or $0.07 per share, in 2012. Discontinued operations in 2013 include the $428 million pre-tax ($261.4 million after tax, or $2.45 per share) gain on sale of the tungsten materials business, and the operating results of the tungsten materials, iron castings and fabricated components businesses. Discontinued operations results in 2013 and 2012 include net of tax long-lived asset impairment charges of $11.9 million, or $(0.11) per share, and $8.8 million, or $(0.08) per share, respectively, primarily related to the iron castings business.

Net income attributable to ATI was $154.0 million, or $1.44 per share, for 2013, compared to $158.4 million, or $1.43 per share, for 2012.

In our High Performance Metals segment, sales in 2013 decreased 16% to $1.95 billion, with sales to the aerospace and defense market down $170.9 million, or 12%, primarily due to lower raw material surcharges/indices and continued aggressive supply chain inventory management in the jet engine market. Sales to the oil and gas market

declined 27%, or $63.0 million, in 2013 and were impacted by falling nickel raw material surcharges and by destocking in the oil and gas supply chain. Sales to the medical market declined 3%, as volume increases were offset by declines in selling prices. Operating profit for the High Performance Metals segment was $209.1 million, or 10.8% of sales, in 2013, compared to $385.4 million or 16.7% of sales in 2012. Results for 2013 reflect lower mill product shipment volume for all specialty materials mill products, as well as lower demand for forged and cast products. High Performance Metals segment operating profit in 2013 also includes a $35.0 million inventory valuation reserve, reflecting a reduction in the carrying value of LIFO-based inventory in the segment, which exceeded current replacement cost, to its net realizable value.

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In our Flat-Rolled Products segment, sales decreased 11% in 2013 to $2.10 billion, primarily as a result of lower raw material surcharges and reduced base prices for most products. Total product shipments were flat compared to 2012, as shipments of standard stainless products increased 1% while shipments of high-value products decreased 2%. Volatile raw material costs and the resulting impact on surcharges affected demand as customers managed inventory levels and the timing of purchases. Operating results for the Flat-Rolled Products segment in 2013 were a loss of $44.7 million, or (2.1%) of sales, compared to segment operating profit of $127.8 million, or 5.4% of sales, due to lower base prices for most products and inventory costs not aligning with raw material surcharges. Flat-Rolled Products segment operating results in 2013 also include a $20.5 million lower of cost or market inventory valuation reserve for industrial titanium products.

For 2013, total segment operating profit decreased 68% to $164.4 million, compared to $513.2 million for 2012. Throughout 2013, we focused on improving our market position and completing our strategic investments to ensure that ATI remains well-positioned as global and economic conditions improve. These actions are aimed at improving our future performance and positioning ATI to benefit from longer-term growth opportunities. Our accomplishments during 2013 from these important efforts included:

- Maintaining our strong balance sheet. ATI finished 2013 with over $1 billion of cash and cash equivalents and $1.4 billion of available liquidity, including our undrawn unsecured senior credit facility. We sold our non-core tungsten materials business for approximately $605 million in cash, and proactively issued $500 million of 5.875%, ten-year senior notes to provide financial flexibility as we complete, commission and qualify our strategic capital projects and address short-term debt maturities. We realized significant cash generation in 2013, despite a decline in profitability, with cash flow from operations of $368 million, including a reduction of $242 million in managed working capital in response to business conditions. We utilized our cash in 2013 to invest $613 million in capital expenditures, primarily for the HRPF project, and return $77 million to our stockholders as dividends. Our net debt to capital ratio was 24.1% at the end of 2013.
- Continued focus on our global market presence, as direct international sales increased to 39% of our total sales, at $1.6 billion. We believe at least 50% of ATI’s 2013 sales were driven by global markets when we consider exports by our customers.
- Placing our Flat-Rolled Products segment Hot-Rolling and Processing Facility (HRPF) into service at the end of 2013. Cold-commissioning has begun, and hot-commissioning is expected to be completed by the end of the third quarter 2014. This capital project, which is on schedule and on budget at $1.2 billion excluding capitalized interest costs, is designed to be the most powerful mill in the world for production of specialty metals. It is designed to produce thinner and wider hot-rolled coils of exceptional quality and reduced cost with shorter lead times, with lower working capital requirements. The HRPF is designed to provide unsurpassed manufacturing capability and versatility in the production of a wide range of flat-rolled specialty metals, including ATI's diversified product mix of nickel-based and specialty alloys, titanium and titanium alloys, zirconium alloys, Precision Rolled Strip products, and stainless sheet and coiled plate products. The HRPF is also designed to produce high-strength carbon steel alloys. It is designed to roll and process exceptional quality hot bands of up to 78.62 inches, or 2 meters, wide, and is expected to be producing all of ATI's flat-rolled products by the end of 2014.
- Beginning the premium-quality (PQ) qualification program at our Rowley, UT titanium sponge production facility in October 2013. We continued to achieve improvements in key operational areas at Rowley, such as cake size and yield. Completion of the PQ qualification program, which is expected to continue through 2015, is an important step in fulfilling the strategic vision and purpose of this approximately $0.5 billion capital investment to provide a secure, domestic supply source for PQ titanium sponge for use in jet engine rotating parts. As originally designed, the Rowley facility had a projected annual production capacity of 24 million pounds, with infrastructure in place to further expand annual capacity by approximately 18 million pounds, for a total potential capacity of 42 million pounds of titanium sponge. We believe our operational improvements in yield and cake size will enable an annual production level in excess of 24 million pounds once we achieve full production levels, which is expected following PQ qualification.
- Continuing our strategic focus on key high value specialty products, including titanium and titanium alloys, precision castings and forgings, nickel-based alloys and specialty alloys, zirconium and related alloys, and grain-oriented electrical steel. In 2013, sales of these key high value products represented 78% of our total sales.

- Further improving our position in the key end markets of aerospace, oil and gas/chemical process industry, electrical energy and medical, through strategic and long-term agreements (LTAs) with both existing and new customers. During 2013, we completed more than 20 new or revised LTAs representing in excess of $3 billion of total revenue potential over the terms of the agreements. The largest LTA was the extension of our long-term supply agreement with The Boeing Company, announced in October 2013. This extension agreement covers value-added titanium mill products and provides the opportunity for greater use of ATI's next generation and advanced titanium alloys.

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- We recognized a $67.5 million restructuring charge in continuing operations, including $59.3 million of long-lived asset impairment charges and costs associated with permanent facility closures. Our recent strategic investments in manufacturing capabilities and process technologies enabled the closure of older, higher cost operations, and the streamlining of our manufacturing processes by reducing our manufacturing footprint.
- Our safety focus continued across all of ATI's operations. Our 2013 OSHA Total Recordable Incident Rate was 2.14 and our Lost Time Case Rate was 0.40 per 200,000 hours worked, which we believe to be competitive with world class performance for our industry.
- We realized continued success from the ATI Business System, which continues to drive lean manufacturing throughout our operations. In addition to the safety performance discussed above, we realized over $141 million in gross cost reductions in 2013, which exceeded our goal of $100 million.
- Our U.S. qualified defined benefit pension was approximately 88% funded, as measured for financial reporting purposes, and there are no required contributions to this plan for 2014.

We continue to believe market conditions remain favorable for strong secular growth over the next 2 to 5 years in many of our key global markets. Aerospace build rates are expected to continue to increase and OEM backlogs remain at record levels. Demand for ATI's high performance specialty materials and components is expected to increase in support of the higher build rates. Also, demand for our innovative new products is expected to begin a multi-year period of significant growth as new technology airframe and jet engine deliveries increase. Demand for our products generally leads a change to a production build schedule by approximately 6 to 12 months. We also expect to see modest growth in demand for jet engine spare parts as we move through 2014.

Global oil and gas exploration and production forecasts project spending to remain strong, which is expected to result in increased upstream capital spending, especially in the U.S. ATI benefits from the trend toward horizontal and directional drilling, deep water projects, and sour gas projects. In the chemical processing industry, ATI benefits from projects requiring specialty materials that can withstand highly corrosive and high temperature environments.

In the electrical energy market, we expect short-term demand to remain flat for both power generation and power distribution because of modest GDP growth in advanced economies, improved energy efficiencies resulting in lower demand growth, and improving, but still weak, new housing construction in the U.S. Our specialty materials are used in nuclear, coal, and natural gas power generation, including pollution control equipment and spent nuclear fuel storage. Our products are also used to manufacture power generation equipment used for renewable energy sources, particularly in solar, fuel cell and geothermal power applications.

We expect moderate growth in demand for our high performance specialty materials from the medical market because of the aging populations in developed countries and the growth of advanced medical procedures in developing countries requiring the products that we produce.

As we begin 2014, while challenging conditions remain, global economic conditions appear to be moderately improving, although at lower rates of growth than past recoveries. Again, we are cautiously optimistic that business conditions will gradually improve as we move through 2014. We will remain focused on actions to enhance ATI's competitive position and improve the cost structure of our businesses. As part of this effort we are targeting $100 million in new gross cost reductions for the full year 2014. We believe that this focus, combined with the capabilities of our strategic investments, including the HRPF and the Rowley, UT titanium sponge production facility, and other strategic actions designed to transform ATI into an aligned and integrated global leader in specialty materials products and components, will keep ATI well-positioned for sustainable profitable growth as market conditions improve.

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Results of Operations

ATI's results of continuing operations exclude the tungsten materials business, which was sold on November 4, 2013, and the iron castings and fabricated components businesses. These three businesses are classified as discontinued operations for all periods presented and are not included within sales, segment operating profit, or results from continuing operations. Sales were $4.04 billion in 2013, $4.67 billion in 2012, and $4.81 billion in 2011. Sales declines have been driven by lower transaction prices due to falling raw material sales indices and surcharges, as well as lower shipment volumes for most products. Direct international sales represented approximately 39% of 2013 sales, 38% of 2012 sales, and 37% of 2011 sales. A summary of our results of operations, including continuing and discontinued operations, is as follows:

in millions, except per share amounts	2013	2012	2011
Sales	$4,043.5	$4,666.9	$4,812.3
Segment operating profit	$164.4	$513.2	$594.7
Amounts attributable to ATI common stockholders:			
Income (loss) from continuing operations	$(98.8)	$150.5	$202.9
Income from discontinued operations	252.8	7.9	11.4
Net income	$154.0	$158.4	$214.3
Per Diluted Share, attributable to ATI:			
Continuing operations	$(0.93)	$1.36	$1.87
Discontinued operations	$2.37	$0.07	$0.10
Net income	$1.44	$1.43	$1.97

Segment operating profit was $164.4 million in 2013, $513.2 million in 2012, and $594.7 million in 2011. Our measure of segment operating profit, which we use to analyze the performance and results of our business segments, excludes income taxes, corporate expenses, net interest expense, retirement benefit expense, closed company expenses and restructuring costs, if any. We believe segment operating profit, as defined, provides an appropriate measure of controllable operating results at the business segment level. Segment operating profit in 2013 was adversely impacted by low shipments of many high value and standard products, low base-selling prices for many products, and the impact of higher raw material input costs for products with longer manufacturing cycle times not aligned with falling raw material sales indices and surcharges. Additionally, 2013 segment operating results included $55.5 million of inventory valuation charges.

The 2013 loss from continuing operations attributable to ATI was $98.8 million, or ($0.93) per share, compared to income from continuing operations attributable to ATI of $150.5 million, or $1.36 per share in 2012. Results for 2013 include a $67.5 million pre-tax ($41.2 million after tax, or $0.39 per share) restructuring charge for long-lived asset impairments and other costs associated with facility closures, including termination benefits for pension and other postretirement benefit plans, and other severance charges. Results for 2011 include after-tax charges of $29.6 million, or $0.26 per share, for acquisition expenses of Ladish Co., Inc., accelerated recognition of equity compensation due to executive retirements, and restructuring and start-up expenses.

Income from discontinued operations attributable to ATI was $252.8 million in 2013, $7.9 million in 2012 and $11.4 million in 2011. Discontinued operations results in 2013 include the $261.4 million net of tax, or $2.45 per share, gain on sale of the tungsten materials business, charges of $11.9 million net of tax, or $0.11 per share primarily related to asset impairments in the fabricated components and iron castings business, as well as the results of operations for these three businesses. Income from discontinued operations attributable to ATI in 2012 includes an $8.8 million net of tax charge, or $0.08 per share, for asset impairment charges in the iron castings business.

We operate in two business segments: High Performance Metals, and Flat-Rolled Products. In 2013, we restructured our former Engineered Products business segment, including the integration of the previously standalone specialty steel forgings business into our forging operations in the High Performance Metals segment, and the integration of our precision titanium and specialty alloy flat-rolled finishing business into our specialty plate operations in the Flat-Rolled Products segment. We completed a strategic review of our iron castings and fabricated components

businesses, which were also part of the former Engineered Products segment. Based on current and forecasted financial results, these businesses were not projected to meet our long-term profitable growth and return on capital employed expectations. These operations, and the tungsten materials business that was

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sold in the fourth quarter 2013, are reported as discontinued operations. Segment results reflect these changes for all periods presented.

These two segments represented the following percentages of our total revenues and segment operating profit for the years indicated:

	2013		2012		2011	
	Revenue	Operating Profit (Loss)	Revenue	Operating Profit	Revenue	Operating Profit
High Performance Metals	48 %	127 %	50 %	75 %	43 %	63 %
Flat-Rolled Products	52 %	(27)%	50 %	25 %	57 %	37 %

Comparative information for our overall revenues (in millions) by end market and their respective percentages of total revenues is as follows:

Market	2013		2012		2011	
Aerospace & Defense	$1,394.5	35 %	$1,584.5	34 %	$1,441.6	30 %
Oil & Gas/Chemical Process Industry	706.8	17 %	837.6	18 %	996.0	21 %
Electrical Energy	459.4	11 %	571.5	12 %	741.8	15 %
Medical	207.7	5 %	211.5	5 %	243.6	5 %
Subtotal - Key Markets	2,768.4	68 %	3,205.1	69 %	3,423.0	71 %
Automotive	348.3	9 %	363.7	8 %	356.2	8 %
Construction/Mining	287.5	7 %	364.2	8 %	305.3	6 %
Food Equipment & Appliances	251.7	6 %	215.4	4 %	236.8	5 %
Electronics/Computers/Communication	153.1	4 %	170.0	4 %	161.1	3 %
Transportation	136.3	3 %	196.1	4 %	209.0	4 %
Conversion Services and Other	98.2	3 %	152.4	3 %	120.9	3 %
Total	$4,043.5	100 %	$4,666.9	100 %	$4,812.3	100 %

Comparative information for our major high-value and standard products based on their percentages of our total revenues is as follows:

For the Years Ended December 31,	2013	2012	2011
High-Value Products			
Nickel-based alloys and specialty alloys	25 %	27 %	27 %
Titanium and titanium alloys	16 %	14 %	15 %
Precision forgings, castings and components	13 %	14 %	9 %
Precision and engineered strip	13 %	12 %	13 %
Zirconium and related alloys	6 %	6 %	6 %
Grain-oriented electrical steel	5 %	5 %	6 %
Total High-Value Products	78 %	78 %	76 %
Standard Products			
Specialty stainless sheet	10 %	10 %	11 %
Stainless steel sheet	9 %	9 %	9 %
Stainless steel plate and other	3 %	3 %	4 %
Total Standard Products	22 %	22 %	24 %
Grand Total	100 %	100 %	100 %

Information with respect to our business segments is presented below.

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High Performance Metals

(In millions)	2013	% Change	2012	% Change	2011
Sales to external customers	$1,944.8	(16)%	$2,314.0	11%	$2,081.0
Operating profit	209.1	(46)%	385.4	2%	377.1
Operating profit as a percentage of sales	10.8%		16.7%		18.1%
Direct international sales as a percentage of sales	43.3%		43.5%		40.6%

Our High Performance Metals segment produces, converts and distributes a wide range of high performance materials, including titanium and titanium-based alloys, nickel- and cobalt-based alloys and superalloys, zirconium and related alloys including hafnium and niobium, advanced powder alloys and other specialty materials, in long product forms such as ingot, billet, bar, rod, wire, shapes and rectangles, and seamless tubes, plus precision forgings and castings, and machined parts. These products are designed for the high performance requirements of such major end markets as aerospace and defense, oil and gas, chemical process industry, electrical energy, and medical. The business units in this segment include ATI Allvac, ATI Wah Chang and ATI Ladish.

2013 Compared to 2012

Sales for the High Performance Metals segment in 2013 decreased 16%, to $1.94 billion, with sales to the aerospace market down $155.1 million, or 12%, due primarily to lower raw material surcharges and indices and continued aggressive supply chain inventory management in the jet engine market. Sales to the oil and gas and chemical process industry markets were 27% lower, again reflecting lower index-based selling prices and supply chain inventory management actions, as well as lower overall project-based demand. Comparative information for our High Performance Metals segment revenues (in millions) by market, the respective percentages of overall segment revenues for the years ended 2013 and 2012, and the percentage change in revenues by market for 2013 is as follows:

Market	2013		2012		Change	
Aerospace:						
Jet Engines	$591.4	30%	$725.3	31%	$(133.9)	(18)%
Airframes	370.5	19%	388.6	17%	(18.1)	(5)%
Government	195.5	10%	198.6	9%	(3.1)	(2)%
Total Aerospace	1,157.4	59%	1,312.5	57%	(155.1)	(12)%
Medical	183.5	9%	188.4	8%	(4.9)	(3)%
Oil & Gas/Chemical Process Industry	172.8	9%	235.8	10%	(63.0)	(27)%
Electrical Energy	133.1	7%	166.3	7%	(33.2)	(20)%
Defense	95.6	5%	111.4	5%	(15.8)	(14)%
Construction/Mining	61.4	3%	109.6	5%	(48.2)	(44)%
Transportation	49.7	3%	75.8	3%	(26.1)	(34)%
Other	91.3	5%	114.2	5%	(22.9)	(20)%
Total	$1,944.8	100%	$2,314.0	100%	$(369.2)	(16)%

Sales of titanium mill products declined 4% in 2013 compared to 2012, and sales of nickel-based alloys and specialty alloys mill products declined 25% compared to 2012, reflecting lower shipment volumes and lower average selling prices. Sales of forged and cast components were 17% lower in 2013. Comparative information for the segment's major product categories, based on their percentages of 2013 and 2012 segment revenues is as follows:

For the Years Ended December 31,	2013	2012
High-Value Products		
Nickel-based alloys and specialty alloys	30%	34%
Forged and cast components	29%	29%
Titanium and titanium alloys	28%	25%
Zirconium and related alloys	13%	12%
Total High-Value Products	100%	100%

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In 2013 and 2012, the aerospace market represented 59% and 57%, respectively, of the revenues of the segment with the majority of the sales to the jet engine market. Aerospace has historically represented a significant market for our High Performance Metals segment, especially for premium quality specialty metals used in the manufacture of jet engines for the original equipment and spare parts markets. ATI is a fully integrated supplier, from raw material (for titanium) and melt through highly engineered technically complex parts, creating a more stable and sustainable supply chain for aerospace, defense and industrial markets. In addition, we have become a larger supplier of specialty materials used in airframe construction. In 2013 and 2012, sales of our material into the airframe market represented approximately 32% and 30%, respectively, of our aerospace market sales.

Over the past several years, we have entered into long-term agreements with our customers for our specialty materials, in the form of mill products and components, to reduce their supply uncertainty. These agreements include a titanium products supply agreement for aircraft airframes and structural components with The Boeing Company, which was extended into the next decade. This long-term agreement covers value-added titanium mill products and provides opportunity for greater use of ATI's next generation and advanced titanium alloys in both long product and flat-rolled product forms, including highly engineered titanium cast and forged products. The agreement includes both long-product forms that are manufactured within the High Performance Metals segment, and a significant amount of plate products that are manufactured utilizing assets of both the High Performance Metals and Flat-Rolled Products segments. Revenues and profits associated with these titanium products covered by the Boeing long-term agreement are included primarily in the results for the High Performance Metals segment. We also have long-term agreements with Rolls-Royce plc for the supply of nickel-based superalloy disc-quality products and precision forgings and castings for commercial jet engine applications. In addition, we have long-term agreements with GE Aviation for the supply of premium titanium alloys, nickel-based alloys, and vacuum-melted specialty alloys products for commercial and military jet engine applications.

The commercial aerospace market's use of titanium alloys is expected to increase significantly as new aircraft airframe designs use a larger percentage of titanium alloys. For example, the airframe (excluding engines) of the new Boeing 787 Dreamliner, which entered service in late 2011, uses significantly more titanium and titanium alloys as a percentage of total weight than any previous commercial aircraft airframe. New aircraft designs from Airbus, the A380 and A350-XWB, and from defense contractors also utilize a greater percentage of titanium alloys. Given the significant current backlogs of Boeing and Airbus, as well as the backlogs of the engine manufacturers, this increasing demand for titanium alloys mill products is expected to last for at least the next several years. Both Boeing and Airbus have implemented production increases, and announced future production increases over the next several years for legacy and next generation aircraft, which is expected to positively impact the demand for titanium alloys and nickel-based superalloys for both jet engine and airframe applications. Due to manufacturing cycle times, demand for our specialty materials leads the deliveries of new aircraft by between 6 to 12 months. In addition, as our specialty materials are used in rotating components of jet engines, demand for our products for spare parts is impacted by aircraft flight activity and engine refurbishment requirements of U.S. and foreign aviation regulatory authorities. As the number of aircraft in service increases, the need for our materials associated with engine refurbishment is expected to increase.

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Commercial Aircraft Engines in Service (Worldwide, per year)

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
43,239	44,543	45,588	46,827	48,065	49,241	50,402	51,403	52,628	53,973	55,486	57,032	58,635	60,269	63,279

Source: Airline Monitor; 2013 preliminary, 2014-2018 forecast

New Commercial Aircraft Engine Builds (Worldwide, per year)

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1,892	1,918	2,114	2,208	2,244	2,380	2,258	2,404	2,760	2,890	3,180	3,420	3,720	3,900	3,900

Source: Airline Monitor; 2013 preliminary, 2014-2018 forecast

Commercial Jet & Military Aircraft Deliveries and Forecast

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Boeing	285	290	398	441	375	481	462	481	601	648	730	760	790		