TITANIUM METALS CORP
Form 10-K
February 27, 2009

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

FORM 10-K

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

For the fiscal year ended December 31, 2008

Commission file number 1-14368

Titanium Metals Corporation
(Exact name of registrant as specified in its charter)

Delaware	13-5630895
(State or other jurisdiction of incorporation or organization)	(IRS employer identification no.)

5430 LBJ Freeway, Suite 1700, Dallas, Texas 75240
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (972) 233-1700

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

Common Stock ($.01 par value)	New York Stock Exchange
(Title of each class)	(Name of each exchange on which registered)

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

6¾% Series A Convertible Preferred Stock ($.01 par Value)
(Title of class)

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

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 o No þ

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 þ No o

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 o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company (as defined in Rule 12b-2 of the Act).
Large accelerated filer þ Accelerated filer o Non-accelerated filer o Smaller reporting company o

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

The aggregate market value of the 85.4 million shares of voting stock held by nonaffiliates of Titanium Metals Corporation as of June 30, 2008 approximated $1.2 billion. There are no shares of non-voting common stock outstanding. As of February 19, 2009, 181,086,421 shares of common stock were outstanding.

Documents incorporated by reference:

The information required by Part III is incorporated by reference from the Registrant's definitive proxy statement to be filed with the Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this report.

Forward-Looking Information

The statements contained in this Annual Report on Form 10-K ("Annual Report") that are not historical facts, including, but not limited to, statements found in the Notes to Consolidated Financial Statements and in Item 1 - Business, Item 1A – Risk Factors, Item 2 – Properties, Item 3 - Legal Proceedings and Item 7 - Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A"), are forward-looking statements that represent our beliefs and assumptions based on currently available information. Forward-looking statements can generally be identified by the use of words such as "believes," "intends," "may," "will," "looks," "should," "could," "anticipates," "expects" or c terminology or by discussions of strategies or trends. Although we believe that the expectations reflected in such forward-looking statements are reasonable, we do not know if these expectations will prove to be correct. Such statements by their nature involve substantial risks and uncertainties that could significantly affect expected results. Actual future results could differ materially from those described in such forward-looking statements, and we disclaim any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Among the factors that could cause actual results to differ materially are the risks and uncertainties discussed in this Annual Report, including risks and uncertainties in those portions referenced above and those described from time to time in our other filings with the Securities and Exchange Commission ("SEC") which include, but are not limited to:

- the cyclicality of the commercial aerospace industry;
- the performance of aerospace manufacturers and us under our long-term agreements;
- the existence or renewal of certain long-term agreements;
- the difficulty in forecasting demand for titanium products;
- global economic and political conditions;
- global productive capacity for titanium;
- changes in product pricing and costs;
- the impact of long-term contracts with vendors on our ability to reduce or increase supply;
- the possibility of labor disruptions;
- fluctuations in currency exchange rates;
- fluctuations in the market price of marketable securities;
- uncertainties associated with new product or new market development;
- the availability of raw materials and services;
- changes in raw material prices and other operating costs (including energy costs);
- possible disruption of business or increases in the cost of doing business resulting from terrorist activities or global conflicts;
- competitive products and strategies; and
- other risks and uncertainties.

Should one or more of these risks materialize (or the consequences of such a development worsen), or should the underlying assumptions prove incorrect, actual results could differ materially from those forecasted or expected.

PART I

ITEM 1: BUSINESS

General. Titanium Metals Corporation is one of the world's leading producers of titanium melted and mill products. We are the only producer with major titanium production facilities in both the United States and Europe, the world's principal markets for titanium consumption. We are currently the largest U.S. producer of titanium sponge, a key raw material, and a major recycler of titanium scrap. Titanium Metals Corporaton was formed in 1950 and was incorporated in Delaware in 1955. Unless otherwise indicated, references in this report to "we", "us" or "our" refer to TIMET and its subsidiaries, taken as a whole.

Titanium was first manufactured for commercial use in the 1950s. Titanium's unique combination of corrosion resistance, elevated-temperature performance and high strength-to-weight ratio makes it particularly desirable for use in commercial and military aerospace applications where these qualities satisfy essential design requirements for certain critical parts such as wing supports and jet engine components. While aerospace applications have historically accounted for a substantial portion of the worldwide demand for titanium, other end-use applications for titanium in military and industrial markets have continued to develop, including the use of titanium-based alloys in armor plating, structural components, chemical plants, power plants, desalination plants and pollution control equipment. Demand for titanium is also increasing in emerging markets with diverse uses including oil and gas production installations, automotive, geothermal facilities and architectural applications.

Our products include titanium sponge, melted products, mill products and industrial fabrications. The titanium industry is comprised of several manufacturers that, like us, produce a relatively complete range of titanium products and a significant number of producers worldwide that manufacture a limited range of titanium mill products.

Our long-term strategy is to maximize the value of our core aerospace business while expanding our presence in non-aerospace markets and developing new applications and products. Over the past three years, we used our operating cash flow and capital resources to fund completion of the expansion of our productive capacity. The expansion of our existing productive capacity and the availability of our secure third-party conversion capabilities allow us to respond to the industry's demand volatility. As the titanium industry progresses through its demand cycle, we will continue to evaluate opportunities to strategically expand our existing production and conversion capacities through internal expansion and long-term third-party arrangements, as well as potential joint ventures and acquisitions.

Titanium industry. We develop certain industry estimates based on our extensive experience within the titanium industry as well as information obtained from publicly available external resources (e.g., United States Geological Survey, International Titanium Association and Japan Titanium Society). We estimate we accounted for approximately 16% of 2007 and 15% of 2008 worldwide industry shipments of titanium mill products and approximately 6% of worldwide titanium sponge production in each of 2007 and 2008. The following chart illustrates our estimates of aggregate industry mill product shipments over the past ten years:

Industry Mill Product Shipments by Sector
(Volumes Exclude Shipments within China and Russia)

The cyclical nature of the commercial aerospace sector has been the principal driver of the historical fluctuations in titanium mill product shipment volume. Over the past 30 years, the titanium industry has had various cyclical peaks and troughs in mill product shipments. Since 1999, titanium mill product demand in the military, industrial and emerging market sectors has increased, primarily due to the continued development of innovative uses for titanium

products in these industries. Over the last several years we, and the industry as a whole, have experienced significantly increased demand with periods of increased volatility. We estimate that industry shipments approximated 89,000 metric tons in 2007 and 102,000 metric tons in 2008, with each year setting a new industry shipment record. The estimated 15% growth in 2008 was supported by continued strength in the commercial aerospace sector and growth in the industrial sector. However, we currently expect 2009 total industry mill product shipments to decrease by approximately 15% to −−25%, driven by anticipated reductions in the commercial aerospace and industrial sectors.

Commercial aerospace sector - Demand for titanium products within the commercial aerospace sector is derived from both jet engine components (e.g., blades, discs, rings and engine cases) and airframe components (e.g., bulkheads, tail sections, landing gear, wing supports and fasteners). The commercial aerospace sector has a significant influence on titanium companies, particularly mill product producers. While industry shipments increased approximately 15% in 2008 due in part to strength in the commercial aerospace sector, demand from the commercial aerospace sector is expected to be negatively impacted in 2009 by (i) revisions and push-outs of production schedules for the Boeing 787, (ii) adjustments and delays in certain other commercial aircraft build-out schedules and (iii) Boeing's labor dispute, which lasted approximately eight weeks and ended in November 2008. These factors are expected to continue to negatively impact demand until uncertainties within the commercial aerospace production cycle are resolved and demand is stabilized on a longer term basis. Deliveries of titanium generally precede aircraft deliveries by about one year, and our business cycle generally correlates to this timeline, although the actual timeline can vary considerably depending on the titanium product.

Our business is more dependent on commercial aerospace demand than is the overall titanium industry. We shipped approximately 65% of our mill products to the commercial aerospace sector in 2008, whereas we estimate approximately 46% of the overall titanium industry's mill products were shipped to the commercial aerospace sector in 2008.

The Airline Monitor, a leading aerospace publication, traditionally issues worldwide forecasts each January and July for commercial aircraft deliveries, approximately one-third of which are expected to be required by the U.S. over the next 20 years. The Airline Monitor's most recently issued forecast (January 2009) estimates deliveries of large commercial aircraft (aircraft with over 100 seats) totaled 944 (including 172 twin aisle aircraft which require more titanium) in 2008, and the following table summarizes the forecasted deliveries of large commercial aircraft over the next five years:

	Forecasted deliveries		% increase (decrease) over previous year	
Year	Total	Twin aisle	Total	Twin aisle
2009	1,002	187	6%	9%
2010	828	243	(17%)	30%
2011	885	285	7%	17%
2012	1,005	310	14%	9%
2013	1,105	365	10%	18%

The latest forecast from The Airline Monitor reflects a 16% decrease in forecasted deliveries over the next five years compared to the July 2008 forecast, mainly due to The Airline Monitor's expectation that airlines will delay or cancel existing orders due to general economic conditions and revisions of production schedules for the Boeing 787. Boeing and Airbus booked orders for 1,561 planes in 2008, a decrease from the record bookings in 2005 through 2007, and The Airline Monitor forecasts that aggregate new orders in 2009 will be lower than 2008. The strong bookings in 2005 through 2008 have increased the order backlog for both Boeing and Airbus, which will be delivered over the next several years.

Changes in the economic environment and the financial condition of airlines can result in rescheduling or cancellation of orders. Accordingly, aircraft manufacturer backlogs are not necessarily a reliable indicator of near-term business activity, but may be indicative of potential business levels over a longer-term horizon. The latest forecast from The Airline Monitor estimates increases for firm order backlog for both Airbus and Boeing. Airbus' firm order backlog is estimated at 1,117 twin aisle planes and 2,598 single aisle planes, and Boeing's firm order backlog is estimated at 1,375 twin aisle planes and 2,304 single aisle planes. Boeing does not plan to increase their build rates to make up for aircraft not delivered due to the strike, and Boeing has announced that the most recent delay of the 787 will postpone

the first customer aircraft delivery until 2010.

At year-end 2008, a total of 198 firm orders had been placed for the Airbus A380, a program officially launched in 2000 with its first delivery in October 2007. Additionally, at year-end 2008, a total of 910 firm orders have been placed for the Boeing 787, a program officially launched in April 2004, with anticipated first deliveries in 2010. The 787 will contain more composite materials than other Boeing aircraft. In early years of the manufacturing cycle for the Boeing 787, and any aircraft model, we believe additional titanium will be required to produce each aircraft, and as the program reaches maturity, less titanium will be required for each aircraft manufactured. During 2006, Airbus officially launched the A350 XWB program, which is a major derivative of the Airbus A330, with first deliveries scheduled for 2012/2013. As of December 31, 2008, a total of 483 firm orders had been placed for the A350 XWB. These A350 XWBs will use composite materials and new engines similar to those used on the Boeing 787 and are expected to require significantly more titanium as compared with earlier Airbus models. However, the final titanium buy weight may change as the A350 XWB is still in the design phase.

Twin aisle planes (e.g., Boeing 747, 767, 777 and 787 and Airbus A330, A340, A350 and A380) tend to use a higher percentage of titanium in their airframes, engines and parts than single aisle planes (e.g., Boeing 737 and 757 and Airbus A318, A319 and A320), and new generation models require a significantly higher percentage of titanium. Additionally, Boeing generally uses a higher percentage of titanium in its airframes than Airbus. Based on information we receive from airframe and engine manufacturers and other industry sources, we estimate approximately 18 metric tons of titanium products are required to manufacture each Boeing 737, approximately 76 metric tons are required to manufacture each Boeing 747, approximately 59 metric tons are required to manufacture each Boeing 777 and approximately 134 metric tons will be required to manufacture each Boeing 787, including both the airframes and engines. Additionally, based on these same sources, we estimate approximately 12 metric tons of titanium products are required to manufacture each Airbus A320, approximately 18 metric tons are required to manufacture each Airbus A330, approximately 32 metric tons are required to manufacture each Airbus A340, approximately 74 metric tons will be required to manufacture each Airbus A350 XWB and approximately 146 metric tons are required to manufacture each Airbus A380, including both the airframes and engines.

Military sector - Titanium shipments into the military sector are largely driven by government defense spending in North America and Europe. Military aerospace programs were the first to utilize titanium's unique properties on a large scale, beginning in the 1950s. Titanium shipments to military aerospace markets reached a peak in the 1980s before falling to historical lows in the early 1990s after the end of the Cold War. Since 2001, titanium shipments to military aerospace have increased, as discussed below. Based on its physical and performance properties, titanium has become widely accepted for use in applications for ground combat vehicles as well as in naval vessels. The importance of military markets to the titanium industry is expected to continue to rise in coming years as defense spending budgets increase in reaction to terrorist activities and global conflicts and to replace aging conventional armaments. Defense spending for most systems is expected to remain strong until at least 2010. Current and anticipated future military strategy leading to light armament and mobility favor the use of titanium due to light weight and improved ballistic performance.

As the strategic military environment demands greater global lift and mobility, the U.S. military needs more airlift capacity and capability. Airframe programs are expected to drive the military market demand for titanium through 2015. Several of today's active U.S. military programs, including the C-17 and F-15, are currently expected to continue in production through the middle of the next decade, while other programs, such as the F/A 18 and F-16, are expected to continue into the middle of the next decade. European military programs also have active aerospace programs offering the possibility for increased titanium consumption. Production levels for the Saab Gripen, Eurofighter Typhoon, Dassault Rafale and Dassault Mirage 2000 are all forecasted to remain steady through the middle or end of the next decade.

In addition to the established programs, newer U.S. programs offer growth opportunities for increased titanium consumption. The F/A-22 Raptor was given full-rate production approval in April 2005. Additionally, the F-35 Joint

Strike Fighter, now known as the Lightning II, has begun low-rate initial production and assembly with delivery of the first production aircraft planned in 2010. Although no specific delivery schedules have been announced, according to The Teal Group, a leading aerospace publication, procurement is expected to extend over the next 30 to 40 years and may include production of as many as approximately 4,000 planes, including sales to foreign nations.

Utilization of titanium on military ground combat vehicles for armor appliqué and integrated armor or structural components continues to gain acceptance within the military market segment. Titanium armor components provide the necessary ballistic performance while achieving a mission critical vehicle performance objective of reduced weight in new generation vehicles. In order to counteract increased threat levels globally, titanium is being utilized on vehicle upgrade programs in addition to new builds. Based on active programs, as well as programs currently under evaluation, we believe there will be additional usage of titanium on ground combat vehicles that will provide continued growth in the military market sector. In armor and armament, we sell plate and sheet products for fabrication into appliqué plate and reactive armor for protection of the entire ground combat vehicle as well as the vehicle’s primary structure.

Industrial and emerging markets sectors - The number of end-use markets for titanium has continued to expand significantly. Established industrial uses for titanium include chemical plants, power plants, desalination plants and pollution control equipment. Rapid growth of the Chinese and other Southeast Asian economies has brought unprecedented demand for titanium-intensive industrial equipment. In November 2005, we entered into a joint venture with XI'AN BAOTIMET VALINOX TUBES CO. LTD. ("BAOTIMET") to produce welded titanium tubing in the Peoples Republic of China. BAOTIMET's production facilities are located in Xi'an, China, and production began in January 2007.

Titanium continues to gain acceptance in many emerging market applications, including transportation, energy (including oil and gas) and architecture. Although titanium is often more expensive than other competing metals, over the entire life cycle of the application, we believe titanium is a less expensive alternative due to its durability, longevity and overall environmental impact. In many cases customers also find the physical properties of titanium to be attractive from the standpoint of weight, performance, design alternatives and other factors. The oil and gas market, a relatively new, potentially large growth area, utilizes titanium in down-hole casing, critical riser components, tapered stress joints, fire water systems and saltwater-cooling systems. Additionally, as offshore development of new oil and gas fields moves into the ultra deep-water depths and as geothermal energy production expands, market demand for titanium's light-weight, high-strength and corrosion-resistance properties is creating new growth opportunities. We have focused additional resources on development of alloys and production processes to promote the expansion of titanium use in this market and in other non-aerospace applications.

Although we estimate emerging market demand presently represents only about 5% of the 2008 total industry demand for titanium mill products, we believe emerging market demand, in the aggregate, could grow at double-digit rates over the next several years. We have ongoing initiatives to actively pursue and expand our presence in these markets.

Products and operations. We are a vertically integrated titanium manufacturer whose products include:

(i) titanium sponge, the basic form of titanium metal used in titanium products;

(ii) melted products (ingot, electrodes and slab), the result of melting titanium sponge and titanium scrap, either alone or with various alloys;

(iii) mill products that are forged and rolled from ingot or slab, including long products (billet and bar), flat products (plate, sheet and strip) and pipe; and

(iv) fabrications (spools, pipe fittings, manifolds, vessels, etc.) that are cut, formed, welded and assembled from titanium mill products.

All of our net sales were generated by our integrated titanium operations (our "Titanium melted and mill products" segment), which is our only business segment. Business and geographic financial information is included in Note 17 to the Consolidated Financial Statements.

Titanium sponge is the commercially pure, elemental form of titanium metal with a porous and sponge-like appearance. The first step in our sponge production involves the combination of titanium-containing rutile ores (derived from beach sand) with chlorine and petroleum coke to produce titanium tetrachloride. Titanium tetrachloride is purified and then reacted with magnesium in a closed system, producing titanium sponge and magnesium chloride as co-products. Our titanium sponge production facility in Henderson, Nevada uses vacuum distillation process ("VDP") technology, which removes the magnesium and magnesium chloride residues by applying heat to the sponge mass while maintaining a vacuum in a chamber. The combination of heat and vacuum boils the residues from the sponge mass, and then the sponge mass is mechanically pushed out of the distillation vessel, sheared and crushed to prepare the sponge for incorporation into one of our melted products. We electrolytically separate and recycle the residual magnesium chloride, a by-product of the VDP process, to improve cost efficiency and reduce environmental

impact.

Melted products (ingot, electrodes and slab) are produced by melting sponge and titanium scrap, either alone or with alloys, to produce various grades of titanium products suited to the ultimate application of the product. By introducing other alloys such as vanadium, aluminum, molybdenum, tin and zirconium, the melted titanium product is engineered to produce quality grades with varying combinations of certain physical attributes such as strength-to-weight ratio, corrosion-resistance and milling compatibility. Titanium ingot is a cylindrical solid shape that, in our case, weighs up to 8 metric tons. Titanium slab is a rectangular solid shape that, in our case, weighs up to 16 metric tons. The melting process for ingot and slab is closely controlled and monitored utilizing computer control systems to maintain product quality and consistency and to meet customer specifications. In most cases, we use our ingot and slab as the intermediate material for further processing into mill products. However, we also sell melted products to our customers.

Mill products are forged or rolled from our melted products (ingot or slab). Mill products include long products (billet and bar), flat products (plate, sheet and strip) and pipe. Our mill products can be further machined to meet customer specifications with respect to size and finish.

We send certain products to outside vendors for further processing (e.g., certain rolling, forging, finishing and other processing steps in the U.S., and certain melting and forging steps in France) before being shipped to customers. In France, our primary processor is also a partner in our 70%-owned subsidiary, TIMET Savoie, S.A. During 2006, we entered into a 20-year conversion services agreement with a supplier, whereby they will provide an annual output capacity of 4,500 metric tons of titanium mill rolling services until 2026, with our option to increase the output capacity to 9,000 metric tons. Additionally, during 2007, we entered into a long-term agreement with another supplier whereby they will provide us dedicated annual forging capacity of 3,000 metric tons beginning in 2008 and increasing to 8,900 metric tons for 2011 through at least 2019. These agreements provide us with long-term secure sources for processing round and flat products, resulting in a significant increase in our existing mill product conversion capabilities, which allows us to assure our customers of our long-term ability to meet their needs.

During the production process and following the completion of manufacturing, we perform extensive testing on our products. Sonic inspection as well as chemical and mechanical testing procedures are critical to ensuring that our products meet our customers' high quality requirements, particularly in aerospace component production. We certify that our products meet customer specification at the time of shipment for substantially all customer orders.

Titanium scrap is a by-product of the forging, rolling and machining operations, and significant quantities of scrap are generated in the production process for finished titanium products and components. Scrap by-products from our mill production processes, as well as the scrap purchased from our customers or on the open metals market, is typically recycled and introduced into the melting process once the scrap is sorted and cleaned. We have the capacity to recycle 14,000 to 16,000 metric tons of titanium scrap annually at our facility in Morgantown, Pennsylvania depending on the scrap and end-use product mix. We believe our capability and expertise in recycling titanium scrap provides a competitive advantage.

Distribution. We sell our products through our own sales force based in the U.S. and Europe and through independent agents and distributors worldwide. We also own eight service centers (five in the U.S. and three in Europe), which we use to sell our products on a just-in-time basis. The service centers primarily sell value-added and customized mill products, including bar, sheet, plate, tubing and strip. We believe our service centers provide a competitive advantage because of our ability to foster customer relationships, customize products to suit specific customer requirements and respond quickly to customer needs.

Raw materials. The principal raw materials used in the production of titanium ingot, slab and mill products are titanium sponge, titanium scrap and alloys. The following table summarizes our 2008 raw material usage requirements in the production of our melted and mill products:

	Percentage of total raw material requirements
Internally produced sponge	24%
Purchased sponge	31%
Titanium scrap	39%
Alloys	6%
Total	100%

Sponge - The primary raw materials used in the production of titanium sponge are titanium-containing rutile ore, chlorine, magnesium and petroleum coke. Rutile ore is currently available from a limited number of suppliers around the world, principally located in Australia, South Africa and Sri Lanka. We purchase the majority of our supply of rutile ore from Australia and South Africa. We believe the availability of rutile ore will be adequate for the foreseeable future and do not anticipate any interruptions of our rutile supplies.

We currently obtain chlorine from a single supplier near our sponge plant in Henderson, Nevada. While we do not anticipate any chlorine supply problems, we have taken steps to mitigate this risk in the event of supply disruption, including establishing the feasibility of certain equipment modifications to enable us to utilize material from alternative chlorine suppliers or to purchase and utilize an intermediate product which will allow us to eliminate the purchase of chlorine if needed. Magnesium and petroleum coke are generally available from a number of suppliers.

We are currently the largest U.S. producer of titanium sponge. In 2007, we completed an expansion of our existing premium-grade titanium sponge facility at our Henderson plant. This expansion increased our annual productive sponge capacity to approximately 12,600 metric tons, and we supplement our produced sponge with purchases from third parties. From 2006 through 2008, other sponge producers have also undertaken additional capacity expansion projects. However, we do not know the degree to which quality and cost of the sponge produced by our competitors will be comparable to the premium-grade sponge we produce in our Henderson facility.

We are party to long-term sponge supply agreements that require us to make minimum annual purchases. These long-term supply agreements, together with our current sponge production capacity in Henderson, should provide us with a total annual available sponge supply at levels ranging from 18,000 metric tons up to 26,000 metric tons through 2024, which we expect to meet our sponge supply requirements. Titanium melted and mill products require varying grades of sponge and/or scrap depending on the customers' specifications and expected end use. We will continue to purchase sponge from a variety of sources in 2009, including those sources under existing supply agreements. Due to anticipated reductions in demand in 2009 for titanium products, we continue to evaluate alternatives to balance our internal and external sources for titanium sponge.

Scrap - We recycle titanium scrap into melted products that will be sold to our customers or used as intermediate feedstock for our mill production process. Our titanium scrap is generated from our melted and mill product production processes, purchased from certain of our customers under contractual agreements or acquired in the open metals market. Such scrap consists of alloyed and commercially pure solids and turnings. Scrap obtained through customer arrangements provides a "closed-loop" arrangement resulting in certainty of supply and cost stability. Externally purchased scrap comes from a wide range of sources, including customers, collectors, processors and brokers. Due to our successful efforts to increase the volume of scrap obtained through "closed-loop" arrangements, we only purchased 27% of our scrap requirement from the open metals market in 2008, and we expect our scrap purchases to remain at the same rate during 2009. We expect our scrap consumption to remain at high levels as we continue to emphasize the utilization of scrap for our electron beam cold hearth ("EB") melting activity. We also occasionally sell scrap, usually in a form or grade we cannot economically recycle for use in our production operations.

Overall market forces can significantly impact the supply or cost of externally produced scrap, as the amount of scrap generated in the supply chain varies during titanium business cycles. Early in the titanium cycle, the demand for titanium melted and mill products begins to increase the scrap requirements for titanium manufacturers. This demand precedes the increase in scrap generation by downstream customers and the supply chain. The pressure on scrap generation and the supply chain at this stage of the cycle places upward pressure on the market price of scrap. The opposite situation occurs when demand for titanium melted and mill products begins to decline, resulting in greater availability of scrap supply and downward pressure on the market price of scrap. During the middle of the cycle, scrap generation and consumption are in relative equilibrium, minimizing disruptions in supply or significant changes in the available supply and market prices for scrap. Increasing or decreasing cycles tend to cause significant changes in both the supply and market price of scrap. These supply chain dynamics result in selling prices for melted and mill products which generally tend to correspond with the changes in raw material costs.

All of our major competitors utilize scrap as a raw material in their titanium melt operations, and steel manufacturers also use titanium scrap as an alloy to produce interstitial-free steels, stainless steels and high-strength-low-alloy steels. Prices for all forms and grades of titanium scrap declined steadily during the first half of 2008 due to increased availability and reduced demand. The global recession reduced demand for titanium scrap in the second half of 2008, which resulted in sharp declines in scrap prices late in 2008. As a result of the market forces described above, general economic conditions are expected to continue to affect the prices of titanium scrap in 2009.

Other - Various alloy additions used in the production of titanium products, such as vanadium and molybdenum, are also available from a number of suppliers. The decline in demand from steel manufacturers for vanadium and molybdenum also resulted in dramatic drops in cost for these alloys, and we expect alloy costs will continue to fluctuate in the future.

Customer agreements. We have long-term agreements ("LTAs") with certain major customers, including, among others, The Boeing Company ("Boeing"), Rolls-Royce plc and its German and U.S. affiliates ("Rolls-Royce"), United Technologies Corporation ("UTC," Pratt & Whitney and related companies), the Safran companies ("Safran," Snecma and related companies), Wyman-Gordon Company ("Wyman-Gordon," a unit of Precision Castparts Corporation ("PCC")) and VALTIMET SAS. These agreements expire at various times through 2017, are subject to certain conditions and generally provide for (i) minimum market shares of the customers' titanium requirements or firm annual volume commitments, (ii) formula-determined prices (including some elements based on market pricing) and (iii) price adjustments for certain raw material, labor and energy cost fluctuations. Generally, the LTAs require our service and product performance to meet specified criteria and contain a number of other terms and conditions customary in transactions of these types. Certain provisions of these LTAs have been amended in the past and may be amended in the future to meet changing business conditions. Our 2008 sales revenues to customers under LTAs were 56% of our total sales revenues.

In certain events of nonperformance by us or the customer, an LTA may be terminated early. Although it is possible that some portion of the business would continue on a non-LTA basis, the termination or expiration of one or more of the LTAs could result in a material adverse effect on our business, results of operations, financial position or liquidity. The LTAs were designed to limit selling price volatility to the customer and to us, while providing us with a committed volume base throughout the titanium industry business cycles and certain mechanisms to adjust pricing for changes in certain cost elements.

Markets and customer base. As discussed previously, we produce a wide range of melted and mill titanium products for our customers, and selling prices generally reflect raw material and other productions costs as well as reasonable profit margins. Selling prices are generally influenced by industry and global economic conditions. For instance, since early 2007, increases in global capacity and manufacturing activity for titanium products throughout the supply chain have increased the availability of titanium scrap, which has resulted in declining costs for this raw material. This decline in raw material costs has, in turn, contributed to lower selling prices for certain products under LTAs, due in part to raw material indexed pricing adjustments included in certain of these agreements, as well as for our non-contract sales volume.

The demand for our titanium products is global, and our global productive capabilities allow us to respond to our customers' needs. The following table summarizes our sales revenue by geographical location:

	Year ended December 31,		
	2006	2007	2008
	(Percentage of total sales revenue)		
Sales revenue to customers within:			
North America	59%	58%	56%
Europe	32%	33%	33%
Other	9%	9%	11%
Total	100%	100%	100%

Further information regarding our external sales, net income, long-lived assets and total assets can be found in our Consolidated Balance Sheets, Consolidated Statements of Income and Notes 5 and 17 to the Consolidated Financial Statements.

Our concentration of customers, primarily in commercial aerospace, may impact our overall exposure to credit and other risks, either positively or negatively, because all of these customers may be similarly affected by the same economic or other conditions. The following table provides supplemental sales revenue information:

	Year ended December 31,		
	2006	2007	2008
	(Percentage of total sales revenue)		
Ten largest customers	49%	49%	49%
Significant customers:			
PCC and PCC-related entities (1)	11%	11%	10%
Boeing (2)	-	10%	12%
Total LTAs	39%	47%	56%
Significant LTAs:			
Rolls-Royce (1) (2)	-	12%	13%
Boeing (2)	-	10%	12%

(1) PCC and PCC-related entities serve as suppliers to certain commercial aerospace manufacturers, including Rolls-Royce. Certain sales we make directly to PCC and PCC-related entities also count towards, and are reflected in, the table above as sales to Rolls-Royce under the Rolls-Royce LTA.

(2) Amounts excluded for periods when the revenue percentage is not at least 10%.

The following table provides supplemental sales revenue information by industry sector:

	Year ended December 31,		
	2006	2007	2008
	(Percentage of total sales revenue)		
Commercial aerospace	57%	55%	59%
Military	15%	19%	16%
Industrial and emerging markets	17%	16%	15%
Other titanium products	11%	10%	10%
Total	100%	100%	100%

The primary market for titanium products in the commercial aerospace sector consists of two major manufacturers of large commercial airframes, Boeing Commercial Airplanes Group (a unit of Boeing) and Airbus, as well as manufacturers of large civil aircraft engines including Rolls-Royce, General Electric Aircraft Engines, Pratt & Whitney and Safran. We sell directly to these major manufacturers, as well as to companies (including forgers such as Wyman-Gordon) that use our titanium to produce parts and other materials for such manufacturers. If any of the major aerospace manufacturers were to significantly reduce aircraft and/or jet engine build rates from those currently expected, there could be a material adverse effect, both directly and indirectly, on our business, results of operations, financial position and liquidity.

The market for titanium in the military sector includes sales of melted and mill titanium products engineered for applications for military aircraft (both engines and airframes), armor and component parts, armor appliqué on ground combat vehicles and other integrated armor or structural components. We sell directly to many of the major manufacturers associated with military programs on a global basis.

Outside of commercial aerospace and military sectors, we manufacture a wide range of products for customers in the chemical process, oil and gas, consumer, sporting goods, healthcare, automotive and power generation sectors.

In addition to melted and mill products, which are sold into all market sectors, we sell certain other products such as titanium fabrications, titanium scrap and titanium tetrachloride.

Our backlog was approximately $1.0 billion at December 31, 2007 and $0.7 billion at December 31, 2008. Over 91% of our 2008 year-end backlog is scheduled for shipment during 2009. Our order backlog may not be a reliable indicator of future business activity.

We have explored and will continue to explore strategic arrangements in the areas of product development, production and distribution. We will also continue to work with existing and potential customers to identify and develop new or improved applications for titanium that take advantage of its unique properties and qualities.

Competition. The titanium metals industry is highly competitive on a worldwide basis. Producers of melted and mill products are located primarily in the United States, Japan, France, Germany, Italy, Russia, China and the United Kingdom. Additionally, producers of other metal products, such as steel and aluminum, maintain forging, rolling and finishing facilities that could be used or modified to process titanium products. There are also several producers of titanium sponge in the world, at least four of which are currently in some stage of increasing sponge production capacity. We believe entry as a new producer of titanium sponge would require a significant capital investment, substantial technical expertise and significant lead time.

Our principal competitors in the aerospace titanium market are Allegheny Technologies Incorporated ("ATI") and RTI International Metals, Inc. ("RTI"), both based in the United States, and Verkhnaya Salda Metallurgical Production Organization ("VSMPO"), based in Russia. UNITI (a joint venture between ATI and VSMPO), RTI and certain Japanese producers are our principal competitors in the industrial and emerging markets. We compete primarily on the basis of price, quality of products, technical support and the availability of products to meet customers' delivery schedules.

In the U.S. market, the increasing presence of foreign participants has become a significant competitive factor. Prior to 1993, imports of foreign titanium products into the U.S. were not significant, primarily attributable to relative currency exchange rates and, with respect to Japan, Russia, Kazakhstan and Ukraine, import duties (including antidumping duties). However, since 1993, imports of titanium sponge, ingot and mill products, principally from Russia and Kazakhstan, have increased and have had a significant competitive impact on the U.S. titanium industry. To the extent we are able to take advantage of this situation by purchasing sponge from such countries for use in our own operations, the negative effect of these imports on us can be somewhat mitigated.

Trade and tariffs - Generally, imports of titanium products into the U.S. are subject to a 15% "normal trade relations" tariff. For tariff purposes, titanium products are broadly classified as either wrought (billet, bar, sheet, strip, plate and tubing) or unwrought (sponge, ingot and slab). Because a significant portion of end-use products made from titanium products are ultimately exported, we, along with our principal competitors and many customers, actively utilize the duty-drawback mechanism to recover most of the tariff paid on imports.

From time-to-time, the U.S. government has granted preferential trade status to certain titanium products imported from particular countries (notably wrought titanium products from Russia, which carried no U.S. import duties from approximately 1993 until 2004). It is possible that such preferential status could be granted again in the future.

The Japanese government has raised the elimination or harmonization of tariffs on titanium products, including titanium sponge, for consideration in multi-lateral trade negotiations through the World Trade Organization (the so-called "Doha Round"). As part of the Doha Round, the United States has proposed the staged elimination of all industrial tariffs, including those on titanium. The Japanese government has specifically asked that titanium in all its forms be included in the tariff elimination program. We have urged that no change be made to these tariffs, either on wrought or unwrought products. The negotiations are ongoing and are expected to continue during 2009.

We will continue to resist efforts to eliminate duties on titanium products, although we may not be successful in these activities. Further reductions in, or the complete elimination of, any or all of these tariffs could lead to increased imports of foreign sponge, ingot, slab and mill products into the U.S. and an increase in the amount of such products on the market generally, which could adversely affect pricing for titanium sponge, ingot, slab and mill products and thus our results of operations, financial position or liquidity.

Section 2533b of Title 10, United States Code, legislation formerly known as the "Berry Amendment," requires that subject to certain exceptions the United States Department of Defense ("DoD") expend funds for products containing specialty metals, including titanium, only if the specialty metals have been melted or produced in the United States. In 2008, the DoD proposed regulations regarding the implementation of this specialty metals law that may reduce its effectiveness. We have filed comments urging the DoD not to adopt the proposed regulations and will

continue to resist attempts to undermine this specialty metals law. A weakening in the enforcement of this specialty metals law could increase foreign competition for sales of titanium for defense products, adversely affecting our business, results of operations, financial position or liquidity.

Research and development. Our research and development activities are directed toward expanding the use of titanium and titanium alloys in all market sectors. Key research activities include the development of new alloys, development of technology required to enhance the performance of our products in the traditional industrial and aerospace markets and applications development for emerging markets. In addition, we continue to work in partnership with the United States Defense Advanced Research Projects Agency ("DARPA") and others to explore means to reduce the cost of titanium production. The work with DARPA complements our research, development and exploration of innovative technologies and improvements to the existing processes such as Vacuum Distillation of sponge and Vacuum Arc Remelting processes. We conduct the majority of our research and development activities at our Henderson Technical Laboratory, with additional activities at our Witton, England facility. We incurred research and development costs of $4.7 million in 2006, $4.2 million in 2007 and $4.3 million in 2008.

Patents and trademarks. We hold U.S. and non-U.S. patents applicable to certain of our titanium alloys and manufacturing technology, which expire at various times from 2009 through 2026 and we have certain other patent applications pending. We continually seek patent protection with respect to our technology base and have occasionally entered into cross-licensing arrangements with third parties. We believe the trademarks TIMET® and TIMETAL®, which are protected by registration in the U.S. and other countries, are important to our business. However, the majority of our titanium alloys and manufacturing technologies do not benefit from patent or other intellectual property protection.

Employees. Our employee headcount varies due to the cyclical nature of the aerospace industry and its impact on our business. Our employee headcount includes both our full and part-time employees. The following table shows our approximate employee headcount at the end of the past 3 years:

	Employees at December 31,		
	2006	2007	2008
U.S.	1,545	1,670	1,775
Europe	835	860	895
Total	2,380	2,530	2,670

Our production and maintenance workers in Henderson and our production, maintenance, clerical and technical workers in Toronto, Ohio (approximately half of our total U.S. employees) are represented by the United Steelworkers of America under contracts expiring in January 2011 and June 2011, respectively. Employees at our other U.S. facilities are not covered by collective bargaining agreements. A majority of the salaried and hourly employees at our European facilities are represented by various European labor unions. Our labor agreement with our U.K. production and maintenance employees expired at the end of 2008, and a new labor agreement is currently under negotiation. Our labor agreement with our U.K. managerial and professional employees runs through March 2011. Our labor agreements with our French and Italian employees are renewed annually.

We currently consider our employee relations to be good. However, it is possible that there could be future work stoppages or other labor disruptions that could materially and adversely affect our business, results of operations, financial position or liquidity.

Regulatory and environmental matters. Our operations are governed by various Federal, state, local and foreign environmental and worker safety and health laws and regulations. In the U.S., such laws include the Occupational, Safety and Health Act, the Clean Air Act, the Clean Water Act, the Toxic Substances Control Act and the Resource

Conservation and Recovery Act. We use and manufacture substantial quantities of substances that are considered hazardous, extremely hazardous or toxic under environmental and worker safety and health laws and regulations. We have used and manufactured such substances throughout the history of our operations. Although we have substantial controls and procedures designed to reduce continuing risk of environmental, health and safety issues, 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, common law theories of liability or non-compliance with environmental permits required at our facilities. In addition, government environmental requirements or the enforcement thereof may become more stringent in the future. It is possible that some, or all, of these risks could result in liabilities that would be material to our business, results of operations, financial position or liquidity.

Our policy is to maintain compliance in all material respects with applicable requirements of environmental and worker health and safety laws and strive to improve environmental, health and safety performance. We incurred capital expenditures related to health, safety and environmental compliance and improvement of approximately $2.0 million in 2006, $3.0 million in 2007 and $2.1 million in 2008.

From time to time, we may be subject to health, safety or environmental regulatory enforcement under various statutes, resolution of which typically involves the establishment of compliance programs. Occasionally, resolution of these matters may result in the payment of penalties or the expenditure of additional funds on compliance. Furthermore, the imposition of more strict standards or requirements under environmental, health or safety laws and regulations could result in expenditures in excess of amounts currently estimated to be required for such matters.

As part of our continuing environmental assessment with respect to our plant site in Henderson in the third quarter of 2008 we completed and submitted to the Nevada Department of Environmental Protection ("NDEP") a Remedial Alternative Study ("RAS") with respect to the groundwater located beneath the plant site. The RAS, which was submitted pursuant to an existing agreement between the NDEP and us, addressed the presence of certain contaminants in the plant site groundwater that require remediation. The RAS proposes various alternatives to the NDEP for the remediation of these contaminants. Upon our completion and submission of the RAS to NDEP, we increased our estimated cost to complete the groundwater remediation by $2.6 million during 2008. The NDEP completed its review of the RAS and our proposed remedial alternatives during the fourth quarter of 2008, and the NDEP issued its record of decision concerning the remediation plan in February 2009. See Note 15 to the Consolidated Financial Statements.

Related parties. At December 31, 2008, Contran Corporation and other entities or persons related to Harold C. Simmons held approximately 52.5% of our outstanding common stock. See Notes 1 and 14 to the Consolidated Financial Statements.

Available information. We maintain an Internet website at www.timet.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, and any amendments thereto, are or will be available free of charge on our website as soon as reasonably practicable after they are filed or furnished, as applicable, with the SEC. Additionally, our (i) Corporate Governance Guidelines, (ii) Code of Business Conduct and Ethics and (iii) Audit Committee, Management Development and Compensation Committee and Nominations Committee charters are also available on our website. Information contained on our website is not part of this Annual Report. We will provide these documents to shareholders upon request. Requests should be directed to the attention of our Investor Relations Department at our corporate offices located at 5430 LBJ Freeway, Suite 1700, Dallas, Texas 75240.

The general public may read and copy any materials on file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549 and may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. We are an electronic filer, and the SEC maintains an Internet website at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

ITEM 1A: RISK FACTORS

Listed below are certain risk factors associated with our business. In addition to the potential effect of these risk factors discussed below, any risk factor that could result in reduced earnings, liquidity or operating losses, could in turn adversely affect our ability to meet our liabilities or adversely affect the quoted market prices for our securities.

The cyclical nature of the commercial aerospace industry, which represents a significant portion of our business, creates uncertainty regarding our future profitability. In addition, adverse changes to, or interruptions in, our

relationships with our major commercial aerospace customers could reduce our revenues and impact our profitability. The commercial aerospace sector has a significant influence on titanium companies, particularly mill product producers. The cyclical nature of the commercial aerospace sector has been the principal driver of the fluctuations in the performance of most titanium product producers. Our business is more dependent on commercial aerospace demand than is the overall titanium industry. We shipped approximately 65% of our mill products to commercial aerospace customers in 2008, whereas we estimate approximately 46% of the overall titanium industry's mill products were shipped to commercial aerospace customers in 2008. Our melted and mill product sales to commercial aerospace customers accounted for 57% of our total sales in 2006, 55% in 2007 and 59% in 2008. In addition to general economic conditions, the commercial aerospace sector is expected to be negatively impacted in 2009 by (i) revisions and push-outs of production schedules for the Boeing 787, (ii) adjustments and delays in certain other commercial aircraft build-out schedules and (iii) Boeing's labor dispute, which lasted approximately eight weeks and ended in November 2008. These factors are expected to continue to negatively impact commercial aerospace demand until uncertainties within the commercial aerospace production cycle are resolved and demand is stabilized on a longer term basis. We estimate that 2009 industry mill product shipments into the commercial aerospace sector will decrease 15% to 25% from 2008 levels. Events that could adversely affect the commercial aerospace sector, such as future terrorist attacks, world health crises, the general economic downturn or unforeseen reductions in orders from commercial airlines, could significantly decrease our results of operations and financial condition. See "Business – Titanium industry – Commercial aerospace sector."

Sales under LTAs with customers in the commercial aerospace sector accounted for approximately 35% of our 2008 total sales. These LTAs expire at various times beginning in 2011 through 2017. If we are unable to maintain our relationships with our major commercial aerospace customers, including Boeing, Rolls-Royce, Safran, UTC and Wyman-Gordon, under the LTAs we have with these customers, our sales could decrease substantially, negatively impacting our profitability. See "Business – Customer agreements" and "Business – Markets and customer base."

Global economic conditions may affect pricing and demand for our products which could lead to reduced revenues and profitability. Pricing and demand for our products are affected by a number of factors, including changes in demand for our customer's products, changes in general economic conditions, availability of credit, changes in market demand, lower overall pricing due to overcapacity, lower priced imports and increases in the use of substitute materials. The current global economic downturn could lead to further reductions in demand for our products and our customers' products, excess inventory within the titanium supply chain and excess capacity throughout the industry, including our manufacturing locations. Furthermore, reductions in credit generally available in the financial markets could have adverse impacts on the industry including our business. In addition to the impact that global economic conditions have already had on our business, if these conditions worsen or persist, our financial condition and results of operations may be further impacted.

The titanium metals industry is highly competitive, and we may not be able to compete successfully. The global titanium markets in which we operate are highly competitive. Competition is based on a number of factors, such as price, product quality and service. Some of our competitors may be able to drive down market prices because their costs are lower than our costs. In addition, some of our competitors' financial, technological and other resources may be greater than our resources, and such competitors may be better able to withstand changes in market conditions. Our competitors may be able to respond more quickly than we can to new or emerging technologies and changes in customer requirements. Further, consolidation of our competitors or customers in any of the industries in which we compete may result in reduced demand for our products. In addition, producers of metal products, such as steel and aluminum, maintain forging, rolling and finishing facilities. Such facilities could be used or modified to process titanium mill products, which could lead to increased competition and decreased pricing for our titanium products. In addition, many factors, including excess capacity resulting from reduced demand in the titanium industry, work to intensify the price competition for available business at low points in the business cycle.

Our dependence upon certain critical raw materials that are subject to price and availability fluctuations could lead to increased costs or delays in the manufacture and sale of our products. We rely on a limited number of suppliers

around the world, and principally on those located in Australia and South Africa, for our supply of titanium-containing rutile ore, one of the primary raw materials used in the production of titanium sponge. While chlorine, another of the primary raw materials used in the production of titanium sponge, is generally widely available, we currently obtain our chlorine from a single supplier near our sponge plant in Henderson. Also, we cannot supply all our needs for all grades of titanium sponge and scrap internally and are therefore dependent on third parties for a substantial portion of our raw material requirements. All of our major competitors utilize sponge and scrap as raw materials in their melt operations. Titanium scrap is also used in certain steel-making operations, and demand for these steel products, especially from China, also influences demand for titanium scrap. Purchase prices and availability of these critical materials are subject to volatility. At any given time, we may be unable to obtain an adequate supply of these critical materials on a timely basis, on price and other terms acceptable to us, or at all. To help stabilize our supply of titanium sponge, we have entered into LTAs with certain sponge suppliers that contain fixed annual supply obligations. These LTAs contain minimum annual purchase requirements and, in certain cases, include take-or-pay provisions which require us to pay penalties if we do not meet the minimum annual purchase requirements. See "Business – Products and Operations – Raw materials," "Management's Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources – Contractual commitments" and Note 15 to the Consolidated Financial Statements.

Although overall inflationary trends in recent years have been moderate, during the same period certain critical raw material costs in our industry, including titanium sponge and scrap, have been volatile. While we are able to mitigate some of the adverse impact of fluctuating raw material costs through LTAs with suppliers and customers, rapid increases in raw material costs may adversely affect our results of operations.

We may not be able to implement price increases. We change prices on certain of our products from time-to-time. Our 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 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. Pricing under our LTAs, which were designed to limit selling price volatility to our customers and us, are generally revised on an annual basis. These factors have had, and may have, an adverse impact on our revenues, operating results and financial condition.

Our failure to develop new markets would result in our continued dependence on the cyclical commercial aerospace sector, and our operating results would, accordingly, remain cyclical. In an effort to reduce dependence on the commercial aerospace market and to increase participation in other markets, we have devoted certain resources to developing new markets and applications for our products. Developing these emerging market applications involves substantial risk and uncertainties due to the fact that titanium must compete with less expensive alternative materials in these potential markets or applications. We may not be successful in developing new markets or applications for our products, significant time may be required for such development and uncertainty exists as to the extent to which we will face competition in this regard.

Because we are subject to environmental and worker safety laws and regulations, we may be required to remediate the environmental effects of our operations or take steps to modify our operations to comply with these laws and regulations, which could reduce our profitability. Various federal, state, local and foreign environmental and worker safety laws and regulations govern our operations. Throughout the history of our operations, we have used and manufactured, and currently use and manufacture, substantial quantities of substances that are considered hazardous, extremely hazardous or toxic under environmental and worker safety and health laws and regulations. Although we have substantial controls and procedures designed to reduce continuing risk of environmental, health and safety issues, 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. In addition, government environmental requirements or the enforcement thereof may become more stringent in the future. Some or all of these risks may result in liabilities that could reduce our profitability.

Reductions in, or the complete elimination of, any or all tariffs on imported titanium products into the United States could lead to increased imports of foreign sponge, ingot, slab and mill products into the U.S. and an increase in the amount of such products on the market generally, which could decrease pricing for our products. In the U.S. titanium market, the increasing presence of foreign participants has become a significant competitive factor. Until 1993, imports of foreign titanium products into the U.S. had not been significant. This was primarily attributable to relative currency exchange rates and, with respect to Japan, Russia, Kazakhstan and Ukraine, import duties (including antidumping duties). However, since 1993, imports of titanium sponge, ingot and mill products, principally from Russia and Kazakhstan, have increased and have had a significant competitive impact on the U.S. titanium industry.

Generally, imports of titanium products into the U.S. are subject to a 15% “normal trade relations” tariff. For tariff purposes, titanium products are broadly classified as either wrought (billet, bar, sheet, strip, plate and tubing) or unwrought (sponge, ingot and slab). From time-to-time, the U.S. government has granted preferential trade status to certain titanium products imported from particular countries (notably wrought titanium products from Russia, which carried no U.S. import duties from approximately 1993 until 2004). It is possible that such preferential status could be granted again in the future, and we may not be successful in resisting efforts to eliminate duties or tariffs on titanium products. See discussion of Doha Round in “Business – Competition.”

We may be unable to reach or maintain satisfactory collective bargaining agreements with unions representing a significant portion of our employees. Our production and maintenance workers in Henderson and our production, maintenance, clerical and technical workers in Toronto, are represented by the United Steelworkers of America under contracts expiring in January 2011 and June 2011, for the respective locations. A majority of the salaried and hourly employees at our European facilities are represented by various European labor unions. Our labor agreement with our managerial and professional U.K. employees expires in 2011. Our labor agreement with our U.K. production and maintenance employees expired at the end of 2008, and a new labor agreement is currently under negotiation. The agreements with our French and Italian employees are renewed annually. A prolonged labor dispute or work stoppage could materially impact our operating results. We may not succeed in concluding collective bargaining agreements with the unions on terms acceptable to us or maintaining satisfactory relations under existing collective bargaining agreements. If our employees were to engage in a strike, work stoppage or other slowdown, we could experience a significant disruption of our operations or higher ongoing labor costs.

ITEM 1B: UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2: PROPERTIES

Set forth below is a listing of our major production facilities. In addition to our U.S. sponge capacity discussed below, our worldwide melting capacity aggregates approximately 61,250 metric tons (estimated 20% of worldwide annual practical capacity) as of December 31, 2008, and our mill product capacity aggregates approximately 27,700 metric tons (estimated 18% of worldwide annual practical capacity) as of December 31, 2008. Of our worldwide melting capacity, 40% is represented by EB melting furnaces, 59% by vacuum arc remelting ("VAR") furnaces and 1% by a vacuum induction melting ("VIM") furnace.

		December 31, 2008 Annual Practical Capacity (3)	
Manufacturing Location	Products Manufactured	Melted Products	Mill Products
		(metric tons)	
Henderson, Nevada (1)	Sponge, Ingot	12,250	-
Morgantown, Pennsylvania (1)	Slab, Ingot, Raw Materials Processing	33,500	-
Toronto, Ohio (1)	Billet, Bar, Plate, Sheet, Strip	-	15,000
Vallejo, California (2)	Ingot (including non-titanium superalloys)	1,600	-
Ugine, France (2) (4)	Ingot, Billet	3,200	2,600
Waunarlwydd, Wales(1)	Bar, Plate, Sheet	-	3,100
Witton, England (2)	Ingot, Billet, Bar	10,700	7,000

(1) Owned facility.
(2) Leased facility.
(3) Practical capacities are variable based on product mix and are not additive. These capacities are as of December 31, 2008 and do not reflect the increases expected to be

realized during 2009 as a result of capacity expansion projects, several of which are mentioned below.

(4) Practical capacities are based on the approximate maximum equivalent product that CEZUS is contractually obligated to provide.

During the past three years, our major production facilities have operated at varying levels of practical capacity. Overall our plants operated at approximately 88% of practical capacity in each of 2006 and 2007 and 81% in 2008. While practical capacity and utilization measures can vary significantly based upon the mix of products produced, we anticipate operating our plants at lower production levels in 2009 due to reduced demand.

United States production. In 2007, we completed the expansion of our existing premium-grade titanium sponge facility in Henderson and reached practical capacity for commercial production in early 2008. This expansion increased our annual productive capacity to approximately 12,600 metric tons.

Our U.S. melting facilities in Henderson, Morgantown and Vallejo produce ingot and slab, which are either used as feedstock for our mill products operations or sold to third parties, and we are in the process of expanding our melt capacity. Our melting facilities operated at approximately 78% of annual practical capacity in 2008. We expect lower capacity utilization in 2009, as melt capacities increase during 2009.

In early 2008, we completed an 8,500 metric ton expansion of our EB melt capacity in Morgantown. In addition, we have commenced construction of another EB furnace at the same facility, which is currently on schedule to be completed in the first half of 2009 which, upon completion, will increase our EB melt capacity by approximately 26%. Also during 2008, we completed an addition to our VAR capacity in Morgantown, which increased our VAR capacity by approximately 5,000 metric tons. Our raw materials processing facility in Morgantown primarily processes scrap used as melting feedstock, either in combination with sponge or separately.

We produce titanium mill products in the U.S. at our forging and rolling facility in Toronto, which receives ingot and slab principally from our U.S. melting facilities. Our U.S. forging and rolling facility operated at approximately 87% of annual practical capacity in 2008, and we expect lower utilization in 2009. Capacity utilization across our individual mill product lines varies.

Under various conversion services agreements with third-party vendors, we have access to a dedicated annual capacity at certain of our vendors' facilities. Our access to outside conversion services includes dedicated annual rolling capacity of at least 4,500 metric tons until 2026, with the option to increase the output capacity to 9,000 metric tons. Additionally, we have access to dedicated annual forging capacity of 3,300 metric tons beginning in 2008 and ramping up to 8,900 metric tons for 2011 through at least 2019. These agreements provide us with long-term secure sources for processing round and flat products, resulting in a significant increase in our existing mill product conversion capabilities, which allows us to assure our customers of our long-term ability to meet their needs.

European production. We conduct our operations in Europe primarily through our wholly owned subsidiaries, TIMET UK, Ltd. and Loterios S.p.A., and our 70% owned subsidiary, TIMET Savoie. TIMET UK's Witton laboratory and manufacturing facilities are leased pursuant to long-term operating leases expiring in 2014 and 2024, respectively. TIMET UK's melting facility in Witton produces VAR ingot used primarily as feedstock for our Witton forging operations. TIMET UK forges the ingot into billet products for sale to third parties or into an intermediate product for further processing into bar or plate at our facility in Waunarlwydd. TIMET UK's melting and mill products production in 2008 was approximately 81% and 61%, respectively, of annual practical capacity, and we expect lower utilization in 2009. In mid-2008 we completed construction of a new VAR furnace at our Witton location, which increased our European VAR capacity by approximately 2,000 metric tons.

TIMET Savoie has the right to utilize portions of the Ugine plant of Compagnie Européenne du Zirconium-CEZUS, S.A. ("CEZUS"), the 30% minority partner in TIMET Savoie, pursuant to a conversion services agreement which runs through 2015. TIMET Savoie's capacity is to a certain extent dependent upon the level of activity in CEZUS' zirconium business, which may from time to time provide TIMET Savoie with capacity in excess of that which CEZUS is contractually required to provide. Our agreement with CEZUS provides for the expansion of the maximum annual melt capacity that CEZUS is contractually required to provide to us to 2,900 metric tons for three years following the capacity implementation in late 2008. During 2008, TIMET Savoie utilized 97% of the maximum annual capacity CEZUS was contractually required to provide, and we expect to utilize less than the maximum annual capacity CEZUS is required to provide in 2009.

Loterios manufactures large industrial use fabrications, generally on a project engineering and design basis, and therefore, measures of annual capacity are not practical or meaningful.

ITEM 3: LEGAL PROCEEDINGS

From time to time, we are involved in litigation relating to our business. See Note 15 to the Consolidated Financial Statements.

ITEM 4: SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of our security holders during the quarter ended December 31, 2008.

PART II

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

Our common stock is traded on the New York Stock Exchange (symbol: TIE). The high and low sales prices for our common stock during 2007, 2008 and the first two months of 2009 are set forth below. All prices (as well as all share numbers referenced herein) have been adjusted to reflect previously affected stock splits.

Year ended December 31, 2007:	High	Low
First quarter	$ 38.85	$ 28.83
Second quarter	$ 39.80	$ 30.30
Third quarter	$ 35.32	$ 25.75
Fourth quarter	$ 36.50	$ 25.26
Year ended December 31, 2008:		
First quarter	$ 26.79	$ 13.05
Second quarter	$ 19.65	$ 13.33
Third quarter	$ 15.00	$ 9.80
Fourth quarter	$ 11.32	$ 5.31
January 1, 2009 to February 19, 2009	$ 9.89	$ 6.35

On February 19, 2009, the closing price of TIMET common stock was $7.15 per share, and there were approximately 2,325 stockholders of record of TIMET common stock.

We previously issued $201.3 million of 6.625% mandatorily redeemable convertible preferred securities, beneficial unsecured convertible securities ("BUCS") which, among other things, were redeemable for a certain number of shares of our common stock. Prior to 2005, we issued 3.9 million shares of our Series A Preferred Stock in exchange for 3.9 million BUCS. During 2005 and 2006, all of the BUCS that were not exchanged for shares of our Series A Preferred Stock were redeemed for approximately 0.6 million shares of our common stock and a nominal amount of cash.

Our Series A Preferred Stock is not mandatorily redeemable but is redeemable at our option at any time after September 1, 2007. Holders of the Series A Preferred Stock are entitled to receive cumulative cash dividends at the rate of 6.75% of the $50 per share liquidation preference per annum per share (equivalent to $3.375 per annum per share), when, as and if declared by our board of directors. Whether or not declared, cumulative dividends on Series A Preferred Stock are deducted from net income to arrive at net income attributable to common stockholders. Our U.S. long-term credit agreement contains certain financial covenants that may restrict our ability to make dividend payments on the Series A Preferred Stock.

During 2006, 2007 and 2008, an aggregate of 1.3 million, 1.6 million and a nominal number of shares of our Series A Preferred Stock were converted into 17.2 million, 21.3 million and 0.3 million shares of our common stock, respectively. As a result of these conversions, approximately 0.1 million shares of Series A Preferred Stock remain outstanding as of December 31, 2008.

We initiated a quarterly dividend on our common stock during the fourth quarter of 2007 resulting in dividends of $13.7 million, or $0.075 per common share during 2007, and we paid an aggregate of $54.5 million, or $0.30 per common share, in dividends on our common stock during 2008. However, declaration and payment of future dividends on our common stock, and the amount thereof, is discretionary and is dependent upon our results of

operations, financial condition, cash requirements for our business, contractual requirements and restrictions and other factors deemed relevant by our board of directors. The amount and timing of past dividends is not necessarily indicative of the amount and timing of future dividends which we might pay. In this regard, our U.S. long-term credit agreement contains certain financial covenants that may restrict our ability to make dividend payments on our common stock.

During 2007, our board of directors authorized the repurchase of up to $100 million of our common stock in open market transactions or in privately negotiated transactions, with any repurchased shares to be retired and cancelled. During 2008, we purchased 2.3 million shares of our common stock in open market transactions for an aggregate purchase price of $36.5 million, and all shares acquired under this repurchase program during 2008 have been cancelled. At December 31, 2008, we could purchase an additional $63.5 million of our common stock under our board of directors' authorization.

Performance graph. Set forth below is a line graph comparing, for the period December 31, 2003 through December 31, 2008, the cumulative total stockholder return on our common stock against the cumulative total return of (a) the S&P Composite 500 Stock Index and (b) a self-selected peer group, comprised solely of RTI International Metals, Inc. (NYSE: RTI), our principal U.S. competitor with significant operations primarily in the titanium metals industry for which meaningful stockholder return information is available. The graph shows the value at December 31 of each year, assuming an original investment of $100 in each and reinvestment of cash dividends and other distributions to stockholders.

Comparison of Cumulative Return among Titanium Metals Corporation,
S&P 500 Composite Index and Self-Selected Peer Group

The information contained in the performance graph shall not be deemed "soliciting material" or "filed" with the SEC, or subject to the liabilities of Section 18 of the Securities Exchange Act, except to the extent we specifically request that the material be treated as soliciting material or specifically incorporates this performance graph by reference into a document filed under the Securities Act or the Securities Exchange Act.

Equity compensation plan information. We have certain equity compensation plans, all of which were approved by our stockholders, which provide for the discretionary grant to our employees and directors of, among other things, options to purchase our common stock and stock awards. As of December 31, 2008, there were a nominal number of options outstanding under all such plans to purchase shares of our common stock, all of which were exercised on or before February 23, 2009, and approximately 0.5 million shares were available for future grant or issuance. In May 2008, our board of directors and stockholders approved the 2008 Long-Term Incentive Plan, which authorizes us to grant awards representing an aggregate total of up to 0.5 million common shares under the plan, and we issued a nominal number of unrestricted common shares to our non-employee directors during 2008. We do not have any equity compensation plans that were not approved by our stockholders. See Note 10 to the Consolidated Financial Statements.

ITEM 6: SELECTED FINANCIAL DATA

The selected financial data set forth below should be read in conjunction with our Consolidated Financial Statements and Item 7 – MD&A.

	Year ended December 31,				
	2004	2005	2006	2007	2008
	($ in millions, except per share and product shipment data)				
STATEMENT OF INCOME DATA:					
Net sales	$ 501.8	$ 749.8	$ 1,183.2	$ 1,278.9	$ 1,151.5
Gross margin	63.7	199.4	436.1	447.4	287.7
Operating income	43.0	171.1	382.8	372.0	219.7
Interest expense	12.5	4.0	3.4	2.6	1.8
Net income attributable tocommon stockholders	43.3	143.7	274.5	263.1	162.2
Earnings per share:					
Basic (1)	$ 0.34	$ 1.10	$ 1.77	$ 1.62	$ 0.89
Diluted (1)	0.33	0.86	1.53	1.46	0.89
Dividends per common share	-	-	-	0.075	0.30
BALANCE SHEET DATA:					
Cash and cash equivalents	$ 7.2	$ 17.7	$ 29.4	$ 90.0	$ 45.0
Total assets (2)	700.6	907.3	1,216.9	1,419.9	1,367.7
Outstanding indebtedness (3)	43.4	51.6	0.7	0.5	0.2
Debt payable to Capital Trust	12.0	5.9	-	-	-
Stockholders' equity (2)	406.4	562.2	878.9	1,132.7	1,079.6
CASH FLOW DATA:					
Cash flows (used) provided by:					
Operating activities	$ (22.4)	$ 72.9	$ 79.1	$ 192.1	$ 197.6
Investing activities	(44.5)	(61.5)	(26.5)	(108.2)	(142.6)
Financing activities	38.7	-	(42.5)	(24.5)	(97.7)
Net cash (used) provided	$ (28.2)	$ 11.4	$ 10.1	$ 59.4	$ (42.7)
Melted product shipments:					
Volume (metric tons)	5,360	5,655	5,900	4,720	3,850
Average selling price (per kilogram)	$ 13.45	$ 19.85	$ 38.30	$ 40.65	$ 30.00
Mill product shipments:					
Volume (metric tons)	11,365	12,660	14,160	14,230	15,050
Average selling price (per kilogram)	$ 32.05	$ 41.75	$ 57.85	$ 66.90	$ 60.70
Order backlog at December 31 (4)	$ 450	$ 870	$ 1,125	$ 1,000	$ 697
Capital expenditures	$ 23.6	$ 61.1	$ 100.9	$ 100.9	$ 121.3

(1) All share and per share disclosures for all periods presented have been adjusted to give effect of all stock splits to date.

(2) We adopted SFAS 158 effective December 31, 2006.

(3) Outstanding indebtedness represents notes payable, current and noncurrent debt and capital lease obligations.

(4)

Order backlog is defined as unfilled purchase orders (including those under consignment arrangements), which are generally subject to deferral or cancellation by the customer under certain conditions.

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

SUMMARY

General overview. We are a vertically integrated producer of titanium sponge, melted products and a variety of mill products for commercial aerospace, military, industrial and other applications. We are one of the world's leading producers of titanium melted products (ingot, electrodes and slab) and mill products (billet, bar, plate, sheet and strip). We are the only producer with major titanium production facilities in both the United States and Europe, the world's principal markets for titanium. We are currently the largest producer of titanium sponge, a key raw material, in the United States.

We sell our titanium melted and mill products into four worldwide market sectors. Aggregate shipment volumes for titanium mill products in 2008 were derived from the following sectors:

	TIMET		Titanium Industry (1)	
	Mill product shipments (Metric tons)	% of total	Mill product shipments (Metric tons)	% of total
Commercial aerospace	9,782	65%	46,900	46%
Military	2,114	14%	6,400	7%
Industrial	2,855	19%	43,000	42%
Emerging markets	299	2%	5,300	5%
	15,050	100%	101,600	100%

(1) Estimates based on our titanium industry experience and information obtained from publicly-available external resources (e.g., United States Geological Survey, International Titanium Association and Japan Titanium Society).

The titanium industry derives a substantial portion of its demand from the highly cyclical commercial aerospace sector. As shown in the table above, our business is more dependent on commercial aerospace demand than is the overall titanium industry.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

We prepare our Consolidated Financial Statements in accordance with accounting principles generally accepted in the United States of America. In the preparation of these financial statements, we are required to make estimates and judgments, and select from a range of possible estimates and assumptions, that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses during the reported period. On an on-going basis, we evaluate our estimates, including those related to allowances for uncollectible accounts receivable, inventory allowances, asset lives, impairments of investments, the recoverability of other long-lived assets, including property and equipment, pension and other postretirement benefit obligations and the related underlying actuarial assumptions, the realization of deferred income tax assets, and accruals for asset retirement obligations, environmental remediation, litigation, income tax and other contingencies. We base our estimates and judgments, to varying degrees, on historical experience, advice of external specialists and various other factors we believe to be prudent under the circumstances. Actual results may differ from previously estimated amounts and such estimates, assumptions and judgments are regularly subject to revision.

We consider the policies and estimates discussed below to be critical to an understanding of our financial statements because their application requires our most significant judgments in estimating matters for financial reporting that are inherently uncertain. See Notes to the Consolidated Financial Statements for additional information on these policies and estimates, as well as discussion of additional accounting policies and estimates.

Inventory valuation. We provide reserves for estimated obsolete or unmarketable inventories equal to the difference between the cost of inventories and the estimated net realizable value using assumptions about future demand for our products, alternate uses of the inventory and market conditions. If actual market conditions are less favorable than those projected by us, we may be required to recognize additional inventory reserves.

Impairment of long-lived assets. Generally, when events or changes in circumstances indicate that the carrying amount of long-lived assets, including property and equipment and intangible assets may not be recoverable, we undertake an evaluation of the assets or asset group. If this evaluation indicates that the carrying amount of the asset or asset group is not recoverable, the amount of the impairment would typically be calculated using discounted expected future cash flows or appraised values. All relevant factors are considered in determining whether an impairment exists. We did not evaluate any long-lived assets for impairment during 2008 because no such impairment indicators were present.

Income taxes. We record a valuation allowance if realization of our gross deferred income tax assets is not more-likely-than-not after giving consideration to recent historical results and near-term projections, and we also consider the availability of tax planning strategies that might impact the need for, or amount of, any valuation allowance. We record reserves for uncertain tax positions in accordance with Financial Accounting Standards Board Interpretation No. 48, Accounting for Uncertain Tax Positions, for tax positions where we believe it is more-likely-than-not our position will not prevail with the applicable tax authorities. See “Results of Operations – Income taxes” for discussion of our analysis of our deferred income tax valuation allowances and Note 2 to the Consolidated Financial Statements for a discussion of our uncertain tax positions.

Pension and OPEB expenses and obligations. Our pension and OPEB expenses and obligations are calculated based on several estimates, including discount rates, expected rates of return on plan assets and expected health care trend rates. We review these rates annually with the assistance of our actuaries. See further discussion of the factors considered and potential effect of these estimates in “Liquidity and Capital Resources – Defined benefit pension plans” and “Liquidity and Capital Resources – Postretirement benefit plans other than pensions.”

RESULTS OF OPERATIONS

Comparison of 2008 to 2007

Summarized financial information. The following table summarizes certain information regarding our results of operations for the years ended December 31, 2007 and 2008. Our reported average selling prices reflect actual selling prices after the effects of currency exchange rates, customer and product mix and other related factors throughout the periods presented.

	For the year ended December 31,			
	2007	% of Total Net Sales	2008	% of Total Net Sales
	(In millions, except product shipment data)			
Net sales:				
Melted products	$ 191.9	15%	$ 115.5	10%
Mill products	952.0	74%	913.5	79%
Other titanium products	135.0	11%	122.5	11%
Total net sales	1,278.9	100%	1,151.5	100%
Cost of sales	831.5	65%	863.8	75%
Gross margin	447.4	35%	287.7	25%