

MATERION Corp
Form 10-K
March 08, 2013

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

Form 10-K

(Mark One)

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

For the Fiscal Year Ended December 31, 2012

OR

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

For the Transition Period from _____ to _____
Commission File Number 1-15885

MATERION CORPORATION

(Exact name of Registrant as specified in its charter)

Ohio

(State or other jurisdiction of
incorporation or organization)

34-1919973

(I.R.S. Employer
Identification No.)

6070 Parkland Blvd.,
Mayfield Heights, Ohio

(Address of principal executive offices)

44124

(Zip Code)

Registrant's telephone number, including area code
216-486-4200

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

Title of Each Class

Common Stock, no par value

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

None

Name of Each Exchange on Which Registered
New York Stock Exchange

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

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

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

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

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

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

Large accelerated filer ☐ Accelerated filer ☒

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

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

The aggregate market value of common shares, no par value, held by non-affiliates of the registrant (based upon the closing sale price on the New York Stock Exchange) on June 29, 2012 was \$470,643,775.

As of February 20, 2013, there were 20,460,312 common shares, no par value, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the proxy statement for the annual meeting of shareholders to be held on May 1, 2013 are incorporated by reference into Part III.

MATERION CORPORATION
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Forward-looking Statements

Portions of the narrative set forth in this document that are not statements of historical or current facts are forward-looking statements. Our actual future performance may materially differ from that contemplated by the forward-looking statements as a result of a variety of factors. These factors include, in addition to those mentioned elsewhere herein:

• Actual sales, operating rates and margins for 2013;

• Uncertainties relating to the fourth quarter 2012 physical inventory and possible theft at our Albuquerque facility, including (i) the outcome of our investigations and (ii) the timing and amount, if any, of any insurance proceeds that we might receive;

• The global economy;

• The condition of the markets that we serve, whether defined geographically or by segment, with the major market segments being: consumer electronics, industrial components and commercial aerospace, defense and science, medical, energy, automotive electronics, telecommunications infrastructure and appliance;

• Changes in product mix and the financial condition of customers;

• Our success in developing and introducing new products and new product ramp-up rates;

• Our success in passing through the costs of raw materials to customers or otherwise mitigating fluctuating prices for those materials, including the impact of fluctuating prices on inventory values;

• Our success in integrating acquired businesses, including EIS Optics Limited (EIS) and Aerospace Metal Composites Limited (AMC);

• Our success in completing the announced facility consolidations and achieving the expected benefits;

• Our success in implementing our strategic plans and the timely and successful completion and start-up of any capital projects, including the new primary beryllium facility in Elmore, Ohio;

• The availability of adequate lines of credit and the associated interest rates;

• Other financial factors, including the cost and availability of raw materials (both base and precious metals), physical inventory valuations (including the impact of losses due to theft), metal financing fees, tax rates, exchange rates, pension costs and required cash contributions and other employee benefit costs, energy costs, regulatory compliance costs, the cost and availability of insurance, and the impact of our stock price on the cost of incentive compensation plans;

• The uncertainties related to the impact of war, terrorist activities and acts of God;

• Changes in government regulatory requirements and the enactment of new legislation that impacts our obligations and operations;

• The conclusion of pending litigation matters in accordance with our expectation that there will be no material adverse effects;

• The timing and ability to achieve further efficiencies and synergies resulting from our name change and product line alignment under the Materion name and Materion brand; and

• The risk factors set forth elsewhere in Item 1A of this Form 10-K.

Item 1. BUSINESS

Materion Corporation, through its wholly owned subsidiaries, is an integrated producer of high performance advanced engineered materials used in a variety of electrical, electronic, thermal and structural applications. Our products are sold into numerous markets, including consumer electronics, industrial components and commercial aerospace, defense and science, medical, energy, automotive electronics, telecommunications infrastructure and appliance. As of December 31, 2012, we had 2,833 employees.

The Company, through its subsidiaries, has operations in the United States, Europe and Asia. The Company has four reportable segments: Advanced Material Technologies, Performance Alloys, Beryllium and Composites and Technical Materials.

All Other includes our parent company expenses, other corporate charges and the operating results of Materion Services Inc., a wholly owned subsidiary that provides administrative and financial oversight services to our other businesses on a cost-plus basis. Corporate employees not included in a reportable segment totaled 109 as of December 31, 2012.

We use our Investor Relations web site, <http://materion.com>, as a channel for routine distribution of important information, including news releases, analyst presentations and financial information. We post filings as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC, including our annual, quarterly, and current reports on Forms 10-K, 10-Q, and 8-K; our proxy statements; and any amendments to those reports or statements. All such postings and filings are available on our Investor Relations web site. In addition, this web site allows investors and other interested persons to sign up to automatically receive e-mail alerts when we post press releases and financial information on our web site. The SEC also maintains a web site, www.sec.gov, that contains reports, proxy and information statements, and other information regarding issuers who file electronically with the SEC. The content on any web site referred to in this Form 10-K is not incorporated by reference into this Form 10-K unless expressly noted.

ADVANCED MATERIAL TECHNOLOGIES

Sales for this segment were \$847.8 million, or 66% of total sales, in 2012; \$1,051.8 million, or 69% of total sales, in 2011 and \$879.0 million, or 67% of total sales, in 2010. As of December 31, 2012, Advanced Material Technologies had 1,380 employees.

Advanced Material Technologies manufactures precious, non-precious and specialty metal products, including vapor deposition targets, frame lid assemblies, clad and precious metal preforms, high temperature braze materials, ultra-fine wire, advanced chemicals, optics, performance coatings and microelectronic packages. These products are used in wireless, semiconductor, photonic, hybrid and other microelectronic applications within the consumer electronics and telecommunications infrastructure markets. Other key markets for these products include medical, defense and science, energy, industrial components and automotive electronics. Advanced Material Technologies also has metal cleaning operations and in-house refineries that allow for the reclaim of precious metals from internally generated or customers' scrap.

Advanced Material Technologies' products are sold directly from its facilities throughout the U.S., Asia and Europe, as well as through direct sales offices and independent sales representatives throughout the world. Principal competition includes companies such as Eastman Chemical Company, Heraeus Inc., Honeywell International Inc., JDS Uniphase Corporation, Johnson Matthey plc, Praxair, Inc., Saint-Gobain S.A., Solar Applied Materials Technology Corp., Sumitomo Metals Industries, Ltd., Tanaka Holding Co., Ltd., and a number of smaller regional and national suppliers.

Advanced Material Technologies — Sales and Backlog

The backlog of unshipped orders for Advanced Material Technologies as of December 31, 2012, 2011 and 2010 was \$54.3 million, \$75.5 million and \$55.4 million, respectively. Backlog is generally represented by purchase orders that may be terminated under certain conditions. We expect that substantially all of our backlog of orders for this segment at December 31, 2012 will be filled during 2013.

Sales are made to over 3,000 customers. Government sales accounted for less than 1% of the sales volume in 2012, 2011 and 2010. Sales outside the United States, principally to Europe and Asia, accounted for approximately 23% of sales in 2012, 16% of sales in 2011 and 19% of sales in 2010. Other segment reporting and geographic information is contained in Note M to the Consolidated Financial Statements, which can be found in Item 8 of this Form 10-K and

which is incorporated herein by reference.

Advanced Material Technologies — Research and Development

Active research and development programs seek new product compositions and designs as well as process innovations. Expenditures for research and development for Advanced Material Technologies amounted to \$8.0 million in 2012, \$6.7 million in 2011 and \$4.0 million in 2010. A staff of 45 scientists, engineers and technicians was employed in this effort as of year-end 2012.

PERFORMANCE ALLOYS

Sales for this segment were \$292.4 million, or 23% of total sales, in 2012; \$335.3 million, or 22% of total sales, in 2011 and \$293.8 million, or 23% of total sales, in 2010. As of December 31, 2012, Performance Alloys had 884 employees.

Performance Alloys manufactures and sells three main product families:

Strip products, the largest of the product families, include thin gauge precision strip and thin diameter rod and wire. These copper and nickel alloys provide a combination of high conductivity, high reliability and formability for use as connectors, contacts, switches, relays and shielding. Major markets for strip products include consumer electronics, telecommunications infrastructure, automotive electronics, appliance and medical. Performance Alloys' primary direct competitor in strip form beryllium alloys is NGK Insulators, Ltd. of Nagoya, Japan, with subsidiaries in the United States and Europe. Performance Alloys also competes with alloy systems manufactured by Global Brass and Copper, Inc., Wieland Electric, Inc., Stolberger Metallwerke GmbH, Nippon Mining, PMX Industries, Inc. and also with other generally less expensive materials, including phosphor bronze, stainless steel and other specialty copper and nickel alloys, which are produced by a variety of companies around the world;

Bulk products are copper and nickel-based alloys manufactured in plate, rod, bar, tube and other customized forms that, depending upon the application, may provide superior strength, corrosion or wear resistance, thermal conductivity or lubricity. While the majority of bulk products contain beryllium, a growing portion of bulk products' sales is from non-beryllium-containing alloys as a result of product diversification efforts. Applications for bulk products include oil and gas drilling components, bearings, bushings, welding rods, plastic mold tooling and undersea telecommunications housing equipment. Major markets for bulk products include industrial components and commercial aerospace, energy and telecommunications infrastructure. In the area of bulk products, in addition to NGK Insulators, Ltd., Performance Alloys competes with several smaller regional producers such as International Beryllium Corp., Ningxia Orient Tantalum in China and LeBronze Industriel in Europe; and Beryllium hydroxide is produced at our milling operations in Utah from our bertrandite mine and purchased beryl ore. The hydroxide is used primarily as a raw material input for strip and bulk products and, to a lesser extent, by the Beryllium and Composites segment. Sales of beryllium hydroxide to NGK Insulators, Ltd. from the Utah operations were less than 4% of Performance Alloys' total sales in each of the four most recent years.

Strip and bulk products are manufactured at facilities in Ohio and Pennsylvania and are distributed internationally through a network of company-owned service centers and outside distributors and agents.

Performance Alloys — Sales and Backlog

The backlog of unshipped orders for Performance Alloys as of December 31, 2012, 2011 and 2010 was \$73.8 million, \$99.6 million and \$98.9 million, respectively. Backlog is generally represented by purchase orders that may be terminated under certain conditions. We expect that substantially all the backlog of orders for this segment as of December 31, 2012 will be filled during 2013.

Sales are made to over 2,000 customers. Performance Alloys had government sales accounting for less than 1% of segment sales in 2012, 2011 and 2010. Sales outside the United States, principally to Europe and Asia, accounted for approximately 54% of sales in 2012, 51% of sales in 2011 and 58% of sales in 2010. Other segment reporting and geographic information is contained in Note M to the Consolidated Financial Statements, which can be found in Item 8 of this Form 10-K and which is incorporated herein by reference.

Performance Alloys — Research and Development

Active research and development programs seek new product compositions and designs as well as process innovations. Expenditures for research and development amounted to \$2.2 million in 2012, \$2.1 million in 2011 and \$1.8 million in 2010. A staff of 10 scientists, engineers and technicians was employed in this effort as of year-end 2012.

BERYLLIUM AND COMPOSITES

Sales for this segment were \$60.0 million, or 5% of total sales, in 2012; \$60.6 million, or 4% of total sales, in 2011 and \$61.9 million, or 5% of total sales, in 2010. As of December 31, 2012, Beryllium and Composites had 265 employees.

Beryllium and Composites manufactures beryllium-based metals and metal matrix composites (MMCs) in rod, sheet, foil and a variety of customized forms. These materials are used in applications that require high stiffness and/or with low density, and they tend to be premium-priced due to their unique combination of properties. This segment also manufactures beryllia

alumina ceramic products. The acquisition of AMC provides a complementary family of non-beryllium-based alloys and composites. Defense and science is the largest market for Beryllium and Composites, while other markets served include industrial components and commercial aerospace, medical, energy and telecommunications infrastructure. Products are also sold for acoustics, optical scanning and performance automotive applications. While Beryllium and Composites is the only domestic producer of metallic beryllium, it competes primarily with designs utilizing other materials including metals, MMCs and organic composites. Our aluminum powder metal MMCs compete with DWA Composites and cast MMCs made by Duralcan USA. Electronic components utilizing beryllia and alumina ceramics are used in the telecommunications infrastructure, medical, industrial components and commercial aerospace and defense and science markets. Direct competitors include American Beryllia Inc., CBL Ceramics Limited and CoorsTek, Inc.

Manufacturing facilities for Beryllium and Composites are located in Ohio, California, Arizona and England.

Beryllium and Composites — Sales and Backlog

The backlog of unshipped orders for Beryllium and Composites as of December 31, 2012, 2011 and 2010 was \$20.5 million, \$16.9 million and \$26.1 million, respectively. Backlog is generally represented by purchase orders that may be terminated under certain conditions. We expect that substantially all of our backlog of orders for this segment at December 31, 2012 will be filled during 2013.

Sales are made to over 400 customers. Government sales accounted for less than 2% of Beryllium and Composites' sales in 2012 and 2010, and less than 1% of sales in 2011. Sales outside the United States, principally to Europe and Asia, accounted for approximately 31% of sales in 2012, 28% of sales in 2011 and 22% of sales in 2010. Other segment reporting and geographic information is contained in Note M to the Consolidated Financial Statements, which can be found in Item 8 of this Form 10-K and which is incorporated herein by reference.

Beryllium and Composites — Research and Development

Active research and development programs seek new product compositions and designs as well as process innovations. Expenditures for research and development amounted to \$2.4 million in 2012, \$2.2 million in 2011 and \$1.3 million in 2010. A staff of nine scientists, engineers and technicians was employed in this effort as of year-end 2012. Some research and development projects, expenditures for which are not material, were externally sponsored and funded.

TECHNICAL MATERIALS

Sales for this segment were \$72.7 million, or 6% of total sales, in 2012; \$78.7 million, or 5% of total sales, in 2011 and \$67.5 million, or 5% of total sales, in 2010. As of December 31, 2012, Technical Materials had 195 employees. Technical Materials' capabilities include clad inlay and overlay metals, precious and base metal electroplated systems, electron beam welded systems, contour profiled systems and solder-coated metal systems. These specialty strip metal products provide a variety of thermal, electrical or mechanical properties from a surface area or particular section of the material. Our cladding and plating capabilities allow for a precious metal or other base metal to be applied in continuous strip form only where it is needed, reducing the material cost to the customer as well as providing design flexibility and performance. Major applications for these products include connectors, contacts, power lead frames and semiconductors while the largest markets are automotive electronics and consumer electronics. The energy and medical markets are smaller but offer further growth opportunities. Technical Materials' products are manufactured at our Lincoln, Rhode Island facility and are sold directly and through its sales representatives. Technical Materials' major competitors include Heraeus Inc., AMI Doduco, Inc. and other North American continuous strip plating companies.

Technical Materials — Sales and Backlog

The backlog of unshipped orders for Technical Materials as of December 31, 2012, 2011 and 2010 was \$17.6 million, \$16.3 million and \$16.3 million, respectively. Backlog is generally represented by purchase orders that may be terminated under certain conditions. We expect that substantially all of our backlog of orders for this segment at December 31, 2012 will be filled during 2013.

Sales are made to over 200 customers. Technical Materials did not have any sales to the government for 2012, 2011 or 2010. Sales outside the United States, principally to Europe and Asia, accounted for approximately 22% of Technical Materials' sales in 2012, 27% of sales in 2011 and 26% of sales in 2010. Other segment reporting and geographic

information is contained in Note M to the Consolidated Financial Statements, which can be found in Item 8 of this Form 10-K and which is incorporated herein by reference.

Technical Materials — Research and Development

Active research and development programs seek new product compositions and designs as well as process innovations. Expenditures for research and development for Technical Materials were nominal in 2012, 2011 and 2010.

GENERAL

Availability of Raw Materials

The principal raw materials we use are aluminum, beryllium, cobalt, copper, gold, nickel, palladium, platinum, ruthenium, silver and tin. Ore reserve data can be found in Item 7 of this Form 10-K. The availability of these raw materials, as well as other materials used by us, is adequate and generally not dependent on any one supplier.

Patents and Licenses

We own patents, patent applications and licenses relating to certain of our products and processes. While our rights under the patents and licenses are of some importance to our operations, our business is not materially dependent on any one patent or license or on all of our patents and licenses as a group.

Regulatory Matters

We are subject to a variety of laws that regulate the manufacture, processing, use, handling, storage, transport, treatment, emission, release and disposal of substances and wastes used or generated in manufacturing. For decades we have operated our facilities under applicable standards of inplant and outplant emissions and releases. The inhalation of airborne beryllium particulate may present a health hazard to certain individuals.

Standards for exposure to beryllium are under review by the United States Occupational Safety and Health Administration (OSHA) and by other governmental and private standard-setting organizations. One result of these reviews will likely be more stringent worker safety standards. Some organizations, such as the California Occupational Health and Safety Administration and the American Conference of Governmental Industrial Hygienists, have adopted standards that are more stringent than the current standards of OSHA. The development, proposal or adoption of more stringent standards may affect the buying decisions by the users of beryllium-containing products. If the standards are made more stringent and/or our customers or other downstream users decide to reduce their use of beryllium-containing products, our results of operations, liquidity and financial condition could be materially adversely affected. The impact of this potential adverse effect would depend on the nature and extent of the changes to the standards, the cost and ability to meet the new standards, the extent of any reduction in customer use and other factors. The magnitude of this potential adverse effect cannot be estimated.

Executive Officers of the Registrant

Name	Age	Positions and Offices
Richard J. Hipple	60	Chairman of the Board, President and Chief Executive Officer. In May 2006, Mr. Hipple was named Chairman of the Board and Chief Executive Officer of Materion Corporation. He had served as President since May 2005. He was Chief Operating Officer from May 2005 until May 2006. Mr. Hipple served as President of Performance Alloys from May 2002 until May 2005. He joined the Company in July 2001 as Vice President of Strip Products, Performance Alloys and served in that position until May 2002. Prior to joining Materion, Mr. Hipple was President of LTV Steel Company, a business unit of the LTV Corporation (integrated steel producer and metal fabricator). Prior to running LTV's steel business, Mr. Hipple held numerous leadership positions in engineering, operations, strategic planning, sales and marketing and procurement since 1975 at LTV. Mr. Hipple has served on the Board of Directors of Ferro Corporation since 2007 and as its Lead Director since April 2010. Mr. Hipple also was appointed to the Board of Directors of KeyCorp in July 2012.
John D. Grampa	65	Senior Vice President Finance and Chief Financial Officer. Mr. Grampa was named Senior Vice President Finance and Chief Financial Officer in December 2006. Prior to that, he had served as Vice President Finance and Chief Financial Officer since November 1999 and as Vice President Finance since October 1998. Prior to that, he had served as Vice President, Finance for the Worldwide Materials Business of Avery Dennison Corporation (producer of pressure sensitive materials, office products, labels and other converted products) since March 1994 and held other various positions at Avery Dennison Corporation from 1984.
Gregory R. Chemnitz	55	Vice President, General Counsel. Mr. Chemnitz joined Materion Corporation in September 2007 as its Vice President, General Counsel. Prior to that, he had served in various roles in the Law Department at Avery Dennison Corporation beginning in 1992, including most recently, as Assistant General Counsel, Americas, where he had responsibility for the legal affairs of Avery Dennison's business units in North and South America.

Item 1A. RISK FACTORS

Our business, financial condition, results of operations and cash flows can be affected by a number of factors, including, but not limited to, those set forth below and elsewhere in this Form 10-K, any one of which could cause our actual results to vary materially from recent results or from our anticipated future results. Therefore, an investment in us involves some risks, including the risks described below. The risks discussed below are not the only risks that we may experience. If any of the following risks occur, our business, results of operations or financial condition could be negatively impacted.

Natural disasters, equipment failures, work stoppages, bankruptcies and other unexpected events may lead our customers to curtail production or shut down their operations.

Our customers' manufacturing operations are subject to conditions beyond their control, including raw material shortages, natural disasters, interruptions in electrical power or other energy services, equipment failures, bankruptcies, work stoppages due to strikes or lockouts, including those affecting the automotive industry, which is one of our major markets, and other unexpected events. For example, the tsunami that hit Japan in March 2011 caused wide-scale destruction of the Tohoku region and led most manufacturers in the area, most notably those in the automotive and consumer electronics markets, to slow or halt production. Similar events could also affect other suppliers to our customers. Such events could cause our customers to curtail production or to shut down a portion or all of their operations, which could reduce their demand for our products and reduce our sales.

Unexpected events and natural disasters at our mine could increase the cost of operating our business.

A portion of our production costs at our mine are fixed regardless of current operating levels. Our operating levels are subject to conditions beyond our control that may increase the cost of mining for varying lengths of time. These conditions include, among other things, fire, natural disasters, pit wall failures and ore processing changes. Our mining operations also involve the handling and production of potentially explosive materials. It is possible that an explosion could result in death and injuries to employees and others and material property damage to third parties and us. Any explosion could expose us to adverse publicity or liability for damages and materially adversely affect our operations. Any of these events could increase our cost of operations.

We have a limited number of manufacturing facilities, and damage to those facilities could interrupt our operations, increase our costs of doing business and impair our ability to deliver our products on a timely basis.

Some of our facilities are interdependent. For instance, our manufacturing facility in Elmore, Ohio relies on our mining operation for its supply of beryllium hydroxide used in production of most of its beryllium-containing materials. Additionally, our Reading, Pennsylvania; Fremont, California and Tucson, Arizona manufacturing facilities are dependent on materials produced by our Elmore, Ohio manufacturing facility and our Wheatfield, New York manufacturing facility is dependent on our Buffalo, New York manufacturing facility. See Item 2 of this Form 10-K. The destruction or closure of any of our manufacturing facilities or our mine for a significant period of time as a result of fire, explosion, act of war or terrorism or other natural disaster or unexpected event may interrupt our manufacturing capabilities, increase our capital expenditures and our costs of doing business and impair our ability to deliver our products on a timely basis. In such an event, we may need to resort to an alternative source of manufacturing or to delay production, which could increase our costs of doing business. Our property damage and business interruption insurance may not cover all of our potential losses and may not continue to be available to us on acceptable terms, if at all.

Equipment failures and other unexpected events at our facilities may lead to manufacturing curtailments or shutdowns.

The manufacturing processes that take place in our mining operation, as well as in our manufacturing facilities, depend on critical pieces of equipment. This equipment may, on occasion, be out of service because of unanticipated failure, and some equipment is not readily available or replaceable. In addition to equipment failures, our facilities are also subject to the risk of loss due to unanticipated events such as fires, explosions or other disasters. Material plant shutdowns or reductions in operations could harm our ability to fulfill our customers' demands, which could harm our sales and cause our customers to find other suppliers. Further, remediation of any interruption in production capability may require us to make large capital expenditures, which may have a negative effect on our profitability and cash

flows. Our business interruption insurance may not cover all of the lost revenues associated with interruptions in our manufacturing capabilities.

Terrorist attacks and other acts of violence or war may directly harm our operations.

Terrorist attacks or other acts of violence or war may directly impact our facilities. For example, our Elmore, Ohio facility is located near, and derives power from, a nuclear power plant, which could be a target for a terrorist attack. In addition, terrorist attacks, related armed conflicts or prolonged or increased tensions in the Middle East or other regions of the world could cause consumer confidence and spending to decrease, decreasing demand for consumer goods that contain our products. Further, when the United States armed forces are involved in active hostilities or large-scale deployments, defense spending tends to focus more on meeting the physical needs of the troops, and planned expenditures on weapons and other systems incorporating our products

may be reduced or deferred. Any of these occurrences could also increase volatility in the United States and worldwide financial markets, which could negatively impact our sales.

Many of our manufacturing facilities are dependent on single source energy suppliers, and interruption in energy services may cause manufacturing curtailments or shutdowns.

Many of our manufacturing facilities depend on one source for electric power and for natural gas. For example, Utah Power is the sole supplier of electric power to the processing facility for our mining operations in Utah. A significant interruption in service from our energy suppliers due to equipment failures, terrorism or any other cause may result in substantial losses that are not fully covered by our business interruption insurance. Any substantial unmitigated interruption of our operations due to these conditions could harm our ability to meet our customers' demands and reduce our sales.

If the price of electrical power, fuel or other energy sources increases, our operating expenses could increase significantly.

We have numerous milling and manufacturing facilities and a mining operation, which depend on electrical power, fuel or other energy sources. See Item 2 of this Form 10-K. Our operating expenses are sensitive to changes in electricity prices and fuel prices, including natural gas prices. Prices for electricity and natural gas may increase and can fluctuate widely with availability and demand levels from other users. During periods of peak usage, supplies of energy may be curtailed, and we may not be able to purchase energy at historical market rates. While we have some long-term contracts with energy suppliers, we are exposed to fluctuations in energy costs that can affect our production costs. Although we enter into forward-fixed price supply contracts for natural gas and electricity for use in our operations, those contracts are of limited duration and do not cover all of our fuel or electricity needs.

Additionally, price increases in fuel and electricity costs, such as those increases which may occur from climate change legislation or other environmental mandates, may increase our cost of operations.

The availability and prices of some raw materials we use in our manufacturing operations fluctuate, and increases in raw material costs can adversely affect our operating results and our financial condition.

We manufacture advanced engineered materials using various precious and non-precious metals, including aluminum, beryllium, cobalt, copper, gold, nickel, palladium, platinum, ruthenium, silver and tin. The availability of, and prices for, these raw materials are subject to volatility and are influenced by worldwide economic conditions, speculative action, world supply and demand balances, inventory levels, availability of substitute metals, the U.S. dollar exchange rate, production costs of United States and foreign competitors, anticipated or perceived shortages and other factors. Precious metal prices, including prices for gold and silver, have increased significantly in recent years. These higher prices can cause adjustments to our inventory carrying values, whether as a result of quantity discrepancies, normal manufacturing losses, differences in scrap rates, theft or other factors, to have a greater impact on our profitability and cash flows. Also, the price of our products has increased in tandem with the rising metal prices, as a result of changes in precious metal prices that are passed through to our customers, which could deter them from purchasing our products and adversely affect our sales.

Further, we maintain some precious metals on a consigned inventory basis. The owners of the precious metals charge a fee that fluctuates based on the market price of those metals and other factors. A significant increase in the market price of precious metals or the consignment fee could increase our financing costs, which could increase our operating costs.

We are dependent on our new primary beryllium facility for our future supply of pure beryllium.

In 2008, we entered into an agreement with the Department of Defense to share in the cost of a new beryllium plant for primary beryllium feedstock. Installation and start-up of our new beryllium facility continued throughout 2012 at the Elmore, Ohio plant site. The resulting additional operating and material costs and manufacturing inefficiencies reduced gross margin by an estimated \$5.2 million in 2012 and an estimated \$5.3 million in 2011.

Construction is now complete, and we are ramping up production, but any delay in further transitioning the operation to run at required production levels could negatively impact our sales and/or cost structure as would unexpected quality problems in qualifying the new beryllium feedstock in our beryllium metal product lines.

The availability of competitive substitute materials for beryllium-containing products may reduce our customers' demand for these products and reduce our sales.

In certain product applications, we compete with manufacturers of non-beryllium-containing products, including organic composites, metal alloys or composites, titanium and aluminum. Our customers may choose to use substitutes for beryllium-containing products in their products for a variety of reasons, including, among other things, the lower costs of those substitutes, the health and safety concerns relating to these products and the risk of litigation relating to beryllium-containing products. If our customers use substitutes for beryllium-containing products in their products, the demand for our beryllium-containing products may decrease, which could reduce our sales.

The markets for our products are experiencing rapid changes in technology.

We operate in markets characterized by rapidly changing technology and evolving customer specifications and industry standards. New products may quickly render an existing product obsolete and unmarketable. For example, for many years thermal and mechanical performance have been at the forefront of device packaging for wireless communications infrastructure devices. In recent years, a tremendous effort has been put into developing simpler packaging solutions composed of copper and other similar components. Our growth and future results of operations depend in part upon our ability to enhance existing products and introduce newly developed products on a timely basis that conform to prevailing and evolving industry standards, meet or exceed technological advances in the marketplace, meet changing customer specifications, achieve market acceptance and respond to our competitors' products.

The process of developing new products can be technologically challenging and requires the accurate anticipation of technological and market trends. We may not be able to introduce new products successfully or do so on a timely basis. If we fail to develop new products that are appealing to our customers or fail to develop products on time and within budgeted amounts, we may be unable to recover our research and development costs, which could adversely affect our margins and profitability.

Our products are deployed in complex applications and may have errors or defects that we find only after deployment. Our products are highly complex, designed to be deployed in complicated applications and may contain undetected defects, errors or failures. Although our products are generally tested during manufacturing, prior to deployment, they can only be fully tested when deployed in specific applications. For example, we sell beryllium-copper alloy strip products in a coil form to some customers, who then stamp the alloy for its specific purpose. On occasion, it is not until such customer stamps the alloy that a defect in the alloy is detected. Consequently, our customers may discover errors after the products have been deployed. The occurrence of any defects, errors, or failures could result in installation delays, product returns, termination of contracts with our customers, diversion of our resources, increased service and warranty costs and other losses to our customers, end users or to us. Any of these occurrences could also result in the loss of, or delay in, market acceptance of our products and could damage our reputation, which could reduce our sales.

Our lengthy and variable sales and development cycle makes it difficult for us to predict if and when a new product will be sold to customers.

Our sales and development cycle, which is the period from the generation of a sales lead or new product idea through the development of the product and the recording of sales, may typically take up to two or three years, making it very difficult to forecast sales and results of operations. Our inability to accurately predict the timing and magnitude of sales of our products, especially newly introduced products, could affect our ability to meet our customers' product delivery requirements or cause our results of operations to suffer if we incur expenses in a particular period that do not translate into sales during that period, or at all. In addition, these failures would make it difficult to plan future capital expenditure needs and could cause us to fail to meet our cash flow requirements.

Our business could be adversely impacted if we fail to adequately address information security issues.

We have taken measures to protect the integrity of our technology infrastructure and the privacy of confidential information. However, our technology infrastructure is potentially vulnerable to physical or electronic break-ins, viruses or similar problems. If a person or entity circumvents our security measures, they could jeopardize the security of confidential information stored on our systems, misappropriate proprietary information or cause interruptions in our operations. We may be required to make substantial additional investments and efforts to protect against or remedy security breaches. Security breaches that result in access to confidential information could damage our reputation and expose us to a risk of loss or liability.

A portion of our revenue is derived from the sale of defense-related products through various contracts and subcontracts. These contracts may be suspended or canceled, which could have an adverse impact on our revenues. In 2012, 10% of our revenue was derived from sales to customers in the defense and science market. A portion of these customers operate under contracts with the U.S. Government, which are vulnerable to termination at any time, for convenience or default. Some of the reasons for cancellation include, but are not limited to, budgetary constraints or re-appropriation of government funds, timing of contract awards, violations of legal or regulatory requirements, and changes in political agenda. If cancellations were to occur, it would result in a reduction in our revenue.

Additionally, the impact of sequestration is yet to be fully determined. Significant additional reductions to defense spending could occur over the next decade, which could have a significant adverse impact on us. While congressional leadership is considering a variety of options to avoid sequestration, it remains uncertain as to whether the government will actually do so. In the event the sequestration is implemented as currently mandated, there could be a material adverse effect on our business and results of operations.

Disruptions or volatility in global financial markets could adversely impact our financial performance. Global economic conditions may cause volatility and disruptions in the capital and credit markets. Should global economic conditions deteriorate or access to credit markets be reduced, customers may experience difficulty in obtaining adequate financing, thereby impacting our sales. Our exposure to bad debt losses may also increase if customers are unable to pay for products previously ordered. The recent global economic crisis and the resulting recession have also caused higher unemployment rates, which could have an adverse impact on demand for consumer electronics, which comprised 41% of our sales in 2012. Any additional negative or uncertain financial and macroeconomic conditions may have a significant adverse impact on our sales, profitability and results of operations. For example, if the current economic conditions in Europe further deteriorate, it could trigger a global economic downturn similar to the one experienced in 2008 and 2009. This could have a negative impact on our sales to Europe, which accounted for approximately 11% of our sales in 2012.

The businesses of many of our customers are subject to significant fluctuations as a result of the cyclical nature of their industries and their sensitivity to general economic conditions, which could adversely affect their demand for our products and reduce our sales and profitability.

A substantial number of our customers are in the consumer electronics, telecommunications infrastructure, defense and science, industrial components and commercial aerospace, automotive electronics and appliance industries. Each of these industries is cyclical in nature, influenced by a combination of factors which could have a negative impact on our business, including, among other things, periods of economic growth or recession, strength or weakness of the U.S. dollar, the strength of the consumer electronics, automotive electronics and computer industries and the rate of construction of telecommunications infrastructure equipment and government spending on defense.

Also, in times when growth rates in our markets slow down, there may be temporary inventory adjustments by our customers that may negatively affect our business.

Because we experience seasonal fluctuations in our sales, our quarterly results will fluctuate, and our annual performance will be affected by the fluctuations.

We expect seasonal patterns to continue, which may cause our quarterly results to fluctuate. For example, the Christmas season generates increased demand from our customers that manufacture consumer products. If our revenue during any quarter were to fall below the expectations of investors or securities analysts, our share price could decline, perhaps significantly. Unfavorable economic conditions, lower than normal levels of demand and other occurrences in any of the other quarters could also harm our results of operations. For example, toward the end of 2010, customers were building inventory in anticipation of increased demand, whereas in the same period of 2011, demand decreased because our customers had excess inventory.

We conduct our sales and distribution operations on a worldwide basis and are subject to the risks associated with doing business outside the United States.

We sell to customers outside of the United States from our United States and international operations. We have been and are continuing to expand our geographic reach in Europe and Asia. Shipments to customers outside of the United States accounted for approximately 31% of our sales in 2012, 25% in 2011 and 28% in 2010. We anticipate that international shipments will account for a significant portion of our sales for the foreseeable future. Revenue from international operations (principally Europe and Asia) amounted to approximately 16% of our sales in 2012, 14% in 2011 and 17% in 2010. There are a number of risks associated with international business activities, including: burdens to comply with multiple and potentially conflicting foreign laws and regulations, including export requirements, tariffs and other barriers, environmental health and safety requirements and unexpected changes in any of these factors;

- difficulty in obtaining export licenses from the United States Government;

- political and economic instability and disruptions, including terrorist attacks;

- disadvantages of competing against companies from countries that are not subject to U.S. laws and regulations, including the Foreign Corrupt Practices Act (FCPA);

- potentially adverse tax consequences due to overlapping or differing tax structures; and

- fluctuations in currency exchange rates.

Any of these risks could have an adverse effect on our international operations by reducing the demand for our products or reducing the prices at which we can sell our products, which could result in an adverse effect on our business, financial position, results of operations or cash flows.

In addition, we could be adversely affected by violations of the FCPA and similar worldwide anti-bribery laws. The FCPA and similar anti-bribery laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to non-U.S. officials for the purpose of obtaining or retaining business. Our policies mandate compliance with these anti-bribery laws. We operate in many parts of the world that have experienced governmental corruption to some degree and, in certain circumstances, strict compliance with anti-bribery laws may conflict with local customs and practices. We cannot assure you that our internal controls and procedures always will protect us from the reckless or criminal acts committed by our employees or agents. If we are found to be liable for FCPA violations, we could suffer from criminal or civil penalties or other sanctions, which could have a material adverse effect on our business.

We are subject to fluctuations in currency exchange rates, which may negatively affect our financial performance. A significant portion of our sales is conducted in international markets and priced in currencies other than the U.S. dollar. Revenues from customers outside of the United States (principally Europe and Asia) amounted to 31% of sales in 2012, 25% in 2011 and 28% in 2010. A significant part of these international sales are priced in currencies other than the U.S. dollar. Significant fluctuations in currency values relative to the U.S. dollar may negatively affect our financial performance. In the past, fluctuations in currency exchange rates, particularly for the euro and the yen, have impacted our sales, margins and profitability. The fair value of our net asset relating to outstanding foreign currency contracts was \$0.3 million at December 31, 2012, indicating that the average hedge rates were favorable compared to the actual year-end market exchange rates. While we may hedge our currency transactions to mitigate the impact of currency price volatility on our earnings, hedging activities may not be successful. For example, hedging activities may not cover the Company's complete exposure which could have an unfavorable impact on our results of operations. We may not be able to complete our acquisition strategy or successfully integrate acquired businesses.

We have been active over the last several years in pursuing niche acquisitions. For example, we completed the acquisition of AMC in 2012 and EIS in 2011. We intend to continue to consider further growth opportunities through the acquisition of assets or companies and routinely review acquisition opportunities. We cannot predict whether we will be successful in pursuing any acquisition opportunities or what the consequences of any acquisition would be. Future acquisitions may involve the expenditure of significant funds and management time. Depending upon the nature, size and timing of future acquisitions, we may be required to raise additional financing, which may not be available to us on acceptable terms. Further, we may not be able to successfully integrate any acquired business with our existing businesses or recognize any expected advantages from any completed acquisition.

In addition, there may be liabilities that we fail, or are unable, to discover in the course of performing due diligence investigations on the assets or companies we have already acquired or may acquire in the future. We cannot assure that rights to indemnification by the sellers of these assets or companies to us, even if obtained, will be enforceable, collectible or sufficient in amount, scope or duration to fully offset the possible liabilities associated with the business or property acquired. Any such liabilities, individually or in the aggregate, could have a materially adverse effect on our business, financial condition and results of operations.

The terms of our indebtedness may restrict our operations, including our ability to pursue our growth and acquisition strategies.

The terms of our credit facilities contain a number of restrictive covenants, including restrictions in our ability to, among other things, borrow and make investments, acquire other businesses and consign additional precious metals. These covenants could adversely affect our business by limiting our ability to plan for or react to market conditions or to meet our capital needs, as well as adversely affect our ability to pursue our growth, acquisition strategies and other strategic initiatives.

Our failure to comply with the covenants contained in the terms of our indebtedness could result in an event of default, which could materially and adversely affect our operating results and our financial condition.

The terms of our credit facilities require us to comply with various covenants, including financial covenants. If the global economic downturn returns, it could have a material adverse impact on our earnings and cash flow, which could adversely affect our ability to comply with our financial covenants and could limit our borrowing capacity. Our ability to comply with these covenants depends, in part, on factors over which we may have no control. A breach of any of these covenants could result in an event of default under one or more of the agreements governing our

indebtedness which, if not cured or waived, could give the holders of the defaulted indebtedness the right to terminate commitments to lend and cause all amounts outstanding with respect to the indebtedness to be due and payable immediately. Acceleration of any of our indebtedness could result in cross defaults under our other debt instruments. Our assets and cash flow may be insufficient to fully repay borrowings under all of our outstanding debt instruments if some or all of these instruments are accelerated upon an event of default, in which case we may be required to seek legal protection from our creditors.

A major portion of our bank debt consists of variable-rate obligations, which subjects us to interest rate fluctuations. Our credit facilities are secured by substantially all of our assets (other than non-mining real property and certain other assets). Our working capital line of credit includes variable-rate obligations, which expose us to interest rate risks. If interest rates increase, our debt service obligations on our variable-rate indebtedness would increase even if the amount borrowed remained the same, resulting in a decrease in our net income. We have developed a hedging program to manage the risks associated with interest rate fluctuations, but our program may not effectively eliminate all of the financial exposure associated with interest rate fluctuations. Additional information regarding our market risks is contained in Item 7A of this Form 10-K.

We may be unable to access the financial markets on favorable terms.

The inability to raise capital on favorable terms, particularly during times of uncertainty in the financial markets, could impact our ability to sustain and grow our business and would increase our capital costs. In particular, the substantial volatility in world capital markets due to the global economic crisis has had a significant negative impact on the global financial markets.

We rely on access to financial markets as a significant source of liquidity for capital requirements not satisfied by cash on hand or operating cash flow. Our access to the financial markets could be adversely impacted by various factors, including:

- changes in credit markets that reduce available credit or the ability to renew existing credit facilities on acceptable terms;

- a deterioration of our credit;

- a deterioration in the financial condition of the banks with which we do business;

- extreme volatility in our markets that increases margin or credit requirements; and

- the collateral pledge of substantially all of our assets in connection with our existing indebtedness, which limits our flexibility in raising additional capital.

These factors have adversely impacted our access to the financial markets from time to time. Negative or uncertain global economic conditions may make it difficult for us to access the credit market and to obtain financing or refinancing, as the case may be, to the extent necessary, on satisfactory terms or at all.

A lower interest rate environment coupled with less than expected investment performance may require us to increase our pension liability and expense, which may require us to fund a portion of our pension obligations and divert funds from other potential uses.

We provide defined benefit pension plans to eligible employees. Our pension expense and our required contributions to our pension plans are directly affected by the value of plan assets, the projected rate of return on plan assets, the actual rate of return on plan assets and the actuarial assumptions we use to measure our defined benefit pension plan obligations, including the rate at which future obligations are discounted to a present value, or the discount rate. Lower investment performance of our pension plan assets resulting from a decline in the stock market could significantly increase the deficit position of our plans. Should the pension asset return fall below our expectations, it is likely that future pension expenses would increase. The actual return on our plan assets for the year ended December 31, 2012 was a gain of approximately 13%. For 2013, for pension accounting purposes, we assumed a 7.50% expected rate of return on pension assets.

We establish the discount rate used to determine the present value of the projected and accumulated benefit obligation at the end of each year based upon the available market rates for high quality, fixed income investments. An increase in the discount rate would reduce the future pension expense and, conversely, a lower discount rate would raise the future pension expense. As of December 31, 2012, for pension accounting purposes, we assumed a 4.00% discount rate for our domestic defined benefit plan compared to 4.75% for the year ended December 31, 2011.

Based on current guidelines, assumptions and estimates, including stock market prices and interest rates, we anticipate that we will make cash contributions of approximately \$13.0 million to our pension plan in 2013. If our current assumptions and estimates are not correct, contributions in 2013 and beyond may be greater than our current or future projections.

We cannot predict whether changing market or economic conditions, regulatory changes or other factors will further increase our pension expenses or funding obligations, diverting funds we would otherwise apply to other uses.

Our expenditures for post-retirement health benefits could be materially higher than we have predicted if our underlying assumptions prove to be incorrect.

We provide post-retirement health benefits to eligible employees. Our retiree health expense is directly affected by the assumptions we use to measure our retiree health plan obligations, including the assumed rate at which health care costs will increase and the discount rate used to calculate future obligations. For retiree health accounting purposes, we maintained the assumed rate at which health care costs will increase for the next year at 8% for both December 31, 2012 and December 31, 2011. In addition, we have assumed that this health care cost increase trend rate will decline to 5% by 2019.

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A one percentage point increase in assumed health care cost trend rates would have increased the post-employment benefit obligation by \$0.8 million at December 31, 2012.

We cannot predict whether changing market or economic conditions, regulatory changes or other factors will further increase our retiree health care expenses or obligations, diverting funds we would otherwise apply to other uses. Utilizing precious metal in the manufacturing process creates challenges in physical inventory valuations that may impact earnings.

We manufacture precious, non-precious and specialty metal products and also have metal cleaning operations and in-house refineries that allow for the reclaim of precious metals from internally generated or customer scrap. We refine that scrap through our internal operations and externally through outside vendors.

When taking periodic physical inventories in our refinery operations, we reconcile the actual precious metals to what was estimated prior to the physical inventory. Those estimates are based on assays or samples of precious metals taken during the refining process. If those estimates are inaccurate, we may have an inventory long (more physical precious metal than what we had estimated) or short (less physical precious metal than what we had estimated). These fluctuations could have a material impact on our financial statements and may impact earnings. For example, we reported a net inventory valuation loss of \$3.6 million in the fourth quarter 2011 as a result of the reconciliation of the amount of metal on hand with amounts financed. Higher precious metal prices may magnify the value of any inventory long or short.

Because we maintain a significant inventory of precious metals, we may experience losses due to employee error and theft.

Because we manufacture products that contain precious metals, we maintain a significant amount of precious metals at certain of our manufacturing facilities. Accordingly, we are subject to the risk of precious metal shortages resulting from employee error and theft. For example, in December 2012, the Company became aware of a potential theft of precious metal from its Albuquerque, New Mexico refinery. An investigation ensued, an arrest was made and a minor amount of stolen material was recovered. The Company began further investigations, including an analysis of the fourth quarter physical inventory results, and engaged an outside team of forensic experts and criminal investigators. While the results of these investigations are not yet complete, preliminary indications are that some, or all, of this year-end inventory short may be due to theft.

While we maintain controls to prevent employee theft, including physical security measures, if our controls do not operate effectively or are structured ineffectively, our profitability could be adversely affected, including any charges that we might incur as a result of the shortage of our inventory and by costs associated with increased security, preventative measures and insurance.

Our financial results are likely to be negatively impacted by an impairment of goodwill should our shareholder equity exceed our market capitalization for a number of quarters.

A goodwill impairment charge may be triggered by a reduction in actual and projected cash flows, which could be negatively impacted by the market price of our common shares. Our goodwill balance at December 31, 2012 was \$88.8 million. Any required non-cash impairment charge could significantly reduce this balance and have a material impact on our reported financial position and results of operations.

Changes in laws or regulations or the manner of their interpretation or enforcement could adversely impact our financial performance and restrict our ability to operate our business or execute our strategies.

New laws or regulations, or changes in existing laws or regulations or the manner of their interpretation or enforcement, could increase our cost of doing business and restrict our ability to operate our business or execute our strategies. This includes, among other things, the possible taxation under U.S. law of certain income from foreign operations, compliance costs and enforcement under the Dodd-Frank Wall Street Reform and Consumer Protection Act, and costs associated with complying with the Patient Protection and Affordable Care Act of 2010 and the regulations promulgated thereunder.

We are exposed to lawsuits in the normal course of business, which could harm our business.

During the ordinary conduct of our business, we may become involved in certain legal proceedings, including those involving product liability claims, third-party lawsuits relating to exposure to beryllium and claims against us of infringement of intellectual property rights of third parties. Due to the uncertainties of litigation, we can give no assurance that we will prevail at the conclusion of future claims. Certain of these matters involve types of claims that, if they result in an adverse ruling to us, could give rise to substantial liability which could have a material adverse effect on our business, operating results or financial condition.

We are presently uninsured for beryllium-related claims where the claimants' first exposure to beryllium occurred on or after January 1, 2008, and we have not undertaken to estimate the impact of such claims, which have yet to be asserted. In addition, some jurisdictions preclude insurance coverage for punitive damage awards. Accordingly, our profitability could be adversely affected if any current or future claimants obtain judgments for any uninsured compensatory or punitive damages. Further, an unfavorable outcome or settlement of a pending beryllium case or adverse media coverage could encourage the commencement of additional similar litigation.

Health issues, litigation and government regulations relating to our beryllium operations could significantly reduce demand for our products, limit our ability to operate and adversely affect our profitability.

If exposed to respirable beryllium fumes, dusts or powder, some individuals may demonstrate an allergic reaction to beryllium and may later develop a chronic lung disease known as chronic beryllium disease, or CBD. Some people who are diagnosed with CBD do not develop clinical symptoms at all. In others, the disease can lead to scarring and damage of lung tissue, causing clinical symptoms that include shortness of breath, wheezing and coughing. Severe cases of CBD can cause disability or death.

Further, some scientists claim there is evidence of an association between beryllium exposure and lung cancer, and certain standard-setting organizations have classified beryllium and beryllium compounds as human carcinogens.

The health risks relating to exposure to beryllium have been, and will continue to be, a significant issue confronting the beryllium-containing products industry. The health risks associated with beryllium have resulted in product liability claims, employee and third-party lawsuits. As of December 31, 2012, we had one CBD case outstanding.

The increased levels of scrutiny by federal, state, foreign and international regulatory authorities could lead to regulatory decisions relating to the approval or prohibition of the use of beryllium-containing materials for various uses. Concerns over CBD and other potential adverse health effects relating to beryllium, as well as concerns regarding potential liability from the use of beryllium, may discourage our customers' use of our beryllium-containing products and significantly reduce demand for our products. In addition, adverse media coverage relating to our beryllium-containing products could damage our reputation or cause a decrease in demand for beryllium-containing products, which could adversely affect our profitability.

Our bertrandite ore mining and beryllium-related manufacturing operations and some of our customers' businesses are subject to extensive health and safety regulations that impose, and will continue to impose, significant costs and liabilities, and future regulation could increase those costs and liabilities or effectively prohibit production or use of beryllium-containing products.

Our customers and we are subject to laws regulating worker exposure to beryllium. Standards for exposure to beryllium are under review by OSHA, the Department of Energy and by other governmental and private standard-setting organizations. One result of these reviews will likely be more stringent worker safety standards. Some organizations, such as the California Occupational Health and Safety Administration and the American Conference of Governmental Industrial Hygienists, have adopted standards that are more stringent than the current standards of OSHA. The development, proposal or adoption of more stringent standards may affect buying decisions by the users of beryllium-containing products. If the standards are made more stringent and/or our customers or other downstream users decide to reduce their use of beryllium-containing products, our results of operations, liquidity and financial condition could be materially adversely affected. The impact of this potential adverse effect would depend on the nature and extent of the changes to the standards, the cost and ability to meet the new standards, the extent of any reduction in customer use and other factors. The magnitude of this potential adverse effect cannot be estimated.

Our bertrandite ore mining and manufacturing operations are subject to extensive environmental regulations that impose, and will continue to impose, significant costs and liabilities on us, and future regulation could increase these

costs and liabilities or prevent production of beryllium-containing products.

We are subject to a variety of governmental regulations relating to the environment, including those relating to our handling of hazardous materials and air and wastewater emissions. Some environmental laws impose substantial penalties for non-compliance. Others, such as the federal Comprehensive Environmental Response, Compensation, and Liability Act, or CERCLA, impose strict, retroactive and joint and several liability upon entities responsible for releases of hazardous substances. Bertrandite ore mining is also subject to extensive governmental regulation on matters such as permitting and licensing requirements, plant and wildlife protection, reclamation and restoration of mining properties, the discharge of materials into the environment and the

effects that mining has on groundwater quality and availability. Future requirements could impose on us significant additional costs or obligations with respect to our extraction, milling and processing of ore. If we fail to comply with present and future environmental laws and regulations, we could be subject to liabilities or our operations could be interrupted. In addition, future environmental laws and regulations could restrict our ability to expand our facilities or extract our bertrandite ore deposits. These environmental laws and regulations could also require us to acquire costly equipment, obtain additional financial assurance, or incur other significant expenses in connection with our business, which would increase our costs of production.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

We operate manufacturing plants, service and other facilities throughout the world. During 2012, we made effective use of our productive capacities at our principal facilities. We believe that the quality and production capacity of our facilities is sufficient to maintain our competitive position for the foreseeable future. Information as of December 31, 2012, with respect to our significant facilities that are owned or leased, and the respective segments in which they are included, is set forth below:

Location	Owned or Leased	Approximate Number of Square Feet
Corporate and Administrative Offices		
Mayfield Heights, Ohio (1)(2)(3)(5)	Leased	79,000
Manufacturing Facilities		
Albuquerque, New Mexico (1)	Owned/Leased	13,000/80,200
Bloomfield, Connecticut (1)	Leased	23,400
Brewster, New York (1)	Leased	75,000
Buellton, California (1)	Leased	35,000
Buffalo, New York (1)	Owned	97,000
Delta, Utah (2)	Owned	86,000
Elmore, Ohio (2)(3)	Owned/Leased	681,000/191,000
Farnborough, England (3)	Leased	10,000
Fremont, California (3)	Leased	40,000
Limerick, Ireland (1)	Leased	18,000
Lincoln, Rhode Island (4)	Owned/Leased	130,000/12,000
Lorain, Ohio (2)	Owned	55,000
Milwaukee, Wisconsin (1)	Owned/Leased	99,000/7,300
Newburyport, Massachusetts (1)	Owned	30,000
Reading, Pennsylvania (2)	Owned	123,000
Santa Clara, California (1)	Leased	5,800
Shanghai, China (1)	Leased	101,400
Singapore (1)	Leased	30,000
Subic Bay, Philippines (1)	Leased	5,000
Suzhou, China (1)	Leased	22,400
Taipei, Taiwan (1)	Leased	11,500
Tucson, Arizona (3)	Owned	53,000
Tyngsboro, Massachusetts (1)	Leased	38,000
Westford, Massachusetts (1)	Leased	75,000
Wheatfield, New York (1)	Owned	35,000
Windsor, Connecticut (1)	Leased	34,700
Service and Distribution Centers		
Elmhurst, Illinois (2)	Leased	28,500
Fukaya, Japan (2)(3)(4)	Owned	35,500
Reading, England (2)(3)	Leased	9,700
Singapore (2)(3)(4)	Leased	2,500
Stuttgart, Germany (2)	Leased	24,800
Tokyo, Japan (2)(3)(4)	Leased	7,200
Warren, Michigan (2)	Leased	34,500

(1) Advanced Material Technologies

- (2) Performance Alloys
- (3) Beryllium and Composites
- (4) Technical Materials
- (5) All Other

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In addition to the above, the Company holds certain mineral rights on 7,500 acres in Juab County, Utah from which the beryllium-bearing ore, bertrandite, is mined by the open pit method. A portion of these mineral rights are held under lease. Ore reserve data can be found in Item 7 of this Form 10-K.

Item 3. LEGAL PROCEEDINGS

Our subsidiaries and our holding company are subject, from time to time, to a variety of civil and administrative proceedings arising out of our normal operations, including, without limitation, product liability claims, health, safety and environmental claims and employment-related actions. Among such proceedings are cases alleging that plaintiffs have contracted, or have been placed at risk of contracting, beryllium sensitization or chronic beryllium disease or other lung conditions as a result of exposure to beryllium ("beryllium cases"). The plaintiffs in beryllium cases seek recovery under negligence and various other legal theories and demand compensatory and often punitive damages, in many cases of an unspecified sum. Spouses of some plaintiffs claim loss of consortium.

Beryllium Claims

As of December 31, 2012, our subsidiary, Materion Brush Inc., was a defendant in one beryllium case (involving one plaintiff, plus one spouse with a consortium claim) in the federal district court in Philadelphia. This case was filed during September 2012. On January 16, 2013, the Company filed a motion for judgment on the pleadings in this case. The Company has some insurance coverage, subject to an annual deductible.

As of December 31, 2011, there were no pending beryllium cases, and as of December 31, 2012, there was one pending beryllium case (involving two plaintiffs).

Item 4. MINE SAFETY DISCLOSURES

Information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K (17 CFR 229.104) is included in Exhibit 95 to this Form 10-K.

PART II

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

Market Information and Dividends

The Company's common shares are listed on the New York Stock Exchange under the symbol "MTRN". As of February 20, 2013, there were 1,183 shareholders of record. The table below is a summary of the range of market prices with respect to common shares during each quarter of fiscal years 2012 and 2011 and the dividends declared per common share.

Fiscal Quarters	Stock Price Range		Dividends
	High	Low	
2012			
First	\$32.91	\$24.77	\$—
Second	29.37	20.37	0.075
Third	25.57	17.59	0.075
Fourth	25.93	18.84	0.075
2011			
First	\$44.94	\$33.99	\$—
Second	44.00	33.02	—
Third	42.05	21.11	—
Fourth	30.15	19.53	—

We did not pay any dividends in 2011, but began paying dividends in June 2012. We expect to pay comparable cash dividends in the future, subject to the continuing determination by our Board of Directors that paying dividends remains in the best interest of our shareholders. The agreements governing our credit facilities restrict the amount of cash dividends that we can pay. Any determinations by our Board of Directors to pay cash dividends in the future will take into account various factors, including our financial condition, results of operations, current and anticipated cash needs, plans for expansion and restrictions under the agreements governing our credit facilities and any agreement governing our future debt. We cannot provide assurance that dividends will be paid in the future or that, if paid, the dividends will be at the same amount or frequency.

Performance Graph

The following graph sets forth the cumulative shareholder return on our common shares as compared to the cumulative total return of the S&P SmallCap 600 Index and the Russell 2000 Index as Materion Corporation is a component of these indices.

	2007	2008	2009	2010	2011	2012
Materion Corporation	\$100	\$34	\$50	\$104	\$66	\$70
S&P SmallCap 600	\$100	\$69	\$87	\$109	\$110	\$128
Russell 2000	\$100	\$66	\$84	\$107	\$102	\$119

The above graph assumes that the value of our common shares and each index was \$100 on December 31, 2007 and that all dividends, if paid, were reinvested.

Item 6. SELECTED FINANCIAL DATA

Materion Corporation and Subsidiaries

(Thousands except per share data)	2012	2011	2010	2009	2008
For the year					
Net sales	\$1,273,008	\$1,526,730	\$1,302,314	\$715,186	\$909,711
Cost of sales	1,074,295	1,311,409	1,079,666	623,764	757,836
Gross margin	198,783	215,321	222,648	91,422	151,875
Operating profit (loss)	36,776	57,078	73,633	(19,485)	) 28,071
Interest expense - net	3,134	2,812	2,665	1,299	1,995
Income (loss) before income taxes	33,642	54,266	70,968	(20,784)	) 26,076
Income taxes (benefit)	8,978	14,287	24,541	(8,429)	) 7,719
Net income (loss)	24,664	39,979	46,427	(12,355)	) 18,357
Earnings per share of common stock:					
Basic	1.21	1.96	2.29	(0.61)	) 0.90
Diluted	1.19	1.93	2.25	(0.61)	) 0.89
Dividends per share of common stock	0.225	—	—	—	—
Depreciation and amortization	37,695	44,194	35,932	32,369	34,204
Capital expenditures	34,088	28,187	42,314	44,173	35,515
Mine development expenditures	10,573	560	11,348	808	421
Year-end position					
Working capital	251,922	231,230	208,365	140,482	189,899
Ratio of current assets to current liabilities	2.7 to 1	2.7 to 1	2.4 to 1	2.0 to 1	2.8 to 1
Property and equipment:					
At cost	\$779,785	\$752,726	\$719,953	\$665,361	\$635,266
Cost less depreciation, amortization and depletion	272,542	263,398	265,868	227,766	207,254
Total assets	814,917	772,103	735,410	621,953	581,897
Long-term liabilities	203,335	184,143	157,571	131,630	116,524
Long-term debt	44,880	40,463	38,305	8,305	10,605
Shareholders' equity	414,995	405,982	384,356	339,859	347,097
Weighted-average number of shares of stock outstanding:					
Basic	20,418	20,365	20,282	20,191	20,335
Diluted	20,679	20,754	20,590	20,191	20,543

Capital expenditures shown above include amounts spent under government contracts for which reimbursements were received from the government in the amounts of \$1.0 million in 2012, \$5.4 million in 2011, \$21.9 million in 2010, \$28.2 million in 2009 and \$8.0 million in 2008.

See Notes to Consolidated Financial Statements.

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

OVERVIEW

We are an integrated producer of high performance advanced engineered materials used in a variety of electrical, electronic, thermal and structural applications. Our products are sold into numerous markets, including consumer electronics, industrial components and commercial aerospace, defense and science, medical, energy, automotive electronics, telecommunications infrastructure and appliance.

Sales of \$1.3 billion in 2012 were 17% lower than our record-high sales of \$1.5 billion in 2011. Market conditions and the associated demand levels were mixed during 2012. We were encouraged by the continuing improvement of our medical market sales and shipments into the industrial components and commercial aerospace market. Consumer electronics sales were adversely impacted by changes within the LED sector while energy sales softened due to a reduction in the oil and gas rig count and the weakness of the solar energy sector. Within the defense and science market, sales for defense applications softened as a result of government budget cuts and the timing of programs while sales for science applications improved. Our sales in 2012 were also affected by differences in the metal price pass-through, the use of customer-supplied metal and our discontinuation of a product line.

Gross margin of \$198.8 million in 2012 was \$16.5 million lower than the gross margin in 2011. Margins were negatively impacted by the lower volumes in 2012 but benefitted from a favorable change in product mix and improved pricing. The gross margin in 2012 was also negatively impacted by a physical inventory loss recorded in the fourth quarter. Implementation and start-up of the new beryllium facility continued in 2012 and, while the associated additional costs reduced margins, improvements in the output and manufacturing efficiencies were made throughout the year.

During 2012, we announced the consolidation of various operations that included the closing of three small facilities and the relocation of their businesses to other facilities. These actions were designed to improve customer service levels and operating efficiencies while reducing costs over the long term. One-time costs associated with the consolidation plan totaled \$4.8 million in 2012.

As a result of the lower gross margin and the facility consolidation costs, as well as an increase in expenses, operating profit declined from \$57.1 million in 2011 to \$36.8 million in 2012. Earnings per share were \$1.19 in 2012 and \$1.93 in 2011.

Cash flow from operations was solid once again, as we generated \$38.6 million in 2012. Cash flow in the fourth quarter 2012 was particularly strong.

We declared a quarterly dividend on our common shares starting in the second quarter 2012 and paid \$4.6 million to shareholders during the year.

In the first quarter 2012, we acquired the outstanding stock of Aerospace Metal Composites Limited (AMC), a small manufacturing operation that produces metal matrix composites. The AMC acquisition followed the acquisition of the outstanding stock of EIS Optics Limited (EIS), a producer of optical filters and related materials, in the fourth quarter 2011.

RESULTS OF OPERATIONS

(Millions except per share amounts)

	2012	2011	2010
Net sales	\$1,273.1	\$1,526.7	\$1,302.3
Operating profit	36.8	57.1	73.6
Income before income taxes	33.6	54.3	71.0
Net income	24.7	40.0	46.4
Diluted earnings per share	1.19	1.93	2.25

Sales were \$1.3 billion in 2012, a decline of \$253.6 million, or 17%, from sales of \$1.5 billion in 2011. Sales in 2011 were \$224.4 million, or 17%, higher than sales of \$1.3 billion in 2010. The decline in sales in 2012 was partially due to a lower metal price pass-through, an increase in the use of customer-supplied metal and the discontinuation of a non-strategic product line, while the changes in sales by market were mixed.

Sales to the consumer electronics market, our largest market, improved slightly in 2012 over 2011 after adjusting for differences in metal price pass-through and use of customer-supplied metal. The growth was primarily due to the acquisition of EIS. Sales to the consumer electronics market in 2012 were negatively affected by softer sales for LED applications due to changes in market conditions. Sales to the consumer electronics market grew approximately 10% in 2011 over 2010, but this growth was mainly due to higher metal pass-through prices.

End-use applications for our materials in the consumer electronics market include cell phones, tablets, gaming systems and other hand-held devices, and the market's demand for increased power and miniaturization in these applications favors the use of our high-performance materials. As a material supplier, we sell to stamping houses and sub-assembly shops so we are several steps removed from the final consumer. Our sales to this market in a given period, therefore, are affected by downstream inventory levels and production schedules and changes in market share of the intermediaries within the supply chain and not necessarily by changes in sales of the final product or in consumer demand in that period. While our marketing staff works closely with various demand generators to develop new applications, technologies can be closely guarded for competitive reasons and we do lose applications from time to time due to rapid changes in technologies and applications that have short life spans.

Underlying volumes sold to the industrial components and commercial aerospace market continued to grow in both 2012 and 2011. The growth in both years was driven by higher sales of materials for heavy equipment, as a result of product development and market penetration efforts, and improved aerospace market conditions. Sales of x-ray windows for industrial applications also contributed to the sales growth in 2011 over 2010 but sales of these products softened in 2012. Sales to the industrial components and aerospace market were approximately 12% of our total sales in 2012.

Defense and science market sales, which were approximately 10% of our total sales in 2012, declined at a double-digit rate in 2012 from 2011 primarily as a result of government delays and spending cuts. The majority of the decline was in optics and precious metal applications as our traditional beryllium-based defense and science sales showed a more minor decline. Defense and science sales in 2011 were relatively unchanged from 2010.

Sales to the medical market grew in 2012 and 2011 over the respective prior year largely due to increased sales for blood glucose test strip applications. Medical sales, which also include x-ray window applications, accounted for approximately 8% of our total sales in 2012.

Energy market sales softened in 2012 from 2011 after growing significantly in 2011 over 2010. Sales for oil and gas applications, which were a main driver for the growth in 2011, declined in 2012 due to a reduction in the rig count. Sales of materials for solar energy, fuel cells and other alternative energy applications contributed to the growth in 2011 but declined in 2012 due to weaker market conditions. Energy market sales were 8% of our total sales in 2012.

Automotive electronics sales declined slightly in 2012 from 2011 after growing at a double-digit rate in 2011 over 2010. The growth in beryllium copper strip sales, primarily in the U.S., was partially offset by softer demand in Europe and weaker sales of optics. The growth in 2011 was largely due to solid demand in the domestic and European markets. Automotive electronics sales were approximately 6% of total sales in 2012.

The order entry rate strengthened in the first half of 2012 over a weak fourth quarter 2011, but then softened in the second half of the year. Total order entry was 2% higher than sales in 2012. Similar to 2012, order entry rates started 2011 off fairly strong, but weakened in the second half of the year and in the fourth quarter in particular. The total

order entry level in 2011, while higher than the order entry level in 2010, was approximately 3% lower than sales in 2011.

Our sales are affected by metal prices, as changes in the prices we pay for precious metals and various base metals, primarily copper, are passed on to our customers. The average prices for the metals we purchased in 2012 were lower than they were in 2011 when the prices for various metals reached all-time or near-term record highs. The net change in metal prices resulted in an estimated \$5.3 million decrease in sales in 2012 from 2011 and an estimated \$195.6 million increase in sales in 2011 over 2010.

We manufacture precious metal products using our metal that we sell to the customer or on a toll basis using metal that the customer supplies to us. Shifts in the relationship between the use of owned versus customer-supplied metal can affect the sales comparisons between periods, and in 2012, customer-supplied metal increased as a percent of the total metal shipped. This shift in the source of metal reduced our sales of precious metal by an estimated \$73.0 million in 2012 compared to 2011. Since the cost of the precious metal is a pass-through, a change in the metal's source does not have a corresponding impact on gross margin.

As part of our product rationalization efforts, we exited the silver investment bar business in 2012. This non-strategic product line generated extremely low margins that could not support the associated level of working capital and overhead. This action resulted in a reduction of sales of approximately \$44.6 million in 2012 from 2011 with an immaterial impact on profitability.

The acquisition of AMC in the first quarter 2012 had a minor impact on sales as did having a full year of EIS in 2012 after it was acquired in the fourth quarter 2011.

Domestic sales declined 23% in 2012 from 2011 after growing 23% in 2011 over 2010. Domestic sales include the majority of the impact of the differences in metal price pass-through between periods. International sales, which are included in each of our reportable segments, grew 2% in 2012 over 2011 and 4% in 2011 over 2010.

Gross margin was \$198.8 million, or 16% of sales, in 2012 versus \$215.3 million, or 14% of sales, in 2011 and \$222.6 million, or 17% of sales, in 2010.

The lower sales volumes reduced gross margin by an estimated \$31.0 million in 2012 from 2011 while differences in the volumes sold by the four segments between 2011 and 2010 resulted in a net increase of \$9.2 million in gross margin in 2011 over 2010. The change in product mix was favorable in 2012 partially due to higher sales of precious metal products for medical applications and pure beryllium metal products that generally generate higher margins.

The change in product mix effect was unfavorable in 2011. Margins also benefited from improved pricing in portions of our business in both 2012 and 2011. Improved yields on nickel products generated a margin benefit in 2012 as compared to 2011 after the lower yields and associated higher costs reduced margins in 2011 from 2010.

Installation and start-up of our new beryllium facility continued throughout 2012 and 2011 at the Elmore, Ohio plant site. The resulting additional operating and material costs and manufacturing inefficiencies reduced gross margin by an estimated \$5.2 million in 2012 and an estimated \$5.3 million in 2011.

The gross margin in 2012 was reduced by a net physical inventory adjustment of \$7.4 million recorded in the fourth quarter at a facility within the Advanced Material Technologies segment. We believe that a portion, and perhaps a significant portion, of this loss may be due to theft. While a minor amount of stolen material was recovered and an arrest was made, the full scope of the potential theft has not yet been determined as the internal and criminal investigations were still in progress as of early in the first quarter of 2013. We have insurance for theft and the carrier was notified accordingly. Since the amount of any recovery was still uncertain, an insurance recoverable was not recorded in 2012 and the benefit from any insurance proceeds will be recorded in a future period. Shipments to customers were not affected by the inventory short. Physical inventories were taken at this facility in the first and second quarters in 2012 that resulted in a combined net short of \$0.2 million.

We recorded a net unfavorable inventory valuation adjustment of \$3.6 million in the fourth quarter 2011. This loss was also recorded within the Advanced Material Technologies segment. We have no evidence to believe that this loss was due to theft.

The acquisitions of EIS and AMC provided additional gross margin in 2012 over 2011 while EIS provided a minor margin increase in 2011 over 2010.

We recorded a \$4.4 million benefit to gross margin in 2010 as a result of the depletion of a last-in, first-out (LIFO) inventory layer. There was no corresponding benefit recorded in 2012 or 2011.

The annual expense on the domestic defined benefit pension plan was \$9.8 million in 2012, \$8.0 million in 2011 and \$5.8 million in 2010. The increase in the pension expense in 2012 and 2011 was due to changes in the discount rate, the performance of the plan assets and other factors and affected cost of sales, selling, general and administrative expenses and, to a lesser extent, research and development expenses. See “Critical Accounting Policies”.

During 2012, we announced the consolidation of several of our smaller operations in order to improve efficiencies and cash flows. Specifically:

• Our microelectronics packaging business will relocate from Massachusetts to Singapore in order to more effectively service the customer base in Malaysia. The relocation is planned to be completed in the first half of 2013.

The precious metal facility in the Czech Republic was shut down in the fourth quarter 2012 and going forward the existing customer base will be serviced from our facility in Ireland. The Czech operation had limited market penetration and was unprofitable.

We had excess manufacturing capacity in our optical coatings operations, partially due to softer demand for these products for defense applications, and, as a result, we will close a facility in California and relocate strategic assets to other facilities during 2013. We also reduced the headcount at the related facility in China in the second half of 2012.

• The Albuquerque, New Mexico operations will be consolidated from four separate buildings into two buildings in 2013 in order to improve work flow and space utilization and reduce overhead costs.

Costs associated with these actions, including severance, equipment write-offs, relocations and other related items, totaled \$4.8 million in 2012 with \$1.6 million recorded in cost of sales, \$1.6 million recorded in selling, general and administrative expense and \$1.6 million recorded in net-other expense. Approximately 150 employees, or 5% of our work force, will be affected once all of these actions are completed. We estimate that there will be no net impact on pre-tax income from these actions in 2013 as the additional costs to finalize the consolidations will offset the associated benefits gained. We also estimate that these actions should generate savings in 2014.

Selling, general and administrative (SG&A) expenses were \$133.9 million (11% of sales) in 2012, \$131.4 million (9% of sales) in 2011 and \$126.5 million (10% of sales) in 2010.

Legal, administrative and marketing expenses associated with the change of our name to Materion Corporation in the first quarter 2011 totaled \$3.9 million in 2011 and \$0.9 million in 2010. Costs associated with the name change were immaterial in 2012.

The incentive compensation expense on plans that pay in cash was \$3.1 million lower in 2012 than in 2011 and \$7.0 million lower in 2011 than 2010. The changes in the annual expense between years were caused primarily by the performance of the individual operations relative to their plans' objectives. Stock-based compensation expense, including the expense for stock appreciation rights, restricted stock and performance restricted shares, was \$5.9 million in 2012, \$5.0 million in 2011 and \$4.1 million in 2010. The comparison of stock-based compensation expense between years may be affected by changes in plan design, the number of grants in a given year, actual performance relative to the plans' objectives, movement in our stock price, forfeitures, vesting schedules and other factors.

Expenses incurred by EIS and AMC subsequent to their acquisitions increased SG&A expenses by \$5.1 million in 2012 over 2011 and \$1.4 million in 2011 over 2010.

Acquisition-related expenses for legal, accounting and due diligence services totaled \$1.8 million in 2011 and \$0.1 million in 2010. As a result of a change in accounting regulations effective January 1, 2009, acquisition-related expenses must be charged against income as incurred. Previously, these expenses would have been capitalized as part of the cost of the acquisitions.

Various corporate costs increased in 2012 over 2011 after increasing in 2011 over 2010. A portion of the higher costs was due to various initiatives, including a new centralized procurement function, that are designed to produce long-term savings and improve profitability across the organization. Other costs, including information technology, environmental, health and safety, business development and communications, have increased in order to support a larger and more diverse organization. Legal compliance costs were also higher in 2011 over 2010 but leveled off in 2012.

Research and development (R&D) expenses were \$12.5 million in 2012, \$11.1 million in 2011 and \$7.1 million in 2010. While R&D expenses increased in 2012 and 2011 over the respective prior year, the expense was less than 1% of sales in each of the three years presented. The majority of the increase in 2012 was due to expenses incurred by EIS. The higher expense in 2011 was due to an increase in activity levels and various special projects. Our R&D staff works closely with production engineers, sales engineers and marketing to support the development of new products and applications as well as to make improvements in the current product portfolio.

Derivative ineffectiveness expense was \$0.6 million in 2010. There was no derivative ineffectiveness recorded in 2012 or 2011. The ineffectiveness recorded in 2010 related to copper-based derivatives that did not qualify for hedge accounting and matured during that year.

Other-net expense totaled \$15.6 million in 2012, \$15.8 million in 2011 and \$14.8 million in 2010. See Note N to the Consolidated Financial Statements for the details of the major components of other-net expense for each of the three years. The major differences in other-net expense between the years are described below.

The metal consignment fee was \$0.9 million lower in 2012 than in 2011, mainly due to differences in the rate charged by the financial institutions and lower average metal prices. The consignment fee increased \$3.3 million in 2011 over 2010 as a result of higher metal prices and increased quantities of metal on hand.

The net foreign currency exchange and translation gains totaled \$1.5 million in 2012 compared to net losses of \$2.8 million in 2011 and \$0.8 million in 2010. These gains and losses result from movements in the value of the U.S. dollar versus other currencies, primarily the euro and yen, and the related impact on certain foreign currency denominated assets, liabilities and transactions and the maturity of foreign currency hedge contracts.

The purchase agreement for our acquisition of the outstanding stock of Barr Associates, Inc. in 2009 included an earn-out feature that would require us to make additional payments to the prior owners of Barr based upon Barr's performance against identified benchmarks over the 2010 to 2013 period. The present value of the earn-out was estimated to be \$1.9 million at the time of the acquisition and was recorded in other long-term liabilities. No payments were required to be made in 2010, 2011 or 2012 based upon Barr's actual performance relative to the individual benchmarks for those years. We determined that the fair value of this liability, based upon the facts and circumstances and updated projections, should be reduced to zero as of December 31, 2011. We had previously reduced the fair value of the liability to \$1.1 million as of December 31, 2010 based upon a review of the facts and circumstances at that time. The \$1.1 million benefit from the reduction to the liability in the fourth quarter 2011 and the \$0.8 million benefit from the liability reduction taken in the fourth quarter 2010 were recorded as income in those respective periods in accordance with accounting guidelines.

Other-net in 2011 included a \$1.3 million benefit from the favorable resolution of a lawsuit that we had filed against a utility provider for raising our billing rates, which was in violation of our contract. In the fourth quarter 2011, the court ruled in our favor and we received \$1.3 million in full satisfaction of our claim.

We donated our former headquarters building and the associated land to a non-profit organization, which resulted in a write-off of the carrying value of \$0.5 million to other-net expense in 2010. The majority of this unfavorable impact on income before income taxes was offset by a favorable income tax adjustment in that year.

Operating profit was \$36.8 million in 2012 compared to \$57.1 million in 2011. The \$20.3 million decline in profitability was due to lower gross margin as a result of the reduced volumes, the physical inventory differences and other factors, the charges recorded for the plant consolidations and higher SG&A expenses. Operating profit in 2011 was \$16.5 million lower than the operating profit of \$73.6 million generated in 2010. The decline resulted from the margin benefit from changes in the sales volume being more than offset by the additional plant start-up costs, other margin issues, higher SG&A expenses, an increase in metal consignment fees and other factors.

Interest expense - net was \$3.1 million in 2012, \$2.8 million in 2011 and \$2.7 million in 2010. The increase in expense in 2012 over 2011 was due primarily to higher average debt levels and, to a lesser extent, an increase in the average borrowing rate. The average outstanding debt levels were similar in 2011 and 2010, while the average effective borrowing rate was slightly higher in 2011 than in 2010, particularly in the second half of 2011.

Income before income taxes and income tax expense for each of the past three years were as follows:

(Millions)	2012	2011	2010	
Income before income taxes	\$33.6	\$54.3	\$71.0	
Income tax expense	9.0	14.3	24.5	
Effective tax rate	26.7	% 26.3	% 34.6	%

The effects of percentage depletion (a tax benefit resulting from our mining operations), foreign source income and deductions, the production deduction, executive compensation, discrete events and other items were major causes of the differences between the effective and statutory rates in each of the three years.

The research and experimentation credit provided a tax benefit in 2011, but this credit was not extended by the federal government for 2012 until January 2013. Accounting regulations require us to record the tax expense based upon the laws in effect at the end of the year and, even though the research and experimentation credit will be used to determine our actual liability on our 2012 tax return, the 2012 benefit of this credit will not be recorded in our Consolidated

Statement of Income until the first quarter 2013.

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The 2012 tax expense included net favorable discrete items of \$0.3 million as a result of a change in tax rates in Japan that affected the carrying value of certain deferred tax assets, a reduction to the tax reserves due to the lapse of the statute of limitations, adjustments to the 2011 tax returns that were finalized during 2012 and other items.

The tax expense in 2011 included net favorable discrete items of \$2.0 million due to a combination of a reduction to the tax reserves as a result of the lapse of the statute of limitations, adjustments to the 2010 tax returns that were finalized in the third quarter 2011 and other items.

The tax expense in 2010 included \$1.5 million for the reduction of a deferred tax asset as a result of the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act. Beginning in 2013, we will no longer be able to claim an income tax deduction for prescription drug benefits provided to our retirees and reimbursed under the Medicare Part D retiree drug subsidy program.

The 2010 tax expense also included the unfavorable impact of a net \$0.6 million increase in the tax reserves that was recorded in accordance with accounting guidelines.

See Note P to the Consolidated Financial Statements for a reconciliation of the statutory and effective tax rates.

Net income was \$24.7 million, or \$1.19 per share diluted, in 2012 compared to \$40.0 million, or \$1.93 per share diluted, in 2011 and \$46.4 million, or \$2.25 per share diluted, in 2010.

Segment Disclosures

Results by segment are shown in Note M to the Consolidated Financial Statements. The All Other column in Note M includes our parent company expenses, other corporate charges and the operating results of Materion Services Inc., a wholly owned subsidiary that provides administrative and financial oversight services to our other businesses on a cost-plus basis. In 2011, we changed our name from Brush Engineered Materials Inc. to Materion Corporation. We changed the names of the majority of our subsidiaries as well. We also changed the names of our four reportable segments but the name change did not alter our operating structure nor did it change the make-up of those segments. The All Other column shows an operating loss of \$6.6 million in 2012 compared to \$10.1 million in 2011 and \$8.3 million in 2010. The reduction in the loss in 2012 from 2011 was due to the costs associated with the company name change incurred in 2011 and an increase in costs charged to the business units offset in part by an increase in various corporate costs and other factors. The primary difference between the 2011 and 2010 results was due to the costs associated with the company name change, due diligence and acquisition costs, various corporate initiatives and other factors offset in part by lower incentive compensation and an increase in costs charged out to the business units.

Advanced Material Technologies

(Millions)	2012	2011	2010
Net sales	\$847.8	\$1,051.8	\$879.0
Operating profit	16.7	33.5	39.5

Advanced Material Technologies manufactures precious, non-precious and specialty metal products, including vapor deposition targets, frame lid assemblies, clad and precious metal preforms, high temperature braze materials, ultra-fine wire, advanced chemicals, optics, performance coatings and microelectronic packages. These products are used in wireless, semiconductor, photonic, hybrid and other microelectronic applications within the consumer electronics and telecommunications infrastructure markets. Other key markets for these products include medical, defense and science, energy and industrial components. Advanced Material Technologies also has metal cleaning operations and in-house refineries that allow for the reclaim of precious metals from internally generated or customers' scrap. This segment has domestic facilities in New York, Connecticut, Wisconsin, New Mexico, Massachusetts and California and international facilities in Asia and Europe.

Sales from Advanced Material Technologies were \$847.8 million, a decline of \$204.0 million, or 19%, from sales of \$1.1 billion in 2011. Sales in 2011 were an improvement of \$172.8 million, or 20%, over sales of \$879.0 million in 2010.

The previously discussed impact of changes in the amount of customer-supplied metal flowed through this segment's sales as did the discontinuation of investment bar sales.

We adjust our selling prices to reflect the price we pay for the precious and various non-precious metals sold. While a change in the cost of the metal is generally a pass-through to the customer, we generate a margin on our fabrication efforts irrespective of the type of metal used in a given application. On average, the applicable metal prices were

higher in each of 2012 and 2011

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than the respective prior years, although the increase in prices in 2012 was not substantial. We estimate that the higher metal price pass-through increased Advanced Material Technologies' sales an estimated \$3.2 million in 2012 from 2011 and \$180.5 million in 2011 over 2010. While the metal price impact was greater than the total sales increase in 2011, underlying volumes processed grew in 2011 due to differences in product mix, customer-supplied metal and other factors.

After adjusting for differences in the metal price pass-through and the use of customer-supplied metal, Advanced Material Technologies' sales to the consumer electronics and medical markets increased in 2012 over 2011 while sales to its other major markets were flat to down.

The majority of the sales into the consumer electronics market from this segment are vapor deposition targets, lids, wire and other related precious and non-precious metal products for semiconductors and other microelectronic applications. These materials are used in wireless, LED, handheld devices and other applications as well as in a number of applications within the defense and science market. The growth in consumer electronics sales in 2012 was largely due to the acquisition of EIS, which produces optical coatings and related products for projection display, gaming and other applications. Consumer electronic sales in 2011 were flat with 2010 as strong sales in the first half of that year were offset by a weaker second half of the year due to stagnant demand.

Sales of precious metal products for LED applications into the consumer electronics market declined in 2012 due to the slower than anticipated growth in end-use consumer demand for LED products driven by the high price to the final customer. As a result, manufacturers of LED products have been designing ways to reduce costs, including reducing the consumption of high cost materials. These new designs use less of our materials and therefore negatively impact the level of our shipments for these applications. This change also resulted in excess downstream inventories during 2012 that needed to be worked down, further depressing our sales in the short term.

Since we are an up-front material supplier, changes in our consumer electronics sales levels do not necessarily correspond to changes in the end-use consumer demand in the same period due to downstream inventory positions, the time to develop and deploy new products and manufacturing lead times and scheduling. While our product and market development efforts allow us to capture new applications, we do lose existing applications and customers from time to time due to the rapid change in technologies and other factors.

Sales of large area coatings products, primarily precision precious metal coated polymer films, grew approximately 35% in 2012 over 2011 and 50% in 2011 over 2010 after adjusting for the estimated metal price difference. The growth in 2012 was predominately due to application development efforts and geographic expansion of our sales of blood glucose test strip materials into the medical market as well as share gains within the existing customer base. Lower manufacturing yields and the inability to hold tolerances resulted in missed sales to a key customer and the loss of a portion of the business to our competitor in 2010. New processes were developed and qualified with the customer and shipment levels improved during 2011. The sales growth in 2011 was also due to product development and share gains with other customers.

Sales of advanced chemical products for LED, optics, security, photovoltaic and other applications from the Wisconsin operations declined approximately 22% in 2012 from 2011 after growing approximately 5% in 2011 over 2010. Weaker conditions within the solar energy market were a main cause for the decline in advanced chemical sales in 2012. The majority of the growth in 2011 was due to the expanded use of LED technologies and the development of new applications. However, the growth rate slowed down in the second half of 2011 and LED sales in 2012 were affected by the previously discussed changes in market conditions.

Precision optical coating sales were higher in 2012 than in 2011 due to the acquisition of EIS. Absent the EIS acquisition, optics sales declined approximately 9% in 2012 from 2011 largely due to lower defense and science sales resulting from changes in government spending patterns and cutbacks. This decline in sales was a main cause for the decision to close our small optical coating operation in California. Sales of optics for medical applications, which were minor, also declined in 2012 as did sales for infra-red camera applications within the automotive electronics market. The EIS acquisition was the main cause for the slight increase in optics sales in 2011 over 2010. Optics sales into the defense and science market declined while sales to the medical and other markets improved slightly in 2011 over 2010.

Refining and chamber cleaning revenue was lower in 2012 than in 2011 partially due to the lower business levels at the now-closed Czech operation. Refining revenue grew in 2011 over 2010 in part due to the expansion of our operations and increased marketing efforts. Refining revenue is also partially a function of the volume of precious metal products sold and the available quantity of metal in the market to be reclaimed.

Order entry for the Advanced Material Technologies segment was approximately 2% higher than sales in 2012 and 1% lower than sales in 2011.

All of the facilities affected by the previously discussed consolidation program in 2012 are part of the Advanced Material Technologies segment and the associated costs were recorded against the segment's cost of sales, SG&A and other-net expenses.

Advanced Material Technologies generated a gross margin of \$104.2 million in 2012 (12% of sales), \$112.2 million (11% of sales) in 2011 and \$113.3 million (13% of sales) in 2010.

The decline in gross margin dollars in 2012 as compared to 2011 was due in part to the previously discussed \$7.4 million physical inventory loss recorded in the fourth quarter 2012. Margins also declined due to the impact of the lower sales volume in 2012, but this was partially offset by the incremental margin generated by EIS. Margins benefited from a favorable change in product mix due to the increase in higher margin medical market sales and a decline in investment bar sales and manufacturing overhead costs decreased approximately 7% in 2012 from 2011. In addition to the improved product mix, the gross margin as a percent of sales was higher in 2012 than in 2011 as a result of the increase in the use of customer-supplied metal.

The net change in volume and product mix shift provided a benefit to gross margin in 2011. This was evident in the increased sales to the medical market and sales of various advanced chemical products, which typically generate higher margins. These benefits were more than offset by higher manufacturing overhead costs, including the costs totaling \$1.2 million incurred by EIS, and other factors, which included a net unfavorable inventory valuation adjustment of \$3.6 million that was recorded in the fourth quarter 2011 as a result of the reconciliation of the amount of metal on hand with amounts financed.

The gross margin as a percent of sales was lower in 2011 than in 2010 in part due to the significant increase in the metal price pass-through in sales.

SG&A, R&D and other-net expenses totaled \$87.5 million (10% of sales) in 2012, \$78.8 million (7% of sales) in 2011 and \$73.8 million (8% of sales) in 2010.

A full year of EIS was the main cause for the increase in expenses in 2012 over 2011. The expenses incurred by EIS in the fourth quarter 2011 subsequent to its acquisition contributed to the increase in expenses in 2011 over 2010.

Precious metal consignment fees were \$0.9 million lower in 2012 than in 2011 largely due to lower consignment rates offset in part by an increased quantity on hand. The consignment fee was \$3.2 million higher in 2011 than 2010 due to the additional quantities of metal on hand and higher metal prices. The rates charged by the financial institutions were higher in 2011 than in 2010 as well.

Incentive compensation expense was \$2.5 million lower in 2012 than in 2011 and \$1.6 million lower in 2011 than in 2010 due to the differences in performance relative to the plans' objectives. R&D costs were relatively flat in 2012 compared to 2011 after increasing in 2011 over 2010 in order to support the growth in the business. Corporate charges were \$1.7 million higher in 2012 than in 2011 and \$2.1 million higher in 2011 than in 2010. This segment's expenses were net of the previously discussed favorable adjustments of the acquisition earn-out liability of \$1.1 million in 2011 and \$0.8 million in 2010.

Advanced Material Technologies' operating profit was \$16.7 million in 2012, a decline of \$16.8 million from the operating profit of \$33.5 million generated in 2011 due to the margin differences from the lower volumes, physical inventory losses, product mix shifts and other factors affecting gross margins and the increase in expenses. The operating profit in 2011 was a \$6.0 million decline from the operating profit of \$39.5 million generated in 2010. The margin benefits from the changes in volumes and mix were more than offset by the fourth quarter inventory valuation adjustment, higher overhead costs and the increase in consignment fees and other expenses. Operating profit was 2% of sales in 2012, 3% of sales in 2011 and 4% of sales in 2010.

Performance Alloys

(Millions)	2012	2011	2010
Net sales	\$292.4	\$335.3	\$293.8
Operating profit	24.0	27.2	27.2

Performance Alloys manufactures and sells three main product families:

Strip products, the largest of the product families, include thin gauge precision strip and thin diameter rod and wire. These copper and nickel alloys provide a combination of high conductivity, high reliability and formability for use as connectors, contacts, switches, relays and shielding. Major markets for strip products include consumer electronics,

telecommunications infrastructure, automotive electronics, appliance and medical;

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Bulk products are copper and nickel-based alloys manufactured in plate, rod, bar, tube and other customized forms that, depending upon the application, may provide superior strength, corrosion or wear resistance, thermal conductivity or lubricity. While the majority of bulk products contain beryllium, a growing portion of bulk products' sales is from non-beryllium-containing alloys as a result of product diversification efforts. Applications for bulk products include oil and gas drilling components, bearings, bushings, welding rods, plastic mold tooling and undersea telecommunications housing equipment. Major markets for bulk products include industrial components and commercial aerospace, energy and telecommunications infrastructure; and,

Beryllium hydroxide is produced at our milling operations in Utah from our bertrandite mine and purchased beryl ore. The hydroxide is used primarily as a raw material input for strip and bulk products and, to a lesser extent, by the Beryllium and Composites segment. Sales of hydroxide are also made on a limited basis.

Strip and bulk products are manufactured at facilities in Ohio and Pennsylvania and are distributed internationally through a network of company-owned service centers and outside distributors and agents.

Sales from Performance Alloys declined \$42.9 million, or 13%, from \$335.3 million in 2011 to \$292.4 million in 2012. Sales in 2011 grew 14% over sales of \$293.8 million in 2010.

The fall-off in Performance Alloys' sales in 2012 was largely due to weaker demand for strip products from the consumer electronics and appliance markets. Our materials are used in the early stages of the manufacture of consumer electronics products and our sales to the intermediaries typically are made well in advance of the sale of the ultimate finished product to the consumer. After a strong first half of 2011, consumer electronics sales softened in the second half of 2011 and then remained relatively flat throughout 2012. Appliance sales declined over 40% in 2012 from 2011 largely due to the weaker economic conditions in Europe. Appliance sales had also declined in 2011 from a strong 2010.

Sales to the energy market, predominately bulk products for oil and gas applications, declined in 2012 from a strong 2011 due to a reduction in the rig count. Energy sales were approximately 20% higher in 2011 than in 2010. Due to the performance characteristics of our products, we remain well-positioned in oil and gas applications and we anticipate that sales for these applications will grow once the rig count starts to increase.

The impact of the softer sales to these markets in 2012 was partially offset by growth in sales by Performance Alloys to other key markets, including industrial components and aerospace and automotive electronics.

Sales to the industrial component and commercial aerospace market, the largest market for bulk products, grew at double digit rates in 2012 and 2011 over the respective prior year. Demand for ToughMet®, a non-beryllium-containing alloy bulk product, for heavy equipment and other applications continued to grow through market penetration and product development efforts, while demand for traditional alloys for aerospace applications was solid.

Sales to the automotive electronics market, primarily in North America and Europe, improved slightly in 2012 over 2011 after growing 20% in 2011 over 2010. Sales over the first nine months of 2012 were below the first nine months of 2011 but sales in the fourth quarter 2012 strengthened due to improving market conditions. Automotive applications for Performance Alloys include under the hood electronic connectors and other sensors that require a high degree of reliability.

Strip product volumes shipped declined 18% in 2012 from 2011 after declining 7% in 2011 from 2010. Bulk product volumes declined 3% in 2012 from 2011, although shipments of non-beryllium-containing bulk alloys grew 28% and established a record high. Bulk volumes grew 6% in 2011 over 2010, largely due to higher shipments of traditional alloys.

Average selling prices for strip and bulk products were higher in 2012 and 2011 than the respective prior years as a result of the implementation of pricing improvement programs.

Copper prices were lower on average in 2012 than in 2011 and the reduced copper price pass-through accounted for an estimated \$8.4 million of the decline in sales between periods. Copper prices increased on average in 2011 over 2010 and accounted for an estimated \$15.1 million of the sales growth in 2011.

Sales of beryllium hydroxide grew in 2012 over 2011 and in 2011 over 2010 but remained relatively small at less than 4% of sales in 2012.

The order entry rate improved in 2012 and was 6% higher than sales for the year. The order entry rate was 8% lower than sales in 2011 as order entry levels started the year strong but then slowed down in the second half of the year, primarily for strip products.

The gross margin generated on Performance Alloys' sales was \$68.4 million in 2012, \$74.6 million in 2011 and \$74.2 million in 2010. Gross margin was 23% of sales in 2012, 22% of sales in 2011 and 25% of sales in 2010.

The lower sales volume was the major cause of the \$6.2 million reduction in gross margin in 2012 from 2011. Gross margin was also affected by the increased cost of bertrandite ore. The ore cost, which is a function of the cost to construct a mine and the quantity of the ore to be excavated from that mine, increased in 2012 due to the higher cost to remove the overburden during the construction of our most recent mine. This higher ore cost coupled with slightly higher extraction mill costs resulted in a \$1.8 million decrease in gross margin in 2012 as compared to 2011.

The negative impact of the lower sales volume and higher ore cost on Performance Alloys' gross margin was partially offset by higher selling prices, improved yields on nickel products and lower manufacturing overhead costs.

During 2012, we improved the yields on certain nickel-containing products resulting in lower scrap rates and rework costs and leading to a \$3.3 million increase in gross margin in 2012 over 2011.

Manufacturing overhead costs at the Elmore, Ohio plant site, including rent, depreciation and outside services, were approximately 10% lower in 2012 than in 2011.

The higher selling prices, changes in foreign exchange rates and other factors contributed to improve gross margin in 2011 over 2010, but this benefit was largely offset by an unfavorable change in product mix, higher conversion cost in our extraction mill, additional manufacturing costs on nickel products, differences due to the depletion of a LIFO layer in 2010 and higher overhead costs.

The weaker product mix in 2011 was due to a 20% decline in shipments of higher beryllium-containing strip products compared to 2010.

The higher conversion costs at the Utah extraction mill in 2011 were primarily chemicals and other commodities used for converting the bertrandite ore into beryllium hydroxide.

The aforementioned lower yields on nickel products did not negatively affect sales in 2011, but the associated higher costs resulted in a \$3.1 million reduction in gross margin in 2011 as compared to 2010.

The depletion of a LIFO inventory layer resulted in a net benefit to gross margin of \$4.4 million in 2010. This benefit did not repeat in 2012 or 2011 as there were no significant LIFO layers depleted in those years.

SG&A, R&D and other-net expenses totaled \$44.4 million in 2012 compared to \$47.4 million in 2011. The 2011 expenses were a slight increase over the total expense of \$47.0 million in 2010. Expenses were 15% of sales in 2012, 14% of sales in 2011 and 16% of sales in 2010.

The \$3.0 million reduction in expenses in 2012 from 2011 was largely due to differences in foreign currency exchange gains and losses between years and a reduction in domestic selling expenses. These reductions were partially offset by higher corporate costs in 2012 and a one-time litigation gain from a lawsuit against a utility provider over billing rates recorded in 2011. R&D expenses and incentive compensation costs were relatively unchanged in 2012 as compared to 2011.

R&D expenses increased a modest amount in 2011 over 2010 due to higher activity levels, while foreign currency exchange losses and corporate charges were also higher in 2011 than in 2010. These increases were largely offset by a reduction in the incentive compensation expense, due to differences in the performance levels against the plan targets between years, and the litigation gain. Selling and administrative expenses were relatively unchanged in 2011 from 2010.

Performance Alloys' operating profit of \$24.0 million was \$3.2 million lower than the operating profit of \$27.2 million earned in 2011. The decline in profitability resulted from the lower gross margin (due to lower volumes and higher ore costs partially offset by improved pricing, lower overhead costs and other factors) net of a reduction in expenses. Operating profit in 2011 was unchanged from 2010. Operating profit was 8% of sales in 2012 and 2011 and 9% of sales in 2010.

Beryllium and Composites

(Millions)	2012	2011	2010
Net sales	\$60.0	\$60.6	\$61.9
Operating (loss) profit	(3.9)	(0.8)	10.0

Beryllium and Composites manufactures beryllium-based metals and metal matrix composites in rod, sheet, foil and a variety of customized forms. These materials are used in applications that require high stiffness and/or low density and they tend to be premium-priced due to their unique combination of properties. This segment also manufactures beryllia ceramic products. The acquisition of AMC provides a complementary family of non-beryllium-based alloys

and composites. Defense and science is the

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largest market for Beryllium and Composites, while other markets served include industrial components and commercial aerospace, medical, energy and telecommunications infrastructure. Products are also sold for acoustics, optical scanning and performance automotive applications. Manufacturing facilities for Beryllium and Composites are located in Ohio, California, Arizona and England.

Beryllium and Composites' sales were \$60.0 million in 2012 compared to \$60.6 million in 2011. Sales in 2011 were 2% lower than sales of \$61.9 million in 2010.

Sales to the defense and science market, which accounted for approximately half of Beryllium and Composites' sales in 2012, declined 6% in 2012 from 2011 after declining 8% in 2011 from 2010. Sales for defense applications, which include strategic missile defense, optical payloads and advanced lightweight avionics packaging, are affected by government funding delays and budget cuts as well as program timing in a given year. Softer defense sales in 2012 were partially offset by improved sales for science applications, including shipments for a nuclear fusion test reactor (ITER) and the Large Hadron Collider in Europe.

Despite the ongoing pressures on government budgets, based on order patterns and other analyses, we believe the outlook for defense and science applications in 2013 is solid. Our materials are designed into applications for SM-3 missile defense system and the EOTS on the new F-35 fighter jet that are funded for 2013. We also anticipate an increase in sales for nuclear science applications in 2013.

Industrial components and commercial aerospace market sales grew in 2012 and 2011 over the respective prior years. The growth in 2012 was due to the acquisition of AMC. The growth in 2011 over 2010 was primarily due to increased sales of x-ray windows and assemblies for industrial applications, but sales for these applications declined in 2012 due to lower demand from a key customer and other factors. Sales of AlBeMet®, a metal matrix composite, for applications in semiconductor manufacturing and inspection equipment remained soft in 2012 and 2011 due to weak conditions in the capital equipment market.

Sales of beryllium speaker domes for acoustic diaphragm assemblies grew modestly in 2012 and 2011 despite weak market conditions and excess downstream inventories. Beryllium's unique combination of properties reduces mechanical deformation in sound, shifting the resonant frequencies inherent in other materials outside of the audible range. Our speaker domes are used in high-end commercial, entertainment and consumer applications and, while sales remained minor in 2012, we believe that this application represents a long-term growth opportunity for our materials. Medical market sales declined 17% in 2012 from 2011 after declining 10% in 2011 from 2010. The majority of the decline in 2012 was due to lower shipments of beryllia ceramics for medical laser applications while the decline in 2011 was largely due to reduced shipments of x-ray windows and assemblies.

Beryllia ceramic sales for applications within the telecommunications infrastructure market declined in 2012 and 2011. Sales to the energy market, after growing in 2011 over 2010, were unchanged in 2012 from 2011.

Beryllium and Composites' gross margin was \$11.3 million (19% of sales) in 2012, \$12.1 million (20% of sales) in 2011 and \$21.5 million (35% of sales) in 2010.

We constructed a new facility at our Elmore plant site that is designed to produce pure beryllium metal from beryllium hydroxide that is mined by our Utah operations allowing us to significantly reduce our dependency upon external sources for pure beryllium metal. The operation was placed in service during 2012, but the equipment did not generate the output as planned or designed on a consistent basis. Additional start-up costs, maintenance costs and other inefficiencies were incurred to allow for the simultaneous operation of all of the equipment at full production volumes for extended periods of time and the production output levels improved by year end. Improvements were ongoing into the first quarter of 2013. The costs and inefficiencies associated with the delay in the start-up of the facility reduced margins by an estimated \$5.2 million in 2012. In 2011, the start-up and inefficiency costs reduced gross margin by an estimated \$5.3 million.

Gross margin in 2012 benefited from a favorable change in product mix, primarily due to an increase in sales of higher-margin beryllium metal products and a decrease in sales of AlBeMet®, a metal matrix composite that generates lower margins. Improved pricing on beryllia ceramic products also provided a margin benefit in 2012. Offsetting these benefits was the negative impact of the slightly lower sales volume and the related lower production volumes. Manufacturing overhead costs increased \$0.6 million in Elmore in 2012 and 2011, largely depreciation and utilities associated with the new facility. Manufacturing overhead costs at the Fremont, California facility also

increased, including manpower and outside services.

The change in product mix was unfavorable in 2011 as compared to 2010 as defense sales, which typically generate higher margins, were lower. Higher operating costs, particularly in the fourth quarter 2011, reduced margins compared to 2010 and largely offset the benefit from the yield improvements made on welded products during 2011. The lower sales volume in 2011 had a minor impact on the decline in margins in 2011 from 2010. Lower production levels at the Arizona facility also negatively

impacted gross margin in 2011. Manufacturing overhead costs were \$2.7 million higher in 2011 than in 2010 partially due to the additional ongoing overhead costs for the new facility in Elmore. Overhead costs increased at the Fremont facility, primarily salaries and fringe benefits, in order to support the higher business levels there.

Total SG&A, R&D and other-net expenses were \$15.3 million (26% of sales) in 2012, \$12.9 million (21% of sales) in 2011 and \$11.5 million (19% of sales) in 2010.

The expenses incurred by AMC subsequent to its acquisition were a major cause of the increase in expenses in 2012 over 2011. R&D expenses grew 8% in 2012 over 2011 after growing 75% in 2011 over 2010 due to increased activity and various projects. Corporate charges also increased in 2012 and 2011 over the respective prior year while incentive compensation declined in both years due to the segment's performance against the design of the plans. Selling expenses grew in 2011 over 2010 while differences in other non-operating items contributed to the higher expense levels in 2012 and 2011.

Beryllium and Composites incurred an operating loss of \$3.9 million in 2012 and \$0.8 million in 2011. In 2010, this segment generated an operating profit of \$10.0 million. The increased operating loss in 2012 was due to the reduced gross margin, caused by the lower sales volume and other factors, and the additional expenses. The \$10.8 million decline in profitability in 2011 from 2010 was due to a reduction in gross margin caused by inefficiencies and additional costs resulting from the delay in the start-up of the new beryllium facility, additional overhead costs and other factors, and higher SG&A expenses. Operating profit was 16% of sales in 2010.

Technical Materials

(Millions)	2012	2011	2010
Net sales	\$72.7	\$78.7	\$67.5
Operating profit	6.6	7.3	5.3

Technical Materials' capabilities include clad inlay and overlay metals, precious and base metal electroplated systems, electron beam welded systems, contour profiled systems and solder-coated metal systems. These specialty strip metal products provide a variety of thermal, electrical or mechanical properties from a surface area or particular section of the material. Our cladding and plating capabilities allow for a precious metal or other base metal to be applied in continuous strip form only where it is needed, reducing the material cost to the customer as well as providing design flexibility and performance. Major applications for these products include connectors, contacts, power lead frames and semiconductors while the largest markets are automotive electronics and consumer electronics. The energy and medical markets are smaller but offer further growth opportunities. Technical Materials' products are manufactured at our Rhode Island facility.

Technical Materials' sales were \$72.7 million in 2012, a decline of 8% from sales of \$78.7 million in 2011. Sales in 2011 were \$11.2 million, or 17% higher, than sales of \$67.5 million in 2010.

Sales to the automotive electronics market softened approximately 8% in 2012 from 2011 largely due to lower sales in Europe due to weaker market conditions there. Automotive electronics market sales were strong in 2011, particularly in the first half of the year, having grown 22% over 2010.

Consumer electronics market sales were 7% lower in 2012 than in 2011 as customers started to phase out of the current design of disk drive arm materials faster than initially anticipated. We have developed a new design for disk drive applications as well as other applications that offer long-term growth potential in this market. Consumer electronics sales were 8% higher in 2011 than 2010 with a portion of the growth due to an 11% increase in shipments of disk drive arm materials despite shipment levels being disrupted in the fourth quarter 2011 by flooding in Thailand that affected the downstream supply chain.

Sales for solar energy, fuel cells and other alternative energy applications showed solid growth in 2011 and 2010 due to product and market development activities but softened in 2012 due to market conditions. Medical market sales were flat in 2012 with 2011 and remained minor.

The majority of Technical Materials' product lines showed a decline in sales in 2012, with the largest decline in inlay products. Sales of selective plating products grew in 2012 and in 2011 while sales of inlay products improved in 2011 over 2010. The growth in the segment's total sales in 2011 was partially due to higher prices and changes in product mix.

Order entry levels were inconsistent throughout 2012 and total order entry was approximately 8% less than sales for the year.

Technical Materials generated a gross margin of \$16.0 million (22% of sales) in 2012, \$16.6 million (21% of sales) in 2011 and \$14.5 million (22% of sales) in 2010.

The \$0.6 million reduction in the gross margin in 2012 was due to the lower sales volume offset in part by a favorable change in product mix. Manufacturing overhead costs were relatively unchanged in 2012 as compared to 2011. The higher sales volume was the main cause for the \$2.1 million increase in gross margin in 2011 over 2010. Manufacturing overhead costs increased due to higher utility costs, maintenance and other items, but this increase was largely offset by lower inventory provision adjustments.

SG&A, R&D and other-net expenses were \$9.3 million in 2012 compared to \$9.4 million in 2011 and \$9.2 million in 2010. These expenses were 13% of sales in 2012, 12% of sales in 2011 and 14% of sales in 2010.

Expenses in this segment were managed in 2012 to be relatively flat with the prior year given the softer sales volumes. A decline in incentive compensation was partially offset by an increase in corporate charges.

The slight increase in the dollar amount of these expenses in 2011 over 2010 was caused primarily by higher commissions, due to the higher level of sales, and increases in fringe benefits costs and corporate charges offset in part by lower bad debt expense.

Technical Materials earned an operating profit of \$6.6 million in 2012 compared to \$7.3 million in 2011. The 2011 operating profit was a \$2.0 million improvement over the \$5.3 million of profit generated in 2010. Operating profit was 9% of sales in 2012 and 2011 and 8% of sales in 2010.

International Sales and Operations

We operate in worldwide markets and our international customer base continues to expand geographically due to the development of various foreign nations' economies and the relocation of U.S. businesses overseas. In Asia, we have strategically located our facilities in Japan, Singapore, China, Korea, Taiwan and the Philippines while our European facilities are in Germany, the United Kingdom and Ireland. Our two most recent acquisitions, AMC and EIS, are based overseas.

Our international operations provide a combination of manufacturing, finishing operations, local sales support and distribution services and are designed to provide a cost-effective method of capturing the growing overseas demand for our products over the long term. We also augment our sales and distribution efforts with an established network of independent distributors and agents throughout the world.

The following table summarizes total international sales by region for the last three years:

(Millions)	2012	2011	2010	
Asia	\$219.8	\$203.9	\$216.3	
Europe	137.6	147.6	127.5	
Rest of world	33.7	31.5	25.3	
Total	\$391.1	\$383.0	\$369.1	
Percent of total sales	31	% 25	% 28	%

International sales include sales from international operations and direct exports from our U.S. operations. The international sales in the above chart are included in the individual segment sales previously discussed.

Total international sales improved approximately 2% in 2012 over 2011. This growth was due to the acquisitions of EIS and AMC as sales from the existing operations were lower in 2012 than in 2011. The lower sales to Europe in 2012 were reflective of weaker economic conditions and the decline in shipments to the appliance market.

International sales grew 4% in 2011 over 2010. Sales to Europe improved in 2011 in part due to stronger automotive electronics sales, while sales to Asia softened partially due to the weaker sales to the consumer electronics market in the second half of the year.

Sales from the European and certain Asian operations are denominated in their local currencies. Exports from the U.S. and the balance of the sales from the Asian operations are typically denominated in U.S. dollars. Local competition generally limits our ability to adjust selling prices upwards to compensate for short-term unfavorable exchange rate movements.

We have a hedge program with the objective of minimizing the impact of fluctuating currency values on our consolidated operating profit. See "Critical Accounting Policies" below.

Legal Proceedings

One of our subsidiaries, Materion Brush Inc., is a defendant from time to time in proceedings in various state and federal courts brought by plaintiffs alleging that they have contracted chronic beryllium disease or other lung

conditions as a result of

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exposure to beryllium. Plaintiffs in beryllium cases generally seek recovery under negligence and various other legal theories and seek compensatory and punitive damages, in many cases of an unspecified sum. Spouses, if any, often claim loss of consortium.

One beryllium case was filed during 2012 and it remained pending as of December 31, 2012. We recorded a reserve of less than \$0.1 million for this case. There were no settlement payments made for beryllium cases in 2012. There were no new cases filed against us during 2011. Two beryllium cases were pending as of year-end 2010, one of which was dismissed and the other was settled for less than \$0.1 million during 2011. Two cases were settled in 2010 at an aggregate cost of less than \$0.1 million.

Additional beryllium claims may arise. Management believes that we have substantial defenses in these types of cases and intends to contest the suits vigorously should they arise. Employee cases, in which plaintiffs have a higher burden of proof, have historically involved relatively small losses to us. Third-party plaintiffs (typically employees of customers or contractors) face a lower burden of proof than do employees or former employees, but these cases are generally covered by varying levels of insurance.

Although it is not possible to predict the outcome of any litigation, we provide for costs related to these matters when a loss is probable and the amount is reasonably estimable. Litigation is subject to many uncertainties, and it is possible that some of these actions could be decided unfavorably in amounts exceeding our reserves. An unfavorable outcome or settlement of a beryllium case or adverse media coverage could encourage the commencement of additional similar litigation. We are unable to estimate our potential exposure to unasserted claims.

Based upon currently known facts and our experience with beryllium cases and assuming collectibility of insurance, we do not believe that resolution of future beryllium proceedings will have a material adverse effect on our financial condition or cash flow. However, our results of operations could be materially affected by unfavorable results in one or more of these cases.

Regulatory Matters. Standards for exposure to beryllium are under review by the United States Occupational Safety and Health Administration (OSHA) and by other governmental and private standard-setting organizations. One result of these reviews will likely be more stringent worker safety standards. Some organizations, such as the California Occupational Health and Safety Administration and the American Conference of Governmental Industrial Hygienists, have adopted standards that are more stringent than the current standards of OSHA. The development, proposal or adoption of more stringent standards may affect the buying decisions by the users of beryllium-containing products. If the standards are made more stringent and/or our customers or other downstream users decide to reduce their use of beryllium-containing products, our results of operations, liquidity and financial condition could be materially adversely affected. The impact of this potential adverse effect would depend on the nature and extent of the changes to the standards, the cost and ability to meet the new standards, the extent of any reduction in customer use and other factors. The magnitude of this potential adverse effect cannot be estimated.

FINANCIAL POSITION

Net cash provided from operations provided from operations was \$38.6 million in 2012 as net income and the effects of depreciation more than offset a net increase in working capital items. Cash provided from operations was a strong \$46.0 million in the fourth quarter 2012 partially due to the collection of accounts receivable and a reduction in inventory.

In 2011, cash provided from operations was \$56.8 million. Cash used in operations totaled \$11.7 million through the first three quarters of 2011 as a result of increases in receivables and inventory, contributions to the domestic pension plan, payment of the 2010 incentive compensation and changes in other items. In the fourth quarter 2011, however, a decline in receivables, coupled with other improvements, resulted in cash flow from operations of \$68.5 million in that period.

In 2010, cash provided from operations totaled \$31.0 million as net income and the effects of depreciation, deferred taxes and other items more than offset increases in working capital, primarily accounts receivable and inventory. The majority of the working capital build in 2010 occurred in the first half of the year as sales levels ramped up from the low levels in 2009.

As previously noted, changes in the cost of precious and base metals are essentially passed on to customers.

Therefore, while sudden movements in the price of metals can cause a temporary imbalance in our cash receipts and

payments in either direction, once prices stabilize our cash flow tends to stabilize as well.

Working Capital

Cash totaled \$16.1 million as of December 31, 2012, an increase of \$3.8 million from the cash balance of \$12.3 million as of year-end 2011.

Cash declined \$3.8 million in 2011 as excess cash, coupled with the cash provided from operations, were used to finance the acquisition of EIS, capital expenditures, a reduction in debt and the repurchase of shares.

Accounts receivable totaled \$126.5 million as of year-end 2012, an increase of \$8.7 million, or 7%, from the year-end 2011 balance of \$117.8 million. The growth was primarily due to a slowdown in the days sales outstanding (DSO), a measure of how fast receivables are collected, from approximately 32 days at year-end 2011 to approximately 37 days at year-end 2012. The DSO of 37 days is within our normal operating range.

The year-end 2011 accounts receivable balance was \$21.6 million, or 16%, lower than the accounts receivable balance of \$139.4 million as of year-end 2010. This decrease was due to a combination of changes in the sales volume, as sales in the fourth quarter 2011 were 6% lower than sales in the fourth quarter 2010, and a 4 day improvement in the DSO.

The expense for accounts written off to bad debts and changes in the allowance for doubtful accounts remained low at \$0.4 million in 2012 and \$0.1 million in 2011.

We have procedures in place to closely monitor our accounts receivable aging and to follow-up on past due accounts. We evaluate the credit position of new customers in advance of the initial sale and we evaluate our existing customers' credit positions on an ongoing basis. We will revise credit terms offered to our customers as conditions warrant in order to minimize our exposures. Credit terms may vary by country based upon local customary practice and competition. Billings for precious metals tend to have tighter payment terms than billings for other products. Advance billings are used from time to time to help reduce credit exposures and speed up the collection of cash.

Other receivables were \$0.4 million as of December 31, 2012 compared to \$4.6 million as of December 31, 2011. The majority of the amount due at year-end 2011 was for reimbursement for equipment purchased under a government contract. The project was completed in 2012.

Inventories totaled \$206.1 million as of year-end 2012 compared to \$187.2 million as of year-end 2011. The inventory turn-over ratio, a measure of how quickly inventory is utilized, slowed down during the year. Inventories increased \$32.7 million, or 21%, in 2011 over the inventory balance of \$154.5 million as of year-end 2010 as the turnover ratio slowed down during that year as well.

The inventory increase in 2012 was predominately within Performance Alloys, with only minor changes in inventories within the other segments. The majority of the 2011 increase in inventory was in Performance Alloys as well.

Performance Alloys inventory, which totaled \$123.6 million at year-end 2012, increased as a result of product mix shifts, growth in various bulk products that have longer processing times, strategic inventory investments and the level loading of production schedules. Inventories at our Utah extraction mill and mine, which are part of the Performance Alloys segment, increased \$1.7 million in 2012 over 2011, partially due to higher cost of ore mined. Utah inventories increased \$10.3 million in 2011 over 2010 due to the cyclical nature of our mining operations and the planned timing of extracting ore and the deployment of our mining resources.

The acquisitions of AMC in 2012 and EIS in 2011 contributed a small increase in our total inventory balances in those respective years, while the delayed start-up of the beryllium facility in Elmore has had a minor impact on the inventory growth in 2012 and 2011.

The majority of Advanced Material Technologies' precious metal requirements are maintained on a consigned basis, but its inventories declined slightly in 2012, due primarily to lower business volumes, after growing in 2011.

The prices for the raw materials we use, particularly precious metals and copper, can be volatile. The impact of changing prices on our inventory value is minimized by the use of the LIFO costing method within our domestic operations. The LIFO method results in the current cost being charged to the income statement and the older costs being used to value the inventory on hand. See "Critical Accounting Policies" below.

Intangible assets totaled \$28.9 million at the end of 2012 versus \$35.0 million at year-end 2011. The \$6.1 million decline was due to amortization of \$6.6 million offset in part by intangible assets of \$0.5 million acquired with AMC. Intangible assets declined approximately \$2.3 million in 2011. Amortization expense was \$6.7 million while intangible assets acquired with EIS and deferred financing costs associated with new debt agreements totaled approximately \$4.4 million.

See Note E to the Consolidated Financial Statements.

Other Long-term Liabilities

Other long-term liabilities were \$16.2 million as of year-end 2012, a decrease of \$0.3 million from year-end 2011 largely due to the normal amortization of capital lease balances. Other long-term liabilities declined \$1.4 million

during 2011 from the year-end 2010 balance primarily due to the reversal of the remaining balance of the earn-out liability associated with the Barr acquisition.

Retirement and Post-employment Benefits

The long-term retirement and post-employment benefit obligation was \$126.0 million at year-end 2012 and \$105.1 million at year-end 2011.

We have a defined benefit pension plan that covers the majority of our domestic employees. The liability for this plan, which is included in the above totals, was \$79.3 million at year-end 2012 and \$63.7 million at year-end 2011. The projected benefit obligation was \$236.9 million, an increase of \$37.7 million from the year-end 2011 balance of \$199.2 million due to a reduction in the discount rate, the current year expense and other factors. The market value of the plan assets increased from \$135.5 million at year-end 2011 to \$157.6 million at year-end 2012. This \$22.1 million increase in the asset value resulted from contributions of \$11.8 million and investment earnings of \$18.0 million less benefit payments and expenses of \$7.7 million. The plan assets generated a return of 13.0% in 2012 and a loss of 3.7% in 2011.

A portion of our domestic retirees and current employees are eligible to participate in a retiree medical benefit plan. The plan is unfunded and the liability was \$34.3 million at year-end 2012, with \$2.7 million classified as short-term and \$31.6 million classified as long-term. The plan liability was \$33.2 million at year-end 2011, with \$30.4 million classified as long-term and \$2.8 million classified as short-term. The plan expense was \$1.8 million in 2012 and \$1.8 million in 2011.

Our subsidiary in Germany has an unfunded retirement plan for its employees, while our subsidiary in England has a funded retirement plan.

See Note I to the Consolidated Financial Statements for additional details on our retirement obligations.

Depreciation and Amortization

Depreciation, amortization and depletion expense was \$37.0 million in 2012, \$43.6 million in 2011 and \$35.4 million in 2010. The primary cause for the decrease in 2012 from 2011 and the increase in 2011 over 2010 was higher mine amortization in 2011 as a result of mining ore throughout 2011 from the new pit that opened late in 2010. During 2012, a significant portion of the mining activity centered on opening another new pit as opposed to excavating ore out of the existing pits.

Capital Expenditures

A summary of capital expenditures over the 2010 to 2012 timeframe is as follows:

(Millions)	2012	2011	2010
Capital expenditures	\$34.1	\$28.2	\$42.4
Mine development	10.6	0.6	11.3
Subtotal	44.7	28.8	53.7
Reimbursement for spending under government contract	1.0	5.4	21.9
Net spending	\$43.7	\$23.4	\$31.8

We have a Title III contract with the U.S. Department of Defense (DoD) for the design and development of a new facility for the production of primary beryllium. The equipment has been installed and placed in service. The total cost of this multi-year project is approximately \$104.9 million, with the DoD providing approximately 70% of the funding, primarily for equipment and a portion of the initial project design costs. Our portion of the project cost includes equipment and the building and other non-capitalizable items. The DoD's contributions to the project were essentially complete as of year-end 2012, but their final share of the cost will be determined based upon their satisfactory review of the project. Additional capital and expense dollars not subject to reimbursement from the DoD will be spent in future periods in order to improve efficiencies and to operate at the designed and necessary levels of production. Capital spending on the beryllium facility totaled \$5.0 million in 2012 and is included in the \$34.1 million figure in the above table. Spending on this project totaled \$5.1 million in 2011 and \$28.0 million in 2010.

Reimbursements from the DoD are recorded as unearned income, a liability on the Consolidated Balance Sheet. See "Critical Accounting Policies" below for further discussion. The spending and reimbursement received from the government may differ in a given year due to the normal lag between when the spending occurs and the government issues the reimbursement.

Capital spending by Advanced Material Technologies totaled \$11.8 million in 2012, \$8.0 million in 2011 and \$5.2 million in 2010. Major projects in 2012 included a new shield kit cleaning operation in New Mexico, a new

manufacturing work cell approach for precision optics at the Westford, Massachusetts facility and an expansion and modification to the Singapore facility.

Performance Alloys' capital spending, which totaled \$19.9 million in 2012, \$10.6 million in 2011 and \$17.1 million in 2010, included upgrades to the casting equipment and extrusion press at the Elmore facility, new R&D equipment and a vertical continuous caster at the Lorain, Ohio facility in 2012. The capital spending in 2012 also included the mine development costs of \$10.6 million. The mine under construction in 2012 should be completed during 2013 with ore scheduled to be removed beginning in the second half of the year.

Technical Materials' capital spending in 2012 included a new electron beam welding line and an upgrade and conversion of a plating line.

In addition to the new beryllium plant, capital spending within the Beryllium and Composites segment included spending on a new clean room and various facility modifications.

We also continued work on software upgrades and implementations at various facilities as well as various infrastructure projects during the 2010 to 2012 timeframe.

Capacity expansion projects, including the new beryllium facility, accounted for approximately 34% of the capital spending in 2012, while new technology projects accounted for approximately 18% of the 2012 spending. The balance of the capital spending in 2012 was on maintenance capital projects and mine development.

Acquisitions

In addition to the above capital expenditures, we acquired the following businesses in the 2010 to 2012 time frame:

(Millions)	Year	Cost	Acquired Goodwill
Aerospace Metal Composites Limited	2012	\$3.3	\$1.9
EIS Optics Limited	2011	24.5	13.9
Academy Corporation	2010	21.0	5.4

The EIS acquisition cost includes \$0.6 million that was paid in 2012 as a result of the resolution of valuation adjustments in accordance with the purchase agreement. The acquisition costs shown are net of cash acquired, if any. Each of these three acquisitions was financed with a combination of cash on hand and borrowings under the revolving credit agreement. See Note B to the Consolidated Financial Statements.

Debt

Outstanding debt increased from \$81.4 million as of year-end 2011 to \$94.3 million as of year-end 2012. The increase was largely due to the net growth in inventory and other working capital items, capital expenditures, the acquisition of AMC and the payment of dividends on our common shares. Debt declined \$4.7 million in 2011. Debt had grown \$26.2 million in the first three quarters of 2011, but then declined \$30.9 million in the fourth quarter despite the EIS acquisition due to strong cash flow from operations in that period.

Short-term debt was \$49.4 million at year-end 2012 compared to \$40.9 million at year-end 2011. Long-term debt was \$44.9 million at December 31, 2012 and \$40.5 million at December 31, 2011.

We negotiated a new five-year \$325.0 million revolving credit agreement to replace the former \$240.0 million agreement in the third quarter 2011. This is a committed facility with sub-facilities for revolving loans, swing line loans, letters of credit and foreign currency-denominated borrowings. The agreement contains various covenants, including a leverage ratio and fixed charge coverage ratio.

In 2011, we entered into an \$8.0 million debt agreement with the Toledo-Lucas County Port Authority and the Dayton-Montgomery County Port Authority to fund capital expenditures at our Ohio facilities. Proceeds totaling \$3.2 million were used during 2011, with the balance of the available proceeds used in 2012. The agreement calls for monthly installment payments and a \$1.1 million balloon payment upon maturity in ten years.

We were in compliance with all of our debt covenants as of December 31, 2012.

Shareholders' Equity

Shareholders' equity increased from \$406.0 million as of year-end 2011 to \$415.0 million as of year-end 2012. Equity increased \$21.6 million in 2011. Causes for the changes in equity in both years included comprehensive income, share repurchases, option exercises and, beginning in 2012, the payment of dividends on our common shares.

Comprehensive income was \$8.5 million in 2012 and \$19.4 million in 2011. As a result of a change in accounting regulations, beginning in 2012, comprehensive income is presented in a separate financial statement as opposed to being detailed in a footnote. Comprehensive income is net income plus items that are charged or credited directly to shareholders' equity, including the cumulative translation adjustment, changes in the fair value of derivative financial instruments and adjustments to the pension and other retirement benefit obligations.

Our Board of Directors implemented a dividend program in the second quarter 2012. A dividend of \$0.075 per common share was paid in each of the last three quarters of 2012. The cash paid to shareholders totaled \$4.6 million in 2012.

We received \$0.2 million from the exercise of approximately 16,000 options in 2012 and \$0.7 million from the exercise of approximately 53,000 options in 2011.

We repurchased approximately 6,000 shares of our common stock at a cost of \$0.1 million in 2012. In 2011, we repurchased approximately 132,000 shares of our common stock at a cost of \$3.8 million in 2011. These repurchases were made under a share buyback program initially approved by the Board of Directors in 2008.

Equity was also affected by stock-based compensation expense, the tax benefits on stock compensation realization and other factors in both 2012 and 2011.

Off-balance Sheet Obligations

We maintain the majority of the precious metals we use in production and a portion of our copper requirements on a consignment basis in order to reduce our exposure to metal price movements and to reduce our working capital investment. See "Quantitative and Qualitative Disclosures about Market Risk". The notional value of the off-balance sheet metal was \$286.9 million as of year-end 2012 compared to \$244.0 million as of year-end 2011. The higher value was largely due to an increase in quantity on hand.

We were in compliance with all of the covenants contained in the consignment agreements as of December 31, 2012.

Contractual Obligations

A summary of payments to be made under long-term debt agreements, operating leases, significant capital leases, pension plan contributions and material purchase commitments by year is as follows:

(Millions)	2013	2014	2015	2016	2017	There- after	Total
Long-term debt	\$0.6	\$0.6	\$0.7	\$39.0	\$0.7	\$3.9	\$45.5
Non-cancelable lease payments	6.7	5.0	4.5	4.1	3.1	15.0	38.4
Capital lease payments	1.1	1.1	1.1	1.0	1.0	5.8	11.1
Pension plan contribution	13.0	—	—	—	—	—	13.0
Purchase commitments	3.2	—	—	—	—	—	3.2
Total	\$24.6	\$6.7	\$6.3	\$44.1	\$4.8	\$24.7	\$111.2

The revolving credit agreement matures in 2016 and the long-term debt repayment in 2016 includes \$30.0 million borrowed under this agreement. In the past, we have renegotiated a new agreement prior to the maturity date of the credit agreement and we anticipate that we would do the same in the future. However, we cannot guarantee that a replacement facility will have similar terms as the existing facility. See Note F to the Consolidated Financial Statements for additional debt information.

The non-cancelable lease payments represent payments under operating leases with initial lease terms in excess of one year as of December 31, 2012. The capital lease payments include a building at the Elmore site and other material capital leases. See Note G to the Consolidated Financial Statements for further leasing details.

The pension plan contribution of \$13.0 million in the above table represents our best estimate of the contribution to be made to the domestic defined benefit plan as of early 2013. Given the complexity and number of factors that may affect the contribution levels, it is not practical to estimate contributions to the plan beyond one year. See the "Liquidity" discussion below.

The purchase commitments of \$3.2 million are for capital equipment to be acquired in 2013 based on orders placed with vendors as of December 31, 2012.

Liquidity

We believe that cash flow from operations plus the available borrowing capacity and the current cash balance are adequate to support operating requirements, capital expenditures, projected pension plan contributions, the payment of quarterly dividends, share repurchases, environmental remediation projects and strategic acquisitions.

A summary of key data relative to our liquidity, including the outstanding debt, cash balances, available borrowing capacity and the debt-to-debt-plus-equity ratio, as of the end of each of the last three years is as follows:

	December 31,			
(Dollars in millions)	2012	2011	2010	
Total outstanding debt	\$94.3	\$81.4	\$86.1	
Cash	16.1	12.3	16.1	
Debt net of cash	\$78.2	\$69.1	\$70.0	
Available borrowing capacity	\$181.4	\$274.9	\$173.0	
Debt-to-debt-plus-equity ratio	19	% 17	% 18	%

Debt net of cash is a non-GAAP measure. We are providing this information because we believe it is more indicative of our overall financial position. It is also a measure our management uses to assess financing and other decisions.

The cumulative cash flow provided from operations totaled \$95.4 million in 2011 and 2012. This two-year cash flow was net of contributions to the domestic defined benefit plan of \$33.1 million. The cash flow from operations during this time period allowed us to fund two acquisitions totaling \$27.8 million, capital expenditures of \$67.1 million (net of the reimbursement from the DoD), share repurchases of \$3.9 million and dividends of \$4.6 million with only an \$8.2 million increase in debt net of cash.

The increase in debt in 2012 resulted in an increase in the debt-to-debt-plus-equity ratio from 17% as of year-end 2011 to 19% as of year-end 2012. We believe that our cash flow from operations can support this level of leverage, or higher, over the long term. The ratio also increased as a result of the share repurchases and the dividend payments. The available borrowing capacity in the table above represents the additional amounts that could be borrowed under the revolving credit agreement and other secured lines existing as of December 31 of each year depicted. The applicable debt covenants have been taken into account when determining the available borrowing capacity, including the covenant that restricts the borrowing capacity to a multiple of the twelve-month trailing earnings before interest, income taxes, depreciation and amortization and other adjustments. The reduction in the available borrowing capacity at year-end 2012 from year-end 2011 was due to the additional outstanding borrowings and letters of credit and lower profitability in 2012 than in 2011.

Our revolving credit agreement, which we renegotiated in 2011, provides a stable borrowing platform with flexible terms and does not mature until 2016.

As of early in the first quarter 2013, we do not know of any future or pending changes that will cause us to be in non-compliance with any of our debt covenants in the near term.

The working capital ratio, which compares current assets to current liabilities, was 2.7 to 1.0 at year-end 2012, unchanged from year-end 2011.

We intend to pay a quarterly dividend on an ongoing basis, subject to a continuing strong capital structure and a determination that the dividend remains in the best interest of the shareholders. The dividend payments in 2012 averaged approximately \$1.5 million per quarter.

In July 2010, our Board of Directors re-authorized us to purchase up to 700,000 shares of our common stock, which represent approximately 3% of our outstanding shares. The primary purpose of this program is to offset the dilution created through shares issued under stock-based compensation plans. Any stock repurchases will be made from time to time for cash in the open market or otherwise, including without limitation, in privately negotiated transactions and round lot or block transactions on the New York Stock Exchange, and may be made pursuant to accelerated share repurchases or Rule 10b5-1 plans. The repurchase program may be suspended or discontinued at any time. As of December 31, 2012, we had approximately 410,000 shares available to be re-purchased under this program.

Our domestic defined benefit pension plan is under-funded as of year-end 2012. Contributions in future periods will be dependent upon regulatory requirements, the plan funded ratio, plan investment performance, discount rates, actuarial assumptions, plan amendments, our contribution objectives and other factors. Federal legislation enacted

during 2012 resulted in a reduction

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in mandatory contributions in the short term from the levels under the previous regulations, but we may elect to contribute funds in excess of the mandatory levels in a given year depending upon our cash flow from operations and other considerations. As of early in the first quarter 2013, we anticipate contributing approximately \$13.0 million to the defined benefit plan in 2013. We also anticipate funding those contributions with cash on hand, cash generated from operations or borrowings under existing lines of credit. It is not practical to estimate the required contributions beyond 2013 at the present time.

In the second quarter 2012, we closed the domestic defined benefit pension plan to new entrants. Current plan participants will continue to accrue benefits under the existing formulas while new hires will be offered an enhanced defined contribution plan. This action was designed to reduce our pension plan funding requirements in the long term but will have minimal impact on our funding requirements in the short term.

We announced in the first quarter 2013 that we were offering a one-time opportunity for terminated deferred vested participants in the domestic defined benefit plan the election of a lump sum payment in 2013 in lieu of an annuity upon retirement. We anticipate that the lump sum payments under this election will not exceed \$16.0 million. The lump sum payments will be made from the pension plan assets during the second quarter 2013 and no additional contribution from the company will be required to fund these payments.

Portions of our business utilize off-balance sheet consignment arrangements to finance their metal requirements. Expansion of business volumes and/or higher metal prices can put pressure on the consignment line limitations from time to time. As a result, we have negotiated increases in the available capacity under existing lines and added additional lines over the last two years. The available and unused capacity under the metal financing lines totaled approximately \$123.7 million as of December 31, 2012.

We have an active environmental compliance program. We estimate the probable cost of identified environmental remediation projects and establish reserves accordingly. The environmental remediation reserve balance was \$5.3 million at December 31, 2012 and 2011. Payments for environmental projects totaled \$0.3 million in 2012 and \$0.4 million in 2011. Environmental projects tend to be long-term and the associated payments are typically made over a number of years. See Note J to the Consolidated Financial Statements.

Cash on hand does not affect the covenants or the borrowing capacity under our debt agreements. Portions of the cash balances may be invested in high quality, highly liquid investments with maturities of three months or less from time to time.

ORE RESERVES

We have proven and probable reserves of beryllium-bearing bertrandite ore in Juab County, Utah. Proven reserves are the measured quantities of ore commercially recoverable through the open-pit method. Probable reserves are the estimated quantities of ore known to exist but have been computed from inspection sites that are farther apart than those used to measure proven reserves. Although the inspection sites are fewer, assurance levels are sufficient to assume ore continuity. Ore dilution of approximately seven percent occurs during the mining process. The ore is processed at our extraction facility in Utah. Approximately 87% of the beryllium in ore is recovered in the extraction process.

We use computer models to estimate ore reserves, which are subject to economic and physical evaluation. The requirement that reserves pass an economic test causes open-pit mineable ore to be found in both proven and probable geologic settings. Proven reserves have decreased slightly in each of the last four years, while probable reserves have remained unchanged over the same time period. Based upon average production levels in recent years and our near-term production forecasts, proven reserves would last over seventy-five years. The following table summarizes our proven and probable reserves and the quantity of ore processed over the last five years. Ore reserves classified as possible are excluded from the table.

	2012	2011	2010	2009	2008	
Proven bertrandite ore reserves at year-end (thousands of dry tons)	6,250	6,341	6,404	6,425	6,454	
Grade % beryllium	0.264	% 0.265	% 0.266	% 0.266	% 0.266	%
Probable bertrandite ore reserves at year-end (thousands of dry tons)	3,519	3,519	3,519	3,519	3,519	
Grade % beryllium	0.232	% 0.232	% 0.232	% 0.232	% 0.232	%
Bertrandite ore processed (thousands of dry tons, diluted)	71	70	56	39	64	
Grade % beryllium, diluted	0.345	% 0.381	% 0.336	% 0.330	% 0.321	%

We own approximately 95% of the proven reserves, with the remaining reserves leased. We augment our proven reserves of bertrandite ore through the purchase of imported beryl ore from time to time. This ore, which is approximately 4% beryllium, is also processed at the Utah extraction facility.

CRITICAL ACCOUNTING POLICIES

The preparation of financial statements requires the inherent use of estimates and management's judgment in establishing those estimates. The following are the most significant accounting policies we use that rely upon management's judgment.

Accrued Liabilities. We have various accruals on our balance sheet that are based in part upon management's judgment, including accruals for litigation, environmental remediation and workers' compensation costs. We establish accrual balances at the best estimate determined by a review of the available facts and trends by management and independent advisors and specialists as appropriate. Absent a best estimate, the accrual is established at the low end of the estimated reasonable range in accordance with accounting guidelines. Litigation and environmental accruals are established only for identified and/or asserted claims; future claims, therefore, could give rise to increases to the accruals. The accruals are adjusted as facts and circumstances change as well as for changes in our strategies or the pertinent regulatory requirements. Since these accruals are estimates, the ultimate resolution may be greater or less than the established accrual balance for a variety of reasons, including court decisions, additional discovery, inflation levels, cost control efforts and resolution of similar cases. Changes to the accruals would then result in an additional charge or credit to income in the period when the change was made. See Note J to the Consolidated Financial Statements.

Legal claims may be subject to partial or complete insurance recovery. The accrued liability is recorded at the gross amount of the estimated cost and the insurance recoverable, if any, is recorded as an asset and is not netted against the liability. The accrued legal liability includes the estimated indemnity cost only, if any, to resolve the claim through a settlement or court verdict. The legal defense costs are not included in the accrual and are expensed in the period incurred, with the level of expense in a given year affected by the number and types of claims we are actively

defending.

Non-employee claims for beryllium disease made prior to 2022 where any of the alleged exposure period is prior to year-end 2007 are covered by insurance. The insurance covers defense costs and indemnity payments (resulting from settlements or court verdicts) and is subject to a \$1.0 million annual deductible. In 2012 and 2011, defense and indemnity costs were less than the deductible.

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Pensions. We have a defined benefit pension plan that covers a large portion of our current and former domestic employees. Carrying values of the associated pension assets and liabilities are determined on an actuarial basis using numerous actuarial and financial assumptions. Differences between the assumptions and current period actual results are typically deferred into the net pension asset or liability value and amortized against future income under established guidelines. The deferral process generally reduces the volatility of the recognized net pension asset or liability and current period income or expense. Unrealized gains or losses are recorded in other comprehensive income (OCI), a component of shareholders' equity.

Management, in conjunction with our actuaries, annually review key pension plan assumptions, including the expected return on plan assets, the discount rate, the average projected wage rate increase and mortality levels, against actual results, trends, Company strategies, interest rate curves, the current and projected investment environment, industry standards and other regulations and make adjustments accordingly. The actuaries will make calculations and adjust various assumptions to reflect changes in demographics and other factors, including employee turnover, annually as warranted. These adjustments may then lead to a higher or lower expense in future periods.

We establish the discount rate used to determine the present value of the projected and accumulated benefit obligation at the end of each year based upon the available market rates for high quality, fixed income investments whose maturities match the plan's projected cash flows. An increase to the discount rate would reduce the present value of the projected benefit obligation and future pension expense and, conversely, a lower discount rate would raise the benefit obligation and future pension expense. We elected to use a discount rate of 4.0% as of December 31, 2012 and 4.75% as of December 31, 2011.

Our pension plan investment strategies are governed by a policy adopted by the Board of Directors. A senior management team oversees a group of outside investment analysts and brokerage firms that implement these strategies. The future return on pension assets is dependent upon the plan's asset allocation, which changes from time to time, and the performance of the underlying investments. As a result of our review of various factors, we reduced the expected rate of return on plan assets assumption to 7.50% as of December 31, 2012 from 7.75% as of December 31, 2011. This change is reflective of management's view of the long-term returns in the market place as well changes in risk profiles and available investments. Management believes that a long-term rate of return of 7.50% is reasonable. Should the assets earn an average return less than 7.50% over time, in all likelihood the future pension expense would increase. Investment earnings in excess of 7.50% would tend to reduce the future expense.

The impact on the pension expense of a change in discount rate or expected rate of return assumption can vary from year to year depending upon the undiscounted liability level, the current discount rate, the asset balance, other changes to the plan and other factors. If the December 31, 2012 discount rate were reduced by 25 basis points (0.25%) and all other pension assumptions remained constant, then the 2013 projected pension expense would increase by approximately \$0.8 million. If the expected rate of return assumption was reduced by 25 basis points and all other pension assumptions remained constant, the 2013 projected pension expense would increase by approximately \$0.4 million.

See Note I to the Consolidated Financial Statements for additional details on our pension and other retirement plans. **LIFO Inventory.** The prices of certain major raw materials that we use, including copper, nickel, gold, silver and other precious metals, fluctuate during a given year. Copper prices on average were lower in 2012 than in 2011 but higher in 2011 than in 2010 while average precious metal prices increased in 2012 and 2011. Where possible, such changes in material costs, in either direction, are generally reflected in selling price adjustments, particularly with precious metals and copper.

The prices of labor and other factors of production, including supplies and utilities, generally increase with inflation. Portions of these cost increases may be offset by manufacturing improvements and other efficiencies. From time to time, we will revise our billing practices to include an energy surcharge in attempts to recover a portion of our higher energy costs from our customers. However, market factors, alternative materials and competitive pricing may limit our ability to offset all or a portion of a cost increase with higher prices.

We use the LIFO method for costing the majority of our domestic inventories. Under the LIFO method, inflationary cost increases are charged against the current period cost of goods sold in order to more closely match the cost with the associated revenue. The carrying value of the inventory is based upon older costs and, as a result, the LIFO cost of

the inventory on the balance sheet is typically, but not always, lower than it would be under most alternative costing methods. The LIFO cost may also be lower than the current replacement cost of the inventory. The LIFO inventory value tends to be less volatile during years of fluctuating costs than the inventory value would be using other costing methods.

The LIFO impact on the income statement in any given year is dependent upon the inflation rate effect on raw material purchases and manufacturing conversion costs, the level of purchases in a given year and changes in the inventory mix and quantities. Assuming no change in the quantity or mix of inventory from the December 31, 2012 level, a 100 basis point change in the annual inflation rate would cause a change of approximately \$0.6 million in the LIFO inventory value.

Deferred Tax Assets. We record deferred tax assets and liabilities based upon the temporary difference between the financial reporting and tax bases of assets and liabilities. We review the expiration dates of the deferrals against projected income levels to determine if the deferral will or can be realized. If it is determined that it is more likely than not that a deferral will not be realized, a valuation allowance would be established for that item. Certain deferrals do not have an expiration date. We will also evaluate deferred tax assets for impairment due to cumulative operating losses by jurisdiction and record a valuation allowance as warranted. A valuation allowance may increase tax expense and reduce net income in the period it is recorded. If a valuation allowance is no longer required, it will reduce tax expense and increase net income in the period that it is reversed.

We had valuation allowances of \$4.6 million associated with state and foreign deferred tax assets as of year-end 2012 primarily for net operating loss carryforwards.

See Note P to the Consolidated Financial Statements for additional deferred tax details.

Unearned revenue. Billings to customers in advance of the shipment of the goods are initially recorded as unearned revenue, which is a liability on the balance sheet. This liability is subsequently reversed and the revenue, cost of sales and gross margin are recorded when the goods are shipped, title passes to the customer and all other revenue recognition criteria are satisfied. The related inventory also remains on our balance sheet until these revenue recognition criteria are met. Advanced billings are typically made in association with products with long manufacturing times and/or products paid with funds from a customer's contract with the government. Billings in advance of the shipments allow us to collect cash earlier than billing at the time of the shipment and, therefore, the collected cash can be used to help finance the underlying inventory. The unearned revenue balance was \$1.5 million as of year-end 2012.

Unearned income. Expenditures for capital equipment to be reimbursed under the Title III contract with the government were initially recorded in construction in process. Reimbursements from the government for those expenditures were recorded in unearned income, a liability on the balance sheet. The total cost of the assets constructed under this contract included costs reimbursed by the government as well as costs borne by us. The assets were placed in service and capitalized in 2012. Depreciation expense was calculated and recorded based upon the assets' total cost and their useful lives. The unearned income liability was reduced and credited to cost of sales on a ratable basis with the annual depreciation expense on the associated assets. The benefit from reducing the unearned income liability in effect reduces the net expense charged to the income statement to an amount equal to the depreciation on the portion of the cost of the assets borne by us. Depreciation and amortization on the Consolidated Statement of Cash Flows is presented net of the current period reduction in the unearned income liability.

Reimbursements recorded in unearned income for the equipment purchased totaled \$63.5 million. During 2012, we reduced the liability by \$2.3 million for the ratable offset of the depreciation expense recorded on the assets, leaving a balance of \$61.2 million on the Consolidated Balance Sheet as of December 31, 2012.

Derivatives. We may use derivative financial instruments to hedge our foreign currency, commodity and precious metal price and interest rate exposures. We apply hedge accounting when an effective hedge relationship can be documented and maintained. The effective portion of the change in a cash flow hedge's fair value is recorded in OCI until the underlying hedged item matures. If a hedge does not qualify as effective, changes in its fair value are recorded against income in the current period. If a derivative is deemed to be a hedge of the fair value of a balance sheet item, the change in the derivative's value will be recorded in income and will offset the change in the fair value of the hedged item to the extent that the hedge is effective.

We secure derivatives with the intention of hedging existing or forecasted transactions only and do not engage in speculative trading or holding derivatives for investment purposes. Hedge contracts are typically held until maturity unless there is a change in the underlying hedged transaction. Our annual budget, quarterly forecasts, monthly estimates, customer agreements and other analyses serve as the basis for determining forecasted transactions. The use of derivatives is governed by policies established by the Audit Committee of the Board of Directors. These policies provide guidance on the allowable types of hedge contracts, the allowable duration of the contracts and other related matters. Hedge contracts are approved by senior financial managers at our corporate office. The level of derivatives outstanding at a particular point in time may also be limited by the availability of credit from financial institutions.

Our practice has been to secure hedge contracts denominated in the same manner as the underlying exposure; for example, a yen exposure will only be hedged with a yen contract and not with a surrogate currency and a silver exposure will only be hedged with a silver and not a gold contract. We also typically secure contracts through financial institutions that are already part of our bank group.

See Note H to the Consolidated Financial Statements and “Quantitative and Qualitative Disclosures About Market Risk”.

OUTLOOK

The near-term outlook for various markets we serve remains solid. Sales for the industrial components and commercial aerospace market have grown, including sales of our ToughMet® products due to product development and market penetration efforts. Medical market sales have also grown over the last two years and we anticipate further growth in 2013 through additional customer and product development programs. While government defense budgets will continue to be under pressure, we anticipate that sales of beryllium products for defense and science applications will improve in 2013 due to program timing, the development of science applications and other factors. We are well-positioned in the oil and gas sector of the energy market and our sales for these applications should grow as the rig count starts to climb.

The growth in consumer electronics sales was disappointing in 2012 as the changes in the LED sector, downstream inventories and other factors reduced our growth. The performance characteristics of our materials in electronic applications support the market's desire for devices that are smaller and faster with more power and therefore the consumer electronics market has long-term growth potential for us.

New product development efforts are an integral part of our sales growth as is leveraging our recent acquisitions. We are cautious about the condition of the U.S. economy, including the federal government deficit and the ongoing high level of unemployment, and the potential impact the economy may have on our sales and profits. The European economic situation is also a concern for us, as approximately 11% of our sales in 2012 were to Europe.

As of early in the first quarter 2013, we are estimating that our sales in 2013 should be 3% to 5% higher than sales in 2012.

The equipment in the new beryllium facility has been installed and is operational. The continued improvement in productive output, efficiencies and total cost will be a key to an increased level of profitability in 2013.

Precious metal prices on average increased slightly in 2012 over 2011 and they remain at high levels with a high degree of volatility. While we typically pass the precious metal costs on to our customers, at higher levels, some customers may investigate alternative pricing arrangements or may design us out in favor of lower priced, lower performing materials. The higher precious metal prices will also put pressure on our consignment lines.

We will have additional costs in 2013 as we complete the facility consolidation program that we started in 2012. These additional costs, however, should be offset by the benefits generated by this program in 2013.

While we have taken steps to mitigate the impact of the defined benefit pension plan over the long term, our pension costs will increase in 2013 largely due to the impact of a lower discount rate.

Capital spending, which can be affected by our cash flow, new business opportunities, age of our equipment and other factors, is anticipated to be approximately \$40.0 million in 2013.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to precious metal and commodity price, interest rate, foreign exchange rate and utility cost differences. While the degree of exposure varies from year to year, our methods and policies designed to manage these exposures have remained fairly consistent over time. Generally, we attempt to minimize the effects of these exposures on our pre-tax income and cash flows through the use of natural hedges, which include pricing strategies, borrowings denominated in the same terms as the exposed asset, off-balance sheet financing arrangements and other methods. Where we cannot use a natural hedge, we may use derivative financial instruments to minimize the effects of these exposures when practical and cost efficient. The use of derivatives is subject to policies approved by the Audit Committee of the Board of Directors with oversight provided by a group of senior financial managers at our corporate office.

Precious metals. We use gold and other precious metals in manufacturing various products. To reduce the exposure to market price changes, the majority of our precious metal requirements are maintained on a consigned inventory basis. We purchase the metal out of consignment from our suppliers when it is ready to ship to a customer as a finished product. Our purchase price forms the basis for the price charged to the customer for the precious metal content and, therefore, the current cost is matched to the selling price and the price exposure is minimized. The use of precious metal consignment arrangements is governed by a policy approved by the Audit Committee of the Board of Directors. We are charged a consignment fee by the financial institutions that own the precious metals. This fee is partially a function of the market price of the metal. Because of market forces and competition, the fee can only be charged to customers in a limited case-by-case basis. Should the market price of precious metals that we have on consignment increase by 20% from the prices on December 31, 2012, the additional pre-tax cost to us as a result of an increase in the consignment fee would be approximately \$1.2 million on an annual basis. This calculation assumes no changes in the quantity of metal held on consignment or the underlying fee and that none of the additional fees are charged to customers.

To further limit price and financing rate exposures, under some circumstances, we will require customers to furnish their own metal for processing. Customers may also elect to provide their own material for us to process on a toll basis as opposed to purchasing our material.

The available capacity of our existing credit lines to consign precious metals is a function of the quantity and price of the metals on hand. As prices increase, a given quantity of metal will utilize a larger proportion of the existing credit lines. A significant prolonged increase in metal prices could result in our credit lines being fully utilized, and, absent securing additional credit line capacity from a financial institution, could require us to purchase precious metals rather than consign them, require customers to supply their own metal and/or force us to turn down additional business opportunities. If we were in a significant precious metal ownership position, we might elect to use derivative financial instruments to hedge the potential price exposure. The cost to finance and potentially hedge the purchased inventory may also be higher than the consignment fee. The financial statement impact of the risk from rising metal prices impacting our credit availability cannot be estimated at the present time.

In certain circumstances, we may elect to fix the price of precious metal for a customer for a stated quantity over a specified period of time. In those cases, we may secure hedge contracts whose terms match the terms in the agreement with our customer so that the gain or loss on the contract with the customer due to subsequent movements in the precious metal price will generally be offset by a gain or loss on the hedge contract. At year-end 2012, we had hedge contracts to purchase and sell gold with a notional value of \$26.3 million. A metal price decline of 10% from the year-end price would result in a net additional pre-tax expense of approximately \$0.3 million in 2013. This calculation does not take into account the additional net gain that would be recorded on the underlying hedged transactions with the customer.

Copper. We also use copper in our production processes. When possible, fluctuations in the purchase price of copper are passed on to customers in the form of price adders or reductions. While over time our price exposure to copper is generally in balance, there can be a lag between the change in our cost and the pass-through to our customers, resulting in higher or lower margins in a given period.

We consign a portion of our copper inventory requirements. The copper consignment arrangements are governed by a policy approved by the Audit Committee of the Board of Directors. As with precious metals, the available capacity

under the existing lines is a function of the quantity and price of metal on hand. Should the market cost of copper increase by 20% from the price as of December 31, 2012, the additional pre-tax cost to us as a result of an increase in the consignment fee would be approximately \$0.1 million on an annual basis. This calculation assumes no changes in the quantity of inventory or the underlying fee and that none of the additional fees are charged to customers.

Lower of cost or market. In our manufacturing processes, we use various metals that are not widely used by others or actively traded and, therefore, there is no established efficient market for derivative financial instruments that could be used to effectively hedge the related price exposures. For certain applications, our pricing practice with respect to these metals is to

establish the selling price based upon our cost to purchase the material, limiting our price exposure. However, the inventory carrying value may be exposed to market fluctuations. The inventory value is maintained at the lower of cost or market and if the market value were to drop below the carrying value, the inventory would have to be reduced accordingly and a charge taken against cost of sales. This risk is mainly associated with long manufacturing lead time items and with sludges and scrap materials, which generally have longer processing times to be refined or processed into a usable form for further manufacturing and are typically not covered by specific sales orders from customers. We did not record any material lower of cost or market charges in 2012 or 2011 as a result of market price fluctuations while we recorded lower of cost or market charges totaling \$0.4 million in 2010.

Interest rates. We are exposed to changes in interest rates on portions of our debt and cash balances. This interest rate exposure is managed by maintaining a combination of short-term and long-term debt and variable and fixed rate instruments. We may also use interest rate swaps to fix the interest rate on variable rate obligations, as we deem appropriate. There were no interest rate derivatives outstanding as of December 31, 2012. Excess cash is typically invested in high quality instruments that mature in ninety days or less. Investments are made in compliance with policies approved by the Board of Directors. Assuming no change in the amount or make-up of the outstanding debt as of December 31, 2012, a 200 basis point movement upwards in the interest rates on our variable rate debt would increase our annual interest expense by \$1.1 million.

Foreign currencies. Portions of our international operations sell products priced in foreign currencies, mainly the euro and yen, while the majority of these products' costs are incurred in U.S. dollars. We are exposed to currency movements in that if the U.S. dollar strengthens, the translated value of the foreign currency sale and the resulting margin on that sale will be reduced. We typically cannot increase the price of our products for short-term exchange rate movements because of local competition. To minimize this exposure, we may purchase foreign currency forward contracts, options and collars in compliance with approved policies. If the dollar strengthened, the decline in the translated value of our margins would be at least partially offset by a gain on the hedge contract. A decrease in the value of the dollar would result in larger margins but potentially a loss on the contract, depending upon the method used to hedge the exposure. Our current policy limits our hedges to 80% or less of the forecasted exposure.

The notional value of the outstanding currency contracts was \$29.1 million as of December 31, 2012. If the dollar weakened 10% against the currencies we have hedged from the December 31, 2012 exchange rates, the reduced gain and/or increased loss on the outstanding contracts as of December 31, 2012 would reduce pre-tax profits by approximately \$2.9 million in 2013. This calculation does not take into account the increase in margins as a result of translating foreign currency sales at the more favorable exchange rates, any changes in margins from potential volume fluctuations caused by currency movements or the translation effects on any other foreign currency denominated income statement or balance sheet item.

The fair value of the outstanding foreign currency contracts was a net asset of \$0.3 million at December 31, 2012, indicating that the average hedge rates were favorable compared to the actual year-end market exchange rates.

Utilities. The cost of natural gas and electricity used in our operations may vary from year to year and from season to season. We attempt to minimize these fluctuations and the exposure to higher costs by utilizing fixed price agreements of set durations, when deemed appropriate, obtaining competitive bidding between regional energy suppliers and other methods.

Economy. We are exposed to changes in global economic conditions and the potential impact those changes may have on various facets of our business. We have a program in place to closely monitor the credit worthiness and financial condition of our key providers of financial services, including our bank group and insurance carriers, as well as the credit worthiness of customers and vendors and have various contingency plans in place.

Our overall credit lines, including lines for credit, consignment and hedging, have increased over the last two years. These lines are established with a number of different banks in order to mitigate our exposure with any one financial institution. All of the banks in our bank group had credit in good standing as of year-end 2012. The financial statement impact from the risk of one or more of the banks in our bank group dropping our lines due to their insolvency or other causes cannot be estimated at the present time.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Management's Report on Internal Control over Financial Reporting

The management of Materion Corporation and subsidiaries are responsible for establishing and maintaining adequate internal controls over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Materion Corporation and subsidiaries' internal control system was designed to provide reasonable assurance to the Company's management and Board of Directors regarding the preparation and fair presentation of published financial statements. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Materion Corporation and subsidiaries' management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2012. In making this assessment, it used the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria) in Internal Control — Integrated Framework. Based on our assessment we believe that, as of December 31, 2012, the Company's internal control over financial reporting is effective.

The effectiveness of our internal control over financial reporting as of December 31, 2012 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report.

/S/ RICHARD J. HIPPLE

Richard J. Hipple

Chairman, President and Chief Executive Officer

/S/ JOHN D. GRAMPA

John D. Grampa

Senior Vice President Finance and

Chief Financial Officer

Report of Independent Registered Public Accounting Firm
The Board of Directors and Shareholders of
Materion Corporation

We have audited Materion Corporation and subsidiaries' internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Materion Corporation and subsidiaries' management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

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

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

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

In our opinion, Materion Corporation and subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets as of December 31, 2012 and 2011, and the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2012 of Materion Corporation and subsidiaries and our report dated March 8, 2013 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP
Cleveland, Ohio
March 8, 2013

Report of Independent Registered Public Accounting Firm
The Board of Directors and Shareholders of
Materion Corporation

We have audited the accompanying consolidated balance sheets of Materion Corporation and subsidiaries as of December 31, 2012 and 2011, and the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2012. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Materion Corporation and subsidiaries at December 31, 2012 and 2011, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2012, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Materion Corporation and subsidiaries' internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 8, 2013 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP
Cleveland, Ohio
March 8, 2013

Materion Corporation and Subsidiaries
Years Ended December 31, 2012, 2011 and 2010
Consolidated Statements of Income

(Thousands except per share amounts)	2012	2011	2010
Net sales	\$1,273,078	\$1,526,730	\$1,302,314
Cost of sales	1,074,295	1,311,409	1,079,666
Gross margin	198,783	215,321	222,648
Selling, general and administrative expense	133,893	131,388	126,477
Research and development expense	12,505	11,081	7,113
Derivative ineffectiveness	—	—	598
Other — net	15,609	15,774	14,827
Operating profit	36,776	57,078	73,633
Interest expense — net	3,134	2,812	2,665
Income before income taxes	33,642	54,266	70,968
Income tax expense	8,978	14,287	24,541
Net income	\$24,664	\$39,979	\$46,427
Basic earnings per share:			
Net income per share of common stock	\$1.21	\$1.96	\$2.29
Diluted earnings per share:			
Net income per share of common stock	\$1.19	\$1.93	\$2.25
Cash dividends per share	\$0.225	\$—	\$—
Weighted-average number of shares of common stock outstanding			
Basic	20,418	20,365	20,282
Diluted	20,679	20,754	20,590

See Notes to Consolidated Financial Statements.

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Materion Corporation and Subsidiaries
Years Ended December 31, 2012, 2011 and 2010
Consolidated Statements of Comprehensive Income

(Thousands)	2012	2011	2010
Net income	\$24,664	\$39,979	\$46,427
Other comprehensive income:			
Foreign currency translation adjustment	(870	) 958	1,665
Derivative and hedging activity, net of tax benefit (expense) of \$385, (\$1,047) and \$581	(715	) 1,946	(1,078)
Pension and post employment benefit adjustment, net of tax of \$7,676, \$12,292 and \$3,119	(14,629	) (23,503	) (5,519)
Net change in accumulated other comprehensive income	(16,214	) (20,599	) (4,932)
Comprehensive income	\$8,450	\$19,380	\$41,495

See Notes to Consolidated Financial Statements.

Materion Corporation and Subsidiaries
Years Ended December 31, 2012, 2011 and 2010
Consolidated Statements of Cash Flows

(Thousands)	2012	2011	2010
Cash flows from operating activities:			
Net income	\$24,664	\$39,979	\$46,427
Adjustments to reconcile net income to net cash provided from operating activities:			
Depreciation, depletion and amortization	37,046	43,635	35,394
Amortization of deferred financing costs in interest expense	649	559	538
Stock-based compensation expense	5,889	5,000	4,100
Derivative financial instruments ineffectiveness	—	—	598
Deferred tax (benefit) expense	(2,462)	(1,668)	13,623
Changes in assets and liabilities net of acquired assets and liabilities:			
Decrease (increase) in accounts receivable	(8,913)	26,818	(50,386)
Decrease (increase) in other receivables	4,197	(630)	7,084
Decrease (increase) in inventory	(18,880)	(30,016)	(23,112)
Decrease (increase) in prepaid and other current assets	483	(7,571)	(3,566)
Increase (decrease) in accounts payable and accrued expenses	1,472	(2,580)	7,002
Increase (decrease) in unearned revenue	(1,491)	661	1,938
Increase (decrease) in interest and taxes payable	(2,324)	(5,891)	2,048
Increase (decrease) in long-term liabilities	(5,053)	(15,993)	(8,736)
Other — net	3,343	4,503	(1,911)
Net cash provided from operating activities	38,620	56,806	31,041
Cash flows from investing activities:			
Payments for purchase of property, plant and equipment	(34,088)	(28,187)	(42,314)
Payments for mine development	(10,573)	(560)	(11,348)
Reimbursement for capital spending under government contract	991	5,386	21,944
Payments for purchase of business less cash received	(3,894)	(22,448)	(20,605)
Proceeds from transfer of acquired inventory to consignment line	—	—	5,667
Proceeds from sale of property, plant and equipment	—	54	77
Other investments — net	4,201	(4,274)	60
Net cash (used in) investing activities	(43,363)	(50,029)	(46,519)
Cash flows from financing activities:			
Issuance (repayment) of short-term debt	8,594	(6,950)	(8,406)
Proceeds from issuance of long-term debt	32,403	118,582	80,000
Repayment of long-term debt	(27,986)	(116,425)	(50,000)
Principal payments under capital lease obligations	(749)	(812)	(779)
Cash dividends paid	(4,615)	—	—
Deferred financing costs	—	(2,637)	(220)
Repurchase of common stock	(119)	(3,776)	(3,527)
Issuance of common stock under stock option plans	158	735	2,631
Tax benefit from stock compensation realization	817	658	121
Net cash provided from (used in) financing activities	8,503	(10,625)	19,820
Effects of exchange rate changes on cash and cash equivalents	41	(1)	(491)
Net change in cash and cash equivalents	3,801	(3,849)	3,851
Cash and cash equivalents at beginning of year	12,255	16,104	12,253
Cash and cash equivalents at end of year	\$16,056	\$12,255	\$16,104

See Notes to Consolidated Financial Statements.

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Materion Corporation and Subsidiaries

December 31, 2012 and 2011

Consolidated Balance Sheets

(Thousands)	2012	2011
Assets		
Current assets		
Cash and cash equivalents	\$16,056	\$12,255
Accounts receivable (net of allowance of \$1,403 for 2012 and \$1,490 for 2011)	126,482	117,761
Other receivables	405	4,602
Inventories	206,125	187,176
Prepaid expenses	41,685	39,739
Deferred income taxes	10,236	9,368
Total current assets	400,989	370,901
Related-party notes receivable	51	73
Long-term deferred income taxes	19,946	11,627
Property, plant and equipment	779,785	752,726
Less allowances for depreciation, amortization and depletion	(507,243)	(489,328)
Property, plant and equipment — net	272,542	263,398
Intangible assets	28,869	34,995
Other assets	3,767	7,073
Goodwill	88,753	84,036
Total Assets	\$814,917	\$772,103
Liabilities and Shareholders' Equity		
Current liabilities		
Short-term debt	\$49,432	\$40,944
Accounts payable	42,281	39,385
Salaries and wages	27,768	29,441
Taxes other than income taxes	1,055	975
Other liabilities and accrued items	26,988	25,893
Unearned revenue	1,543	3,033
Total current liabilities	149,067	139,671
Other long-term liabilities	16,173	16,488
Retirement and post-employment benefits	125,978	105,115
Unearned income	61,184	62,540
Long-term income taxes	1,510	1,793
Deferred income taxes	1,130	51
Long-term debt	44,880	40,463
Shareholders' equity		
Serial preferred stock (no par value; 5,000 authorized shares, none issued)	—	—
Common stock (no par value; 60,000 authorized shares, issued shares of 27,050 for 2012 and 27,024 for 2011)	191,169	185,913
Retained earnings	428,394	408,380
Common stock in treasury (6,607 shares for 2012 and 6,716 shares for 2011)	(118,298)	(118,279)
Other comprehensive income (loss)	(88,429)	(72,215)
Other equity transactions	2,159	2,183
Total shareholders' equity	414,995	405,982
Total Liabilities and Shareholders' Equity	\$814,917	\$772,103

See Notes to Consolidated Financial Statements.

Materion Corporation and Subsidiaries
Years Ended December 31, 2012, 2011 and 2010
Consolidated Statements of Shareholders' Equity

(Thousands)	Common Stock	Retained Earnings	Common Stock In Treasury	Other Comprehensive Income (Loss)	Other Equity Transactions	Total
Balance at January 1, 2010	\$173,776	\$321,974	\$(111,370)	\$ (46,684)	\$2,163	\$339,859
Net income	—	46,427	—	—	—	46,427
Other comprehensive income	—	—	—	(4,932)	—	(4,932)
Proceeds from exercise of 154 shares under option plans	2,631	—	—	—	—	2,631
Income tax benefit from stock compensation realization	120	—	—	—	—	120
Repurchase of 150 shares	—	—	(3,527)	—	—	(3,527)
Stock-based compensation expense	4,100	—	—	—	—	4,100
Shares withheld for employee taxes on equity awards	(481)	—	—	—	—	(481)
Directors' deferred compensation	—	—	(192)	—	337	145
Other equity transactions	15	—	(1)	—	—	14
Balance at December 31, 2010	180,161	368,401	(115,090)	(51,616)	2,500	384,356
Net income	—	39,979	—	—	—	39,979
Other comprehensive income	—	—	—	(20,599)	—	(20,599)
Proceeds from exercise of 53 shares under option plans	735	—	—	—	—	735
Income tax benefit from stock compensation realization	658	—	—	—	—	658
Repurchase of 132 shares	—	—	(3,776)	—	—	(3,776)
Stock-based compensation expense	5,000	—	—	—	—	5,000
Shares withheld for employee taxes on equity awards	(641)	—	—	—	—	(641)
Directors' deferred compensation	—	—	587	—	(317)	270
Balance at December 31, 2011	185,913	408,380	(118,279)	(72,215)	2,183	405,982
Net income	—	24,664	—	—	—	24,664
Other comprehensive income	—	—	—	(16,214)	—	(16,214)
Cash dividends declared	—	(4,650)	—	—	—	(4,650)
Proceeds from exercise of 16 shares under option plans	158	—	—	—	—	158
Income tax benefit from stock compensation realization	817	—	—	—	—	817
Repurchase of 6 shares	—	—	(119)	—	—	(119)
Stock-based compensation expense	5,889	—	—	—	—	5,889
Shares withheld for employee taxes on equity awards	(1,608)	—	—	—	—	(1,608)
Directors' deferred compensation	—	—	100	—	(24)	76
Balance at December 31, 2012	\$191,169	\$428,394	\$(118,298)	\$ (88,429)	\$2,159	\$414,995

See Notes to Consolidated Financial Statements.

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Materion Corporation and Subsidiaries

Notes to Consolidated Financial Statements

Note A — Significant Accounting Policies

Organization: The Company is a holding company with subsidiaries that have operations in the United States, Europe and Asia. These operations manufacture advanced engineered materials used in a variety of markets, including consumer electronics, defense and science, industrial components and commercial aerospace, automotive electronics, telecommunications infrastructure, energy, medical and appliance. The Company has four reportable segments: Advanced Material Technologies manufactures precious and non-precious vapor deposition targets, frame lid assemblies, advanced chemicals, performance coatings, optics, microelectronic packages, other precious and non-precious metal products and specialty inorganic materials;

Performance Alloys manufactures high precision strip and bulk products from copper and nickel-based alloys; Beryllium and Composites produces beryllium metal, beryllium and non-beryllium metal matrix composites and beryllia ceramics in a variety of forms; and

Technical Materials manufactures clad inlay and overlay metals, precious and base metal electroplated systems and other related products.

See Note M to the Consolidated Financial Statements for additional segment details. The Company is vertically integrated and distributes its products through a combination of company-owned facilities and independent distributors and agents.

Use of Estimates: The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results may differ from those estimates.

Consolidation: The Consolidated Financial Statements include the accounts of Materion Corporation and its subsidiaries. All of the Company's subsidiaries are wholly owned as of December 31, 2012. Intercompany accounts and transactions are eliminated in consolidation.

Cash Equivalents: All highly liquid investments with a maturity of three months or less when purchased are considered to be cash equivalents.

Accounts Receivable: An allowance for doubtful accounts is maintained for the estimated losses resulting from the inability of customers to pay the amounts due. The allowance is based upon identified delinquent accounts, customer payment patterns and other analyses of historical data and trends. The Company extends credit to customers based upon their financial condition and generally collateral is not required.

Inventories: Inventories are stated at the lower of cost or market. The cost of the majority of domestic inventories is determined using the last-in, first-out (LIFO) method. The remaining inventories are stated principally at average cost.

Property, Plant and Equipment: Property, plant and equipment is stated on the basis of cost. Depreciation is computed principally by the straight-line method, except certain assets for which depreciation may be computed by the units-of-production or the sum-of-the-years-digit method. The depreciable lives that are used in computing the annual provision for depreciation by class of asset are as follows:

	Years
Land improvements	5 to 25
Buildings	10 to 40
Leasehold improvements	Life of lease
Machinery and equipment	3 to 15
Furniture and fixtures	4 to 15
Automobiles and trucks	2 to 8
Research equipment	6 to 12
Computer hardware	3 to 10
Computer software	3 to 10

An asset acquired under a capital lease will be recorded at the lesser of the present value of the projected lease payments or the fair value of the asset and will be depreciated in accordance with the above schedule. Leasehold improvements will be depreciated over the life of the improvement if it is shorter than the life of the lease. Repair and maintenance costs are expensed as incurred.

Mineral Resources and Mine Development: Property acquisition costs are capitalized as mineral resources on the balance sheet and are depleted using the units-of-production method based upon recoverable proven reserves.

Overburden, or waste rock, is removed prior to the extraction of the ore from a particular open pit. The removal cost is capitalized and amortized as the ore is extracted using the units-of-production method based upon the proven reserves in that particular pit. Exploration and development expenses, including development drilling, are charged to expense in the period in which they are incurred.

Goodwill and Other Intangible Assets: Goodwill is not amortized, but instead reviewed annually as of December 31 of each year, or more frequently under certain circumstances, for impairment. Goodwill is assigned to the reporting unit, which is the operating segment level or one level below the operating segment. Intangible assets with finite lives are amortized using the straight-line method or effective interest method, as applicable, over the periods estimated to be benefited, which is generally twenty years or less. Finite-lived intangible assets are also reviewed for impairment if facts and circumstances warrant.

Asset Impairment: In the event that facts and circumstances indicate that the carrying value of long-lived assets may be impaired, an evaluation of recoverability is performed by comparing the carrying value of the assets to the associated estimated future undiscounted cash flow. If the carrying value exceeds that cash flow, then the assets are written down to their fair values.

Derivatives: The Company recognizes all derivatives on the balance sheet at their fair values. If the derivative is designated and effective as a cash flow hedge, changes in the fair value of the derivative are recognized in other comprehensive income (loss), a component of shareholders' equity, until the hedged item is recognized in earnings. If the derivative is designated as a fair value hedge, changes in its value are offset against the change in the value of the hedged asset, liability or commitment through earnings. The ineffective portion of a derivative's change in fair value, if any, is recognized in earnings immediately. If a derivative is not a hedge, changes in its fair value are adjusted through income.

Asset Retirement Obligation: The Company records a liability to recognize the legal obligation to remove an asset at the time the asset is acquired or when the legal liability arises. The liability is recorded for the present value of the ultimate obligation by discounting the estimated future cash flows using a credit-adjusted risk-free interest rate. The liability is accreted over time, with the accretion charged to expense. An asset equal to the fair value of the liability is recorded concurrent with the liability and depreciated over the life of the underlying asset.

Unearned Income: Expenditures for capital equipment to be reimbursed under government contracts are recorded in construction in process while the reimbursements for those expenditures are recorded in unearned income, a liability on the balance sheet. When the assets subject to reimbursement are placed in service, their total cost is depreciated over their useful lives and the unearned income liability is reduced and credited to cost of sales on the Consolidated Statements of Income ratably with the annual depreciation expense. Depreciation and amortization expense on the Consolidated Statement of Cash Flows is shown net of the associated current period reduction in the unearned income liability.

Revenue Recognition: The Company generally recognizes revenue when the goods are shipped and title passes to the customer. The Company requires persuasive evidence that a revenue arrangement exists, delivery of the product has occurred, the selling price is fixed or determinable and collectibility is reasonably assured before revenue is realized and earned. Billings in advance of the shipment of the goods are recorded as unearned revenue, which is a liability on the balance sheet. Revenue is recognized for these transactions when the goods are shipped and all other revenue recognition criteria are met.

Shipping and Handling Costs: The Company records shipping and handling costs for products sold to customers in cost of sales on the Consolidated Statements of Income.

Advertising Costs: The Company expenses all advertising costs as incurred. Advertising costs were \$1.2 million in 2012, \$3.1 million in 2011 and \$1.1 million in 2010.

Stock-based Compensation: All stock-based compensation instruments, including options, stock appreciation rights, restricted stock and performance restricted stock, are viewed collectively when determining the accounting treatment of the tax considerations upon the realization of the benefit by the recipient.

Capitalized Interest: Interest expense associated with active capital asset construction and mine development projects is capitalized and amortized over the future useful lives of the related assets.

Income Taxes: The Company uses the liability method in measuring the provision for income taxes and recognizing deferred tax assets and liabilities on the balance sheet. The Company will record a valuation allowance to reduce the deferred tax assets to the amount that is more likely than not to be realized, as warranted by the facts and circumstances. The Company applies

a more-likely-than-not recognition threshold for all tax uncertainties and will record a liability for those tax benefits that have a less than 50% likelihood of being sustained upon examination by the taxing authorities.

Net Income Per Share: Basic earnings per share (EPS) is computed by dividing income available to common stockholders by the weighted-average number of common shares outstanding for the period. Diluted EPS reflects the assumed conversion of all dilutive common stock equivalents as appropriate under the treasury stock method.

Reclassification: Certain amounts in prior years have been reclassified to conform to the 2012 consolidated financial statement presentation.

New Pronouncements: In 2011, the Financial Accounting Standards Board (FASB) issued two Accounting Standards Updates (ASU) which amended guidance for the presentation of comprehensive income. The amended guidance requires an entity to present components of net income and other comprehensive income in one continuous statement, referred to as the statement of comprehensive income, or in two separate, but consecutive statements. The current option to report other comprehensive income and its components in the statement of stockholders' equity will be eliminated. Although the new guidance changes the presentation of comprehensive income, there were no changes to the components that are recognized in net income or other comprehensive income under existing guidance. The ASU is effective for interim and annual periods beginning after December 15, 2011 and retrospective application is required. The Company adopted these ASUs beginning with its disclosures for the first quarter 2012.

The FASB issued an ASU in October 2009 that provides amendments to the criteria for separating consideration in multiple-deliverable arrangements. This update allows companies to allocate consideration received for qualified separate deliverables using estimated selling price for both delivered and undelivered items when vendor-specific objective evidence or third-party evidence is unavailable. Additional disclosures discussing the nature of multiple element arrangements, the types of deliverables under the arrangements, the general timing of their delivery, and significant factors and estimates used to determine estimated selling prices are required. The Company adopted this update effective January 1, 2011 for new revenue arrangements entered into or materially modified on or after January 1, 2011. The adoption of the provisions of this update did not have a material impact on the Consolidated Financial Statements.

Note B — Acquisitions

In the first quarter 2012, the Company acquired all of the outstanding stock of Aerospace Metal Composites Limited (AMC) of Farnborough, England for \$3.3 million, net of \$1.5 million of cash acquired. AMC manufactures ultrafine particulate reinforced metal matrix composites, primarily aluminum materials, that are used in performance automotive, aerospace, defense and precision high speed machinery applications. A portion of the purchase price was held in escrow pending resolution of various matters as detailed in the purchase agreement. Goodwill was valued at \$1.9 million.

The pro forma impact of AMC's operating results on the Company's sales, income before income taxes and net income for 2011 and 2012 was immaterial.

In the fourth quarter of 2011, the Company acquired the outstanding stock of EIS Optics Limited (EIS) for \$24.5 million in cash. EIS manufactures optical thin film filters, glass processing, lithography and optical subassemblies that allow for the precision management of light in a broad range of end-use applications throughout the projection display, entertainment lighting, sensors, medical instruments and gaming industries. EIS manufactures its products at a 101,000 square foot facility in Shanghai, China. The \$24.5 million purchase price includes \$0.6 million paid by the Company in the first quarter of 2012 as a result of the resolution of working capital valuation adjustments in accordance with the purchase agreement. Goodwill assigned to the transaction totaled \$13.9 million.

In the first quarter of 2010, the Company acquired the outstanding stock of Academy Corporation of Albuquerque, New Mexico for \$21.0 million in cash. Academy provides precious and non-precious metals and refining services for a variety of applications, including architectural glass, solar energy, medical and electronics. Major product forms include sputtering targets, sheet, fine wire, rod and powder. The \$21.0 million purchase price was net of \$1.7 million the Company received back from the seller in the second quarter 2010 as a result of the resolution of working capital valuation adjustments in accordance with the purchase agreement. Goodwill assigned to the transaction totaled \$5.4 million.

Each of these acquisitions was financed with a combination of cash on hand and borrowings under the existing revolving credit agreement.

The results of the above acquired businesses were included in the Company's financial statements since their respective acquisition dates. The AMC acquisition is included in the Beryllium and Composites segment while the EIS and Academy

acquisitions are included in the Advanced Material Technologies segment. See Note E to the Consolidated Financial Statements for additional information on the intangible assets associated with these acquisitions.

Note C — Inventories

Inventories on the Consolidated Balance Sheets are summarized as follows:

(Thousands)	December 31,	
	2012	2011
Principally average cost:		
Raw materials and supplies	\$42,751	\$42,969
Work in process	203,179	179,445
Finished goods	51,094	57,645
Gross inventories	297,024	280,059
Excess of average cost over LIFO inventory value	90,899	92,883
Net inventories	\$206,125	\$187,176

Average cost approximates current cost. Gross inventories accounted for using the LIFO method totaled \$195.7 million at December 31, 2012 and \$183.7 million at December 31, 2011. The use of the LIFO method results in a better matching of revenue and costs. The liquidation of LIFO inventory layers reduced cost of sales by \$0.5 million in 2012 and \$0.2 million in 2011.

Note D — Property, Plant and Equipment

Property, plant and equipment on the Consolidated Balance Sheets is summarized as follows:

(Thousands)	December 31,	
	2012	2011
Land	\$8,797	\$9,123
Buildings	127,691	114,090
Machinery and equipment	570,001	485,593
Software	31,640	29,277
Construction in progress	15,389	86,149
Allowances for depreciation	(503,560)	(476,443)
Subtotal	249,956	247,789
Capital leases	10,912	10,898
Allowances for amortization	(1,440)	(837)
Subtotal	9,472	10,061
Mineral resources	4,979	5,029
Mine development	10,377	12,567
Allowances for amortization and depletion	(2,243)	(12,048)
Subtotal	13,113	5,548
Property, plant and equipment — net	\$272,542	\$263,398

The Company has a Title III contract with the Department of Defense (DoD) for the design and development of a primary beryllium production facility. Construction of the facility would not have been economically feasible without assistance from the government. The cost of the project, which included the equipment and building and project design, administrative and other general costs that were not capitalizable as fixed assets, totaled approximately \$104.9 million. The Company capitalized \$14.7 million of fixed assets and \$10.0 million of capital leases as a portion of its cost share for the project. Reimbursements received by the Company from the DoD included \$63.5 million for its share of the cost of equipment that was purchased by the Company and installed in the facility. The cost paid by the Company was recorded in property, plant and equipment and the reimbursement from the government was recorded as unearned income on the Consolidated Balance Sheets. The unearned income liability will be reduced and credited to income ratably with the depreciation expense recorded over the useful life the equipment.

The equipment was placed in service during 2012. Depreciation expense on the portion of the equipment whose cost was reimbursed by the DoD was \$2.3 million in 2012. Accordingly, unearned income was reduced by \$2.3 million and credited to cost of sales on the Consolidated Statement of Income in 2012, offsetting the impact of the depreciation expense on the associated equipment on the Company's cost of sales and gross margin.

Depreciation expense, including amortization for assets recorded under capital lease, was \$31.0 million in 2012, \$37.5 million in 2011 and \$29.0 million in 2010. The 2012 expense of \$31.0 million is net of the \$2.3 million reduction from the unearned income liability. Depreciation, depletion and amortization as shown on the Consolidated Statement of Cash Flows is also net of the \$2.3 million reduction in the unearned income liability in 2012.

Note E — Intangible Assets

Assets Acquired

The Company acquired the following intangible assets in 2012:

(Dollars in thousands)	Amount	Weighted-average Amortization Period
Customer relationships	\$257	5.0 Years
Trade Name	62	5.0 Years
Technology	212	5.0 Years
Total assets subject to amortization	\$531	5.0 Years
Goodwill	\$4,717	Not Applicable

The assets subject to amortization were acquired as part of the purchase of the capital stock of AMC in the first quarter 2012. The additional goodwill resulted from the AMC acquisition as well as from the final adjustments to the purchase price allocation from the acquisition of EIS in the fourth quarter 2011.

Assets Subject to Amortization

The cost, accumulated amortization and net book value of intangible assets subject to amortization as of December 31, 2012 and 2011 and the amortization expense for each year then ended is as follows:

(Thousands)	2012	2011
Deferred financing costs		
Cost	\$6,427	\$6,427
Accumulated amortization	(4,048)	(3,399)
Net book value	2,379	3,028
Customer relationships		
Cost	38,427	38,170
Accumulated amortization	(18,703)	(14,684)
Net book value	19,724	23,486
Technology		
Cost	12,092	11,880
Accumulated amortization	(6,538)	(5,074)
Net book value	5,554	6,806
License		
Cost	2,480	2,480
Accumulated amortization	(1,340)	(850)
Net book value	1,140	1,630
Non-compete contracts		
Cost	550	550
Accumulated amortization	(530)	(505)
Net book value	20	45
Trade Name		
Cost	62	—
Accumulated amortization	(10)	—
Net book value	52	—
Total		
Cost	\$60,038	\$59,507
Accumulated amortization	(31,169)	(24,512)
Net book value	\$28,869	\$34,995
Aggregate amortization expense	\$6,657	\$6,703

The aggregate amortization expense is estimated to be \$6.1 million in 2013, \$5.8 million in 2014, \$5.7 million in 2015, \$4.8 million in 2016 and \$3.9 million in 2017.

Assets Not Subject to Amortization

The Company's only intangible asset not subject to amortization is goodwill. A reconciliation of the goodwill activity for 2012 and 2011 is as follows:

(Thousands)	2012	2011
Balance at the beginning of the year	\$84,036	\$72,936
Current year additions	4,717	11,100
Balance at the end of the year	\$88,753	\$84,036

Goodwill totaling \$86.9 million has been assigned to the Advanced Material Technologies segment while the remaining \$1.9 million has been assigned to the Beryllium and Composites segment.

The goodwill acquired in 2012 and 2011 was not deductible for tax purposes.

Note F — Debt

Long-term debt on the Consolidated Balance Sheets is summarized as follows:

(Thousands)	December 31,	
	2012	2011
Revolving credit agreement	\$30,000	\$25,000
Fixed rate industrial development revenue bonds payable in annual installments through 2021	7,158	7,705
Variable rate industrial development revenue bonds payable in 2016	8,305	8,305
Total outstanding	45,463	41,010
Current portion of long-term debt	(583)	(547)
Total	\$44,880	\$40,463
Maturities on long-term debt instruments as of December 31, 2012 are as follows:		
2013		\$583
2014		613
2015		653
2016		38,998
2017		733
Thereafter		3,883
Total		\$45,463

In July 2011, the Company entered into an Amended and Restated Credit Agreement with six financial institutions that expires in 2016 and provides for a \$325.0 million revolving credit facility comprised of sub-facilities for revolving loans, swing line loans, letters of credit and foreign borrowings. The credit agreement also provides for an uncommitted incremental facility whereby, under certain conditions, the Company may be able to borrow additional term loans in an aggregate amount not to exceed \$100.0 million. The credit agreement is secured by substantially all of the assets of the Company and its direct subsidiaries, with the exception of non-mining real property and certain other assets. The credit agreement allows the Company to borrow money at a premium over LIBOR or the prime rate and at varying maturities. The premium resets quarterly according to the terms and conditions available under the agreement. At December 31, 2012 there was \$38.2 million outstanding against the letters of credit sub-facility. The Company pays a variable commitment fee that resets quarterly (0.25% as of December 31, 2012) of the available and unborrowed amounts under the revolving credit line.

The credit agreement is subject to restrictive covenants including incurring additional indebtedness, acquisition limits, dividend declarations and stock repurchases. In addition, the agreement includes covenants over a maximum leverage ratio and a minimum fixed charge coverage ratio. The Company was in compliance with all of its debt covenants as of December 31, 2012.

The following table summarizes the Company's short-term lines of credit. Amounts shown as outstanding are included in short-term debt on the Consolidated Balance Sheets.

(Thousands)	December 31, 2012			December 31, 2011		
	Total	Outstanding	Available	Total	Outstanding	Available
Domestic	\$256,799	\$8,000	\$248,799	\$262,724	\$3,200	\$259,524
Foreign	15,266	1,415	13,851	16,149	770	15,379
Precious metal	39,435	39,435	—	36,427	36,427	—
Total	\$311,500	\$48,850	\$262,650	\$315,300	\$40,397	\$274,903

While the available borrowings under the individual existing credit lines total \$262.7 million, the covenants in the domestic credit agreement restrict the aggregate available borrowings to \$189.5 million as of December 31, 2012. The domestic line is committed and includes all sub-facilities in the \$325.0 million maximum borrowing under the revolving credit agreement. The Company has various foreign lines of credit, one of which for 3.5 million euros is committed and secured.

The remaining foreign lines are uncommitted, unsecured and renewed annually. The average interest rate on short-term debt was 2.43% and 2.94% as of December 31, 2012 and 2011, respectively.

In April 2011, the Company entered into an agreement with the Toledo-Lucas County Port Authority and the Dayton–Montgomery County Port Authority, who co-issued \$8.0 million in taxable development revenue bonds, with a fixed amortization term that will mature in 2021. The interest rate on these bonds is fixed at 4.9% and the unamortized balance of the bonds was \$7.2 million at December 31, 2012.

In November 1996, the Company entered into an agreement with the Lorain Port Authority, Ohio to issue \$8.3 million in variable rate industrial revenue bonds, maturing in 2016. The variable rate ranged from 0.26% to 0.46% in 2012 and from 0.20% to 0.50% in 2011.

Note G — Leasing Arrangements

The Company leases warehouse and manufacturing space, and manufacturing and computer equipment under operating leases with terms ranging up to 25 years. Operating lease expense amounted to \$9.0 million in 2012, \$8.9 million in 2011 and \$9.9 million in 2010. The future estimated minimum payments under capital leases and non-cancelable operating leases with initial lease terms in excess of one year at December 31, 2012, are as follows:

(Thousands)	Capital Leases	Operating Leases
2013	\$ 1,102	\$6,721
2014	1,069	4,982
2015	1,068	4,472
2016	1,066	4,152
2017	1,064	3,063
2018 and thereafter	5,766	14,992
Total minimum lease payments	11,135	\$38,382
Amounts representing interest	2,593	
Present value of net minimum lease payments	\$8,542	

The Company was in compliance with all of the covenants contained in the lease agreements as of December 31, 2012.

Note H — Fair Value Information and Derivative Financial Instruments

The Company measures and records financial instruments at their fair value. A hierarchy is used for those instruments measured at fair value that distinguishes between assumptions based upon market data (observable inputs) and the Company's assumptions (unobservable inputs). The hierarchy consists of three levels:

Level 1 — Quoted market prices in active markets for identical assets and liabilities;

Level 2 — Inputs other than Level 1 inputs that are either directly or indirectly observable; and

Level 3 — Other significant unobservable inputs developed using estimates and assumptions developed by the Company, which reflect those that a market participant would use.

The following table summarizes the financial instruments measured at fair value in the Consolidated Balance Sheet as of December 31, 2012:

(Thousands)	Total	Fair Value Measurements		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Other Significant Unobservable Inputs (Level 3)
Financial Assets				
Directors' deferred compensation investments	\$ 1,742	\$ 1,742	\$—	\$—
Precious metal forward contracts	197	—	197	—
Foreign currency forward contracts	650	—	650	—
Total	\$2,589	\$ 1,742	\$847	\$—
Financial Liabilities				
Directors' deferred compensation liability	\$ 1,742	\$ 1,742	\$—	\$—
Precious metal swaps	100	—	100	—
Foreign currency forward contracts	397	—	397	—
Total	\$2,239	\$ 1,742	\$497	\$—

The Company uses a market approach to value the assets and liabilities for outstanding derivative contracts in the table above. Foreign currency and precious metal hedge contracts are valued through models that utilize market observable inputs including both spot and forward prices for the same underlying currencies and metals. The carrying values of the other working capital items and debt on the Consolidated Balance Sheet approximate their fair values as of December 31, 2012.

The Company uses derivative contracts to hedge portions of its foreign currency exposures and may also use derivatives to hedge a portion of its precious metal exposures. The objectives and strategies for using derivatives in these areas are as follows:

Foreign Currency. The Company sells products to overseas customers in their local currencies, primarily the euro and yen. The Company secures foreign currency derivatives, mainly forward contracts and options, to hedge these anticipated sales transactions. The purpose of the hedge program is to protect against the reduction in the dollar value of foreign currency sales from adverse exchange rate movements. Should the dollar strengthen significantly, the decrease in the translated value of the foreign currency sales should be partially offset by gains on the hedge contracts. Depending upon the methods used, the hedge contract may limit the benefits from a weakening U.S. dollar. The use of forward contracts locks in a firm rate and eliminates any downside from an adverse rate movement as well as any benefit from a favorable rate movement. The Company may from time to time choose to hedge with options or a tandem of options known as a collar. These hedging techniques can limit or eliminate the downside risk but can allow for some or all of the benefit from a favorable rate movement to be realized. Unlike a forward contract, a premium is paid for an option; collars, which are a combination of a put and call option, may have a net premium but they can be structured to be cash neutral. The Company will primarily hedge with forward contracts due to the relationship between the cash outlay and the level of risk.

Precious Metals. The Company maintains the majority of its precious metal production requirements on consignment in order to reduce its working capital investment and the exposure to metal price movements. When a precious metal product is fabricated and ready for shipment to the customer, the metal is purchased out of consignment at the current market price. The price paid by the Company forms the basis for the price charged to the customer. This methodology allows for changes in either direction in the market prices of the precious metals used by the Company to be passed through to the customer and reduces the impact changes in prices could have on the Company's margins and operating profit. The consigned metal is owned by financial institutions who charge the Company a financing fee based upon the current value of the metal on hand.

In certain instances, a customer may want to establish the price for the precious metal at the time the sales order is placed rather than at the time of shipment. Setting the sales price at a different date than when the material would be purchased potentially creates an exposure to movements in the market price of the metal. Therefore, in these limited situations, the Company may elect to enter into a forward contract to purchase precious metal. The forward contract allows the Company to purchase metal at a fixed price on a specific future date. The price in the forward contract serves as the basis for the price to be charged to the customer. By doing so, the selling price and purchase price are matched and the Company's price exposure is reduced.

The Company refines precious metal containing materials for its customers and typically will purchase the refined metal from the customer at current market prices. In limited circumstances, the customer may want to fix the price to be paid at the time of the order as opposed to when the material is refined. The customer may also want to fix the price for a set period of time. The Company may then elect to enter into a hedge contract, either a forward contract or a swap, to fix the price for the estimated quantity of metal to be purchased thereby reducing the exposure to adverse movements in the price of the metal.

The Company may from time to time elect to purchase precious metal and hold in its inventory rather than on consignment due to potential credit line limitations or other factors. These purchases are typically held for a short duration. A forward contract will be secured at the time of the purchase to fix the price to be used when the metal is transferred back to the consignment line, thereby limiting any price exposure during the time when the metal was owned.

A team consisting of senior financial managers reviews the estimated exposure levels, as defined by budgets, forecasts and other internal data, and determines the timing, amounts and instruments to use to hedge that exposure.

Management analyzes the effective hedged rates and the actual and projected gains and losses on the hedging transactions against the program objectives, targeted rates and levels of risk assumed. Foreign currency contracts are typically layered in at different times for a specified exposure period in order to minimize the impact of market rate movements.

The use of derivatives is governed by policies adopted by the Audit Committee of the Board of Directors. The Company will only enter into a derivative contract if there is an underlying identified exposure. Contracts are typically held to maturity. The Company does not engage in derivative trading activities and does not use derivatives for speculative purposes. The Company only uses hedge contracts that are denominated in the same currency or metal as the underlying exposure.

The following table summarizes the notional amount and the fair value of the Company's outstanding derivatives as of December 31, 2012 and 2011:

(Thousands)	December 31, 2012		December 31, 2011	
	Notional Amount	Fair Value	Notional Amount	Fair Value
Asset (liability)				
Foreign currency forward contracts				
Yen	\$8,024	\$650	\$12,096	\$(480)
Euro	21,047	(397)	26,466	1,879
Total	\$29,071	\$253	\$38,562	\$1,399
Precious metal contracts				
Forward contracts	\$14,623	\$197	\$8,795	\$249
Swaps	11,673	(100)	6,964	(198)
Total	\$26,296	\$97	\$15,759	\$51

The fair values of the outstanding derivatives are recorded as assets (if the derivatives are in a gain position) or liabilities (if the derivatives are in a loss position). The fair values will also be classified as short term or long term depending upon their maturity dates. The balance sheet classification of the outstanding derivatives at December 31, 2012 and 2011 was as follows:

(Thousands)	December 31,	
	2012	2011
Asset (liability)		
Prepaid expenses	\$847	\$2,128
Other liabilities and accrued items	(497)	(678)
Total	\$350	\$1,450

All of the foreign currency and precious metal derivative contracts outstanding at December 31, 2012 and 2011 were designated as cash flow hedges.

A summary of the hedging relationships of the outstanding derivative financial instruments designated as cash flow hedges as of December 31, 2012 and 2011 and the pre-tax amounts transferred into income for the twelve months then ended follows.

(Thousands) Gain (loss)	Effective Portion of Hedge		Ineffective Portion of Hedge	
	Recognized in OCI at End of Period	Reclassified from OCI into Income During Period Location Amount	Recognized in Income on Derivative During Period Location Amount	
2012				
Foreign currency contracts	\$253	Other-net \$1,839	Other-net \$—	
Precious metal contracts	97	Cost of sales (598	) Cost of sales —	
Total	\$350	\$1,241	\$—	
2011				
Foreign currency contracts	\$1,399	Other-net \$(2,809	) Other-net \$—	
Precious metal contracts	51	Cost of Sales —	Cost of Sales —	
Total	\$1,450	\$(2,809	) \$—	

Total derivative ineffectiveness expense was zero in 2012 and 2011 and \$0.6 million in 2010. The ineffectiveness recorded in 2010 was associated with copper-based derivatives that were secured in 2009 and 2010 that provided an economic hedge but did not qualify as a hedge for accounting purposes. These derivatives matured during 2010.

In addition to the precious metal contracts that were outstanding at December 31, 2011, during 2011, the Company secured various forward contracts to sell specified quantities of gold. The contracts served as economic hedges of gold purchased and held in inventory for use in manufacturing products for sale in the normal course of business. No hedge designations were assigned to the contracts since they typically matured in the same quarter as they were initially secured. A loss of \$1.2 million was recognized upon maturity of these contracts in 2011 and was recorded in cost of sales on the Consolidated Statement of Income. An equal and offsetting gain was recorded in cost of sales in 2011 as a result of the sale of the underlying gold inventory.

The Company expects to relieve the entire balance in OCI as of December 31, 2012 and credit other-net and cost of sales on the Consolidated Statement of Income in 2013.

Note I — Pensions and Other Post-retirement Benefits

The obligation and funded status of the Company's pension and other post-retirement benefit plans are shown below. The Pension Benefits column aggregates defined benefit pension plans in the U.S., Germany and England and the U.S. supplemental retirement plans. The Other Benefits column includes the U.S. retiree medical and life insurance plan.

(Thousands)	Pension Benefits		Other Benefits	
	2012	2011	2012	2011
Change in benefit obligation				
Benefit obligation at beginning of year	\$210,996	\$180,673	\$33,209	\$32,374
Service cost	7,915	6,955	285	284
Interest cost	9,912	9,786	1,440	1,596
Plan amendments	117	430	—	—
Actuarial loss	32,595	21,280	1,493	1,419
Benefit payments from fund	(7,523)	) (7,512)	) —	—
Benefit payments directly by Company	(129)	) (127)	) (2,432)	) (2,735)
Expenses paid from assets	(293)	) (479)	) —	—
Medicare Part D subsidy	—	—	299	271
Foreign currency exchange rate changes	249	(10)	) —	—
Benefit obligation at end of year	253,839	210,996	34,294	33,209
Change in plan assets				
Fair value of plan assets at beginning of year	140,344	131,761	—	—
Actual return on plan assets	18,534	(5,215)	) —	—
Employer contributions	12,218	21,706	—	—
Benefit payments from fund	(7,523)	) (7,512)	) —	—
Expenses paid from assets	(293)	) (479)	) —	—
Foreign currency exchange rate changes	156	83	—	—
Fair value of plan assets at end of year	163,436	140,344	—	—
Funded status at end of year	\$(90,403)	) \$(70,652)	) \$(34,294)	) \$(33,209)
Amounts recognized in the Consolidated Balance Sheets consist of:				
Other assets	\$1,112	\$—	\$—	\$—
Other liabilities and accrued items	(475)	) —	(2,663)	) (2,788)
Retirement and post-employment benefits	(91,040)	) (70,652)	) (31,631)	) (30,421)
	\$(90,403)	) \$(70,652)	) \$(34,294)	) \$(33,209)
Amounts recognized in other comprehensive income (before tax) consist of:				
Net actuarial loss	\$127,027	\$106,583	\$2,472	\$978
Net prior service (credit) cost	(2,075)	) (2,527)	) 115	202
	\$124,952	\$104,056	\$2,587	\$1,180
Amortizations expected to be recognized during next fiscal year (before tax):				
Amortization of net loss	\$7,731	\$5,605	\$—	\$—
Amortization of prior service credit	(341)	) (335)	) 115	87
	\$7,390	\$5,270	\$115	\$87
Additional information				
Accumulated benefit obligation for all defined benefit pension plans	\$242,854	\$204,359	—	—
For defined benefit pension plans with benefit obligations in excess of plan assets:				

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Aggregate benefit obligation	249,075	206,800	—	—
Aggregate fair value of plan assets	157,560	135,505	—	—
For defined benefit pension plans with accumulated benefit obligations in excess of plan assets:				
Aggregate accumulated benefit obligation	238,090	200,163	—	—
Aggregate fair value of plan assets	157,560	135,505	—	—

Components of net periodic benefit cost and other amounts recognized in other comprehensive income (OCI)

(Thousands)	Pension Benefits			Other Benefits		
	2012	2011	2010	2012	2011	2010
Net periodic benefit cost						
Service cost	\$7,915	\$6,955	\$5,135	\$285	\$284	\$273
Interest cost	9,912	9,786	9,156	1,440	1,596	1,738
Expected return on plan assets	(11,934)	) (11,050	) (10,441	) —	—	—
Amortization of prior service cost (benefit)	(335)	) (335	) (530	) 86	(36	) (36
Recognized net actuarial loss	5,605	3,920	2,834	—	—	—
Net periodic benefit cost	\$11,163	\$9,276	\$6,154	\$1,811	\$1,844	\$1,975

(Thousands)	Pension Benefits			Other Benefits		
	2012	2011	2010	2012	2011	2010
Change in other comprehensive income						
OCI at beginning of year	\$104,056	\$69,716	\$62,886	\$1,180	\$(275	) \$(2,085
Increase (decrease) in OCI:						
Recognized during year — prior service cost (credit)	335	335	530	(87	) 36	36
Recognized during year — net actuarial (losses)	(5,605	) (3,920	) (2,834	) —	—	—
Occurring during year — prior service cost	117	430	739	—	—	—
Occurring during year — net actuarial losses	25,995	37,543	8,390	1,494	1,419	1,774
Other adjustments	—	—	—	—	—	—
Foreign currency exchange rate changes	57	(48	) 5	—	—	—
OCI at end of year	\$124,955	\$104,056	\$69,716	\$2,587	\$1,180	\$(275
Summary of key valuation assumptions						

	Pension Benefits			Other Benefits		
	2012	2011	2010	2012	2011	2010
Weighted-average assumptions used to determine benefit obligations at fiscal year end						
Discount rate	3.99	% 4.78	% N/A	3.75	% 4.50	% N/A
Rate of compensation increase	4.44	% 4.46	% N/A	4.50	% 4.50	% N/A
Weighted-average assumptions used to determine net cost for the fiscal year						
Discount rate	4.81	% 5.49	% 5.86	% 4.50	% 5.13	% 5.88
Expected long-term return on plan assets	7.65	% 7.88	% 8.18	% N/A	N/A	N/A
Rate of compensation increase	4.43	% 3.97	% 2.99	% 4.50	% 4.00	% 3.00

The Company uses a December 31 measurement date for the above plans. The rates depicted in the pension benefits columns in the above table are the weighted-average assumptions of the U.S., German and U.K. defined benefit plans and the U.S. supplemental plan.

Effective January 1, 2013, the Company revised the expected long-term rate of return assumption used in calculating the annual expense for its domestic defined benefit pension plan, decreasing it to 7.50% from 7.75%. Effective January 1, 2012, this expected long-term rate of return assumption was decreased to 7.75% from 8.00%, and effective January 1, 2011, this assumption was decreased to 8.00% from 8.25%. In each instance, the impact was accounted for as a change in estimate.

Management establishes the domestic expected long-term rate of return assumption by reviewing its historical trends and analyzing the current and projected market conditions in relation to the plan's asset allocation and risk management objectives. Consideration is given to both recent plan asset performance as well as plan asset performance over various long-term periods of time, with an emphasis on the assumption being a prospective, long-term rate of return. Management consults with and considers the opinions of its outside investment advisors and actuaries when establishing the rate and reviews its assumptions with the Board of Directors. Management believes that the 7.50% domestic expected long-term rate of return assumption is achievable and reasonable given current market conditions and forecasts, asset allocations, investment policies and investment risk objectives.

The domestic rate of compensation increase assumption was changed from a flat 4.5% to a graded assumption as of January 1, 2009. The graded assumption for the domestic rate of compensation increase is 2.0% for the 2009 fiscal year, 3.0% for the 2010 fiscal year, 4.0% for the 2011 fiscal year and 4.5% for the 2012 fiscal year and later.

In the second quarter 2012, the Company closed its domestic defined benefit pension plan to new entrants. Current plan participants will continue to accrue benefits under the existing formulas while new hires will be offered an enhanced defined contribution plan.

Assumptions for the defined benefit pension plans in Germany and England are determined separately from the U.S. plan assumptions, based on historical trends and current and projected market conditions in Germany and England.

The plan in Germany is unfunded and the plan in England has assets that are approximately 4% of the Company's aggregated total fair value of plan assets as of year-end 2012.

Assumed health care trend rates at fiscal year end	2012	2011
Health care trend rate assumed for next year	8.00%	8.00%
Rate that the trend rate gradually declines to (ultimate trend rate)	5.00%	5.00%
Year that the rate reaches the ultimate trend rate	2019	2019

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A one-percentage-point change in assumed health care cost trend rates would have the following effects:

	1-Percentage- Point Increase		1-Percentage- Point Decrease	
(Thousands)	2012	2011	2012	2011
Effect on total of service and interest cost components	\$35	\$33	\$(31)	\$(30)
Effect on post-retirement benefit obligation	827	806	(723)	(711)

Plan Assets

The following tables present the fair values of the Company's defined benefit pension plan assets as of December 31, 2012 and 2011 by asset category. See Note H to the Consolidated Financial Statements for definitions of fair value hierarchy.

	December 31, 2012			
	Total	Level 1	Level 2	Level 3
(Thousands)				
Cash	\$7,388	\$7,388	\$—	\$—
Equity securities:				
U.S. (a)	54,691	45,025	9,666	—
International (b)	22,683	19,650	3,033	—
Emerging markets (c)	14,786	14,535	251	—
Fixed income securities:				
Intermediate-term bonds (d)	26,749	18,378	8,371	—
Short-term bonds (e)	11,656	11,656	—	—
Global bonds (f)	12,854	11,185	1,669	—
Other types of investments:				
Real estate fund (g)	7,793	7,768	25	—
Multi-strategy hedge funds (h)	4,191	—	—	\$4,191
Private equity funds	645	—	—	645
Total	\$163,436	\$135,585	\$23,015	\$4,836

	December 31, 2011			
	Total	Level 1	Level 2	Level 3
(Thousands)				
Cash	\$9,280	\$9,280	\$—	\$—
Equity securities:				
U.S. (a)	46,004	37,859	8,145	—
International (b)	19,096	9,355	9,741	—
Emerging markets (c)	10,784	10,569	215	—
Fixed income securities:				
Intermediate-term bonds (d)(i)	22,684	14,673	8,011	—
Short-term bonds (e)	11,122	11,122	—	—
Global bonds (f)	10,999	10,353	646	—
Other types of investments:				
Real estate fund (g)	5,704	5,704	—	—
Multi-strategy hedge funds (h)	3,989	—	—	\$3,989
Private equity funds	682	—	—	682
Total	\$140,344	\$108,915	\$26,758	\$4,671

(a) Mutual funds that invest in various sectors of the U.S. market.

(b) Mutual funds that invest in non-U.S. companies primarily in developed countries that are generally considered to be value stocks.

(c) Mutual funds that invest in non-U.S. companies in emerging market countries.

(d) Includes a mutual fund that employs a value-oriented approach to fixed income investment management and a mutual fund that invests primarily in investment-grade debt securities.

(e) Includes a mutual fund that seeks a market rate of return for a fixed-income portfolio with low relative volatility of returns, investing generally in U.S. and foreign debt securities maturing in five years or less.

- (f) Mutual funds that invest in domestic and foreign sovereign securities, fixed income securities, mortgage-backed and asset-backed bonds, convertible bonds, high yield bonds and emerging market bonds.

Includes a mutual fund that typically invests at least 80% of its assets in equity and debt securities of companies in (g) the real estate industry or related industries or in companies which own significant real estate assets at the time of investment.

(h) Includes a hedge fund that employs multiple strategies to multiple asset classes with low correlations.

(i) The portion of intermediate-term bonds shown as Level 2 had been shown as Level 1 in the previous year. The valuation method for these U.S. government securities and corporate bonds is better reflected as Level 2 assets.

The following table summarizes changes in the fair value of the Company's defined benefit pension plan Level 3 assets measured using significant unobservable inputs during 2012 and 2011:

(Thousands)	Multi- strategy Hedge Funds	Private Equity Funds	Total
Balance as of January 1, 2011	\$3,851	\$546	\$4,397
Actual return:			
On assets still held at reporting date	376	172	548
On assets sold during the period	—	5	5
Purchases, sales and settlements	(238)	(41)	(279)
Balance as of December 31, 2011	\$3,989	\$682	\$4,671
Actual return:			
On assets still held at reporting date	386	17	403
On assets sold during the period	(57)	4	(53)
Purchases, sales and settlements	(127)	(58)	(185)
Balance as of December 31, 2012	\$4,191	\$645	\$4,836

Plan withdrawals from the multi-strategy hedge fund partnerships may be made up to 25% of the value of the capital account as of June 30 and December 31 of each calendar year upon written notice of at least thirty days. Any withdrawals in excess of 25% must have at least three months written notice. The plan may withdraw up to 100% of the capital account of all other partnerships upon at least thirty day written notice.

The Company's domestic defined benefit pension plan investment strategy, as approved by the Governance and Organization Committee of the Board of Directors, is to employ an allocation of investments that will generate returns equal to or better than the projected long-term growth of pension liabilities so that the plan will be self-funding. The return objective is to maximize investment return to achieve and maintain a 100% funded status over time, taking into consideration required cash contributions. The allocation of investments is designed to maximize the advantages of diversification while mitigating the risk and overall portfolio volatility to achieve the return objective. Risk is defined as the annual variability in value and is measured in terms of the standard deviation of investment return. Under the Company's investment policies, allowable investments include domestic equities, international equities, fixed income securities, cash equivalents and alternative securities (which include real estate, private venture capital investments and hedge funds). Ranges, in terms of a percentage of the total assets, are established for each allowable class of security. Derivatives may be used to hedge an existing security or as a risk reduction strategy. Current asset allocation guidelines are to invest 30% to 70% in equity securities, 20% to 50% in fixed income securities and cash and up to 20% in alternative securities. Management reviews the asset allocation on a quarterly or more frequent basis and makes revisions as deemed necessary.

None of the plan assets noted above are invested in the Company's common stock.

Cash Flows

Employer Contributions

The Company expects to contribute \$13.0 million to its domestic defined benefit pension plan and \$2.3 million to its other benefit plans in 2013.

Estimated Future Benefit Payments

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid:

		Other Benefits	
	Pension Benefits	Gross Benefit Payment	Net of Medicare Part D Subsidy
(Thousands)			
2013	\$9,025	\$2,663	\$2,287
2014	9,375	2,700	2,302
2015	9,661	2,743	2,320
2016	10,344	2,755	2,309
2017	13,507	2,815	2,343
2018 through 2022	71,056	13,597	10,720

Other Benefit Plans

In addition to the plans shown above, the Company also has certain foreign subsidiaries with accrued unfunded pension and other post-employment arrangements. The liability for these arrangements was \$2.6 million at December 31, 2012 and \$3.2 million at December 31, 2011 and was included in retirement and post-employment benefits on the Consolidated Balance Sheets.

The Company also sponsors defined contribution plans available to substantially all U.S. employees. The Company's annual defined contribution expense, including the expense for the enhanced defined contribution plan that was implemented in the second quarter 2012, was \$2.5 million in 2012, \$2.2 million in 2011 and \$1.3 million in 2010.

Note J — Contingencies and Commitments

CBD Claims

The Company is a defendant from time to time in proceedings in various state and federal courts brought by plaintiffs alleging that they have contracted chronic beryllium disease (CBD) or related ailments as a result of exposure to beryllium. Plaintiffs in CBD cases seek recovery under theories of negligence and various other legal theories and seek compensatory and punitive damages, in many cases of an unspecified sum. Spouses, if any, often claim loss of consortium.

Employee cases, in which plaintiffs have a high burden of proof, have historically involved relatively small losses to the Company. Third-party plaintiffs (typically employees of customers) face a lower burden of proof than do the Company's employees, but these cases have generally been covered by varying levels of insurance. Management has vigorously contested the CBD cases brought against the Company.

Claims filed by third-party plaintiffs alleging CBD filed prior to the end of 2022 are covered by insurance if any portion of the alleged exposure period occurred prior to year end 2007. Both defense and indemnity costs are covered subject to an annual \$1.0 million deductible and other terms and provisions.

There was one CBD case outstanding as of year-end 2012 with a recorded reserve of \$0.1 million. There were no other active CBD cases against the Company during 2012. There were two active cases during 2011, both of which were filed prior to 2011. One of these cases was settled for less than \$0.1 million while the other case was dismissed during 2011.

Although it is not possible to predict the outcome of any pending litigation, the Company provides for costs related to litigation matters when a loss is probable and the amount is reasonably estimable. Litigation is subject to many uncertainties, and it is possible that some of the actions could be decided unfavorably in amounts exceeding the Company's reserves. An unfavorable outcome or settlement of a CBD case or adverse media coverage could encourage the commencement of additional similar litigation. The Company is unable to estimate its potential exposure to unasserted claims.

Based upon currently known facts and assuming collectibility of insurance, the Company does not believe that resolution of the current or future beryllium proceedings will have a material adverse effect on the financial condition or cash flow of the Company. However, the Company's results of operations could be materially affected by

unfavorable results in one or more cases.

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Insurance Recoverable

The Company recorded a pre-tax loss of \$7.4 million as a result of a physical inventory count taken in the fourth quarter 2012. The Company has reason to believe that this loss, or a portion thereof, may be due to theft. The Company has insurance for theft and the insurance carrier was duly notified. The internal and criminal investigations were still in progress as of early in the first quarter 2013 and an offsetting benefit from an insurance recovery was not determinable and therefore was not recorded as of December 31, 2012. The benefit of any insurance recoverable may be recorded in future periods based upon the ability to determine the amount of the recovery, an assessment of the probability of the recovery and other factors and/or in the period when the cash is received.

Environmental Proceedings

The Company has an active program for environmental compliance that includes the identification of environmental projects and estimating their impact on the Company's financial performance and available resources. Environmental expenditures that relate to current operations, such as wastewater treatment and control of airborne emissions, are either expensed or capitalized as appropriate. The Company records reserves for the probable costs for identified environmental remediation projects. The Company's environmental engineers perform routine on-going analyses of the remediation sites and will use outside consultants to assist in their analyses from time to time. Accruals are based upon their analyses and are established at either the best estimate or, absent a best estimate, at the low end of the estimated range of costs. The accruals are revised for the results of on-going studies, changes in strategies, inflation and for differences between actual and projected costs. The accruals may also be affected by rulings and negotiations with regulatory agencies. The timing of payments often lags the accrual, as environmental projects typically require a number of years to complete.

The environmental reserves recorded represent the Company's best estimate of what is reasonably possible and cover existing or currently foreseen projects based upon the current facts and circumstances. The Company does not believe that it is reasonably possible that the cost to resolve environmental matters for sites where the investigative work and work plan development are substantially complete will be materially different than what has been accrued while the ultimate loss contingencies for sites that are in the preliminary stages of investigation cannot be reasonably determined at the present time. As facts and circumstances changes, the ultimate cost may be revised and the recording of additional costs may be material in the period in which the additional costs are accrued. The Company does not believe that the ultimate liability for environmental matters will have a material impact on its financial condition or liquidity due to the extended period of time during which environmental remediation normally takes place.

The undiscounted reserve balance at the beginning of the year, the amounts expensed and paid and the balance at the end of the year for 2012 and 2011 are as follows:

(Thousands)	2012		2011	
Reserve balance at beginning of year	\$ (5,312	)	\$ (5,201	)
Expensed	(316	)	(528	)
Paid	327		417	
Reserve balance at end of year	\$ (5,301	)	\$ (5,312	)
Ending balance recorded in:				
Other liabilities and accrued items	\$ (903	)	\$ (1,000	)
Other long-term liabilities	(4,398	)	(4,312	)

The majority of spending in 2012 and 2011 was for various remediation projects at the Elmore, Ohio, plant site with lesser amounts spent at other locations.

Long-term Obligation

The Company has a long-term supply agreement with Ulba/Kazatomprom of the Republic of Kazakhstan and its marketing representative, Nukem, Inc. of Connecticut for the purchase of approximately 775,000 pounds of beryllium copper master alloy. The pricing for the beryllium content of the material is fixed while the price for the copper content fluctuates based upon the monthly average LME market price. Purchase commitments in 2013, which represent the final shipments to be made under this agreement, total approximately \$1.8 million. Purchases made under this agreement totaled \$5.2 million in 2012 and \$8.8 million in 2011. The material purchased from Nukem is

used in the manufacture of beryllium-containing alloy products by the Performance Alloys segment.

Other

The Company is subject to various other legal or other proceedings that relate to the ordinary course of its business. The Company believes that the resolution of these proceedings, individually or in the aggregate, will not have a material adverse impact upon the Company's consolidated financial statements.

The Company has outstanding letters of credit totaling \$26.0 million related to workers' compensation, consigned precious metal guarantees, environmental remediation issues and other matters that expire in 2013.

Note K — Common Stock and Stock-based Compensation

A reconciliation of the changes in the number of common shares issued is as follows:

(Thousands)

Issued as of January 1, 2010	26,800
Exercise of stock options and SARs	162
Vesting of performance-restricted shares	6
Issued as of December 31, 2010	26,968
Exercise of stock options and SARs	55
Vesting of performance-restricted shares	1
Issued as of December 31, 2011	27,024
Exercise of stock options and SARs	26
Issued as of December 31, 2012	27,050

Stock incentive plans (the 2006 Stock Incentive Plan and the 2006 Non-employee Director Equity Plan) were approved at the May 2, 2006 annual meeting of shareholders. These plans authorize the granting of option rights, stock appreciation rights, performance-restricted shares, performance shares, performance units and restricted shares and replaced the 1995 Stock Incentive Plan and the 1997 Stock Incentive Plan for Non-employee Directors, although there are still options outstanding under these plans. The 2006 Stock Incentive Plan and the 2006 Non-employee Director Equity Plan were amended to, among other things, add additional shares to the plans. These amendments were approved by shareholders at the May 2011 annual meeting.

Stock Options

Stock options may be granted to employees or non-employee directors of the Company. Option rights entitle the optionee to purchase common shares at a price equal to or greater than the market value on the date of grant. Option rights granted to employees generally become exercisable (i.e., vest) over a four-year period and expire ten years from the date of the grant. Options granted to employees may also be issued with shorter vesting periods. Options granted to non-employee directors vest in six months and expire ten years from the date of the grant. The number of options available to be issued is established in plans approved by shareholders. The exercise of options is generally satisfied by the issuance of new shares.

Compensation cost for options is determined at the date of the award through the use of a pricing model and charged against income over the vesting period for each award. There was no compensation cost in 2012, 2011 or 2010, as all options were fully vested prior to 2010.

The following table summarizes the Company's stock option activity during 2012:

(Shares in thousands)	Number of Options	Weighted- average Exercise Price Per Share	Aggregate Intrinsic Value	Weighted- average Remaining Term (Years)
Outstanding at December 31, 2011	113	\$15.03		
Exercised	(16)	) 9.75		
Canceled	(1)	) 7.27		
Outstanding at December 31, 2012	96	15.98	\$943,000	1.4
Vested and expected to vest as of December 31, 2012	96	15.98	943,000	1.4
Exercisable at December 31, 2012	96	15.98	943,000	1.4

Summarized information on options outstanding as of December 31, 2012 is as follows:

Range of Option Prices	Number Outstanding and Exercisable (Thousands)	Weighted- average Remaining Life (Years)	Weighted- average Exercise Price
\$5.55 - \$8.10	11	0.4	\$6.75
\$14.80-\$16.10	8	1.8	15.45
\$17.075-\$17.58	77	1.5	17.31
	96	1.4	\$15.98

Cash received from the exercise of stock options totaled \$0.2 million in 2012, \$0.7 million in 2011 and \$2.6 million in 2010. The tax benefit realized from tax deductions from exercises was \$0.1 million in 2012, \$0.5 million in 2011 and \$0.8 million in 2010. The total intrinsic value of options exercised during the years ended December 31, 2012, 2011 and 2010 was \$0.3 million, \$1.4 million and \$2.3 million, respectively.

Restricted Stock

The Company may grant restricted stock to employees and non-employee directors of the Company. These shares are restricted and vest over a designated period of time as defined at the date of the grant and are forfeited should the holder's employment terminate during the restriction period. The fair market value of the restricted shares is determined on the date of the grant and is amortized over the restriction period. The restriction period is typically three years.

The fair value of the restricted stock is based on the closing stock price on the date of grant. The weighted-average grant date fair value for 2012, 2011 and 2010 was \$27.87, \$39.18 and \$22.65, respectively.

Compensation cost was \$2.7 million in 2012, \$2.5 million in 2011 and \$2.3 million in 2010. The unamortized compensation cost on the outstanding restricted stock was \$2.8 million as of December 31, 2012 and is expected to be amortized over a weighted-average period of 19 months.

The following table summarizes the restricted stock activity during 2012:

(Shares in thousands)	Number of Shares	Weighted- average Grant Date Fair Value
Outstanding at December 31, 2011	311	\$23.89
Granted	76	27.87
Vested	(113)	) 28.37
Forfeited	(51)	) 28.93
Outstanding at December 31, 2012	223	\$30.18

Long-term Incentive Plans

Under long-term incentive compensation plans, executive officers and selected other employees receive cash or stock awards based upon the Company's performance over the defined period, typically three years. Awards may vary based upon the degree to which actual performance exceeds the pre-determined threshold, target and maximum performance levels at the end of the performance periods. Payouts may be subjected to attainment of threshold performance objectives.

Compensation expense is based upon the performance projections for the three-year plan period, the percentage of requisite service rendered and the fair market value of the Company's common shares on the date of grant. The offset to the compensation expense for the portion of the award to be settled in shares is recorded within shareholders' equity and was \$0.4 million for 2012, zero for 2011 and less than \$0.1 million for 2010.

Directors Deferred Compensation

Non-employee directors may defer all or part of their fees into the Company's common shares. The fair value of the deferred shares is determined at the share acquisition date and is recorded within shareholders' equity. Subsequent changes in the fair value of the Company's common shares do not impact the recorded values of the shares.

The following table summarizes the stock activity for the directors' deferred compensation plan during 2012:

(Shares in thousands)	Number of Shares	Weighted- average Grant Date Fair Value
Outstanding at December 31, 2011	101	\$26.42
Granted	8	23.10
Distributed	(6	) (26.40
Outstanding at December 31, 2012	103	\$38.68

There was no income or expense associated with this plan recorded in 2012, 2011 or 2010. During the years ended December 31, 2012, 2011 and 2010, the weighted-average grant date fair value of shares granted was \$23.10, \$38.00 and \$25.13, respectively.

Stock Appreciation Rights

The Company may grant stock appreciation rights (SARs) to certain employees and non-employee directors. Upon exercise of vested SARs, the participant will receive a number of shares of common stock equal to the spread (the difference between the market price of the Company's common shares at the time of the exercise and the strike price established in the SARs agreement) divided by the common share price. The strike price of the SARs is equal to or greater than the market value of the Company's common shares on the day of the grant. The number of SARs available to be issued is established by plans approved by the shareholders. The vesting period and the life of the SARs are established in the SARs agreement at the time of the grant. The exercise of the SARs is satisfied by the issuance of treasury shares. The SARs vest three years from the date of grant. SARs granted prior to 2011 expire in ten years, while the SARs granted in 2011 and later expire in seven years.

The following table summarizes the Company's SARs activity during 2012:

(Shares in thousands)	Number of SARs	Weighted- average Exercise Price Per Share	Aggregate Intrinsic Value	Weighted- average Remaining Term (Years)
Outstanding at December 31, 2011	841	\$23.39		
Granted	185	29.45		
Exercised	(33	) 15.01		
Outstanding at December 31, 2012	993	24.80	\$4,473,000	5.9
Vested and expected to vest as of December 31, 2012	993	24.80	4,473,000	5.9
Exercisable at December 31, 2012	444	19.65	3,511,000	5.5

The weighted-average fair value of the SARs granted in 2012 was \$12.87. The fair value will be amortized to compensation cost on a straight-line basis over the three-year vesting period. Compensation cost was \$2.8 million, \$2.5 million and \$1.8 million in 2012, 2011 and 2010, respectively, and was included in selling, general and administrative expense. The unamortized compensation cost balance was \$3.8 million as of December 31, 2012.

Summarized information on SARs outstanding as of December 31, 2012 follows:

SARs Prices	Number Outstanding (Thousands)	Weighted- average Remaining Life (Years)	Weighted- average Exercise Price
\$15.01	316	6.1	\$15.01
\$21.24-\$24.03	272	6.2	21.86
\$27.78-\$29.45	214	5.3	29.23
\$34.30-\$39.30	152	5.3	39.19
\$44.72	39	4.1	44.72
	993	5.9	\$24.80

The SARs granted at \$15.01, \$24.03, \$27.78 and \$44.72 are exercisable.

The fair value of the SARs was estimated on the grant date using the Black-Scholes pricing model with the following assumptions:

	2012	2011	2010	
Risk-free interest rate	0.89	% 0.03	% 0.11	%
Dividend yield	—	% —	% —	%
Volatility	50.0	% 58.7	% 58.0	%
Expected lives (in years)	5.0	6.5	6.5	

The risk-free rate of return was based upon the five-year Treasury note rate at the time the SARs were granted. The Company initiated a dividend in May 2012, subsequent to the 2012 grant date. The share price volatility was calculated based upon the actual closing prices of the Company's common shares at month end over a period of approximately ten years prior to the granting of the SARs. This approach to measuring volatility is consistent with the approach used to calculate the volatility assumption in the valuation of stock options. The Company's current SARs program has been in place since 2006. The expected life assumption was based upon prior analyses.

Serial Preferred Stock

The Company has five million shares of Serial Preferred Stock authorized (no par value), none of which have been issued. Certain terms of the Serial Preferred Stock, including dividends, redemption and conversion, will be determined by the Board of Directors prior to issuance.

Note L — Other Comprehensive Income

The following table summarizes the cumulative net gain (loss) by component, net of tax, within other comprehensive income as of December 31, 2012, 2011 and 2010:

(Thousands)	December 31,		
	2012	2011	2010
Foreign currency translation adjustment	\$4,077	\$4,947	\$3,989
Derivative financial instruments			
Gross	350	1,450	(1,543)
Deferred tax (benefit)	(1,280)	) (895)	) (1,942)
Net	1,630	2,345	399
Pension and other retirement plan adjustment			
Gross	(127,541)	) (105,236)	) (69,441)
Deferred tax (benefit)	(33,405)	) (25,729)	) (13,437)
Net	(94,136)	) (79,507)	) (56,004)
Total	\$(88,429)	) \$(72,215)	) \$(51,616)

Note M — Segment Reporting and Geographic Information

	Advanced Material Technologies	Performance Alloys	Beryllium and Composites	Technical Materials	Subtotal	All Other	Total
(Thousands)							
2012							
Sales to external customers	\$ 847,835	\$ 292,448	\$ 59,983	\$ 72,733	\$ 1,272,999	\$ 79	\$ 1,273,078
Intersegment sales	2,556	2,718	740	672	6,686	—	6,686
Operating profit (loss)	16,749	24,004	(3,944)	) 6,608	43,417	(6,641)	) 36,776
Depreciation, depletion and amortization	16,282	14,994	1,883	2,609	35,768	1,278	37,046
Expenditures for long-lived assets	11,874	19,906	7,962	3,604	43,346	1,315	44,661
Assets	341,604	269,003	135,414	23,328	769,349	45,568	814,917
2011							
Sales to external customers	\$ 1,051,823	\$ 335,323	\$ 60,557	\$ 78,732	\$ 1,526,435	\$ 295	\$ 1,526,730
Intersegment sales	2,493	3,771	757	2,167	9,188	—	9,188
Operating profit (loss)	33,471	27,241	(754)	) 7,262	67,220	(10,142)	) 57,078
Depreciation, depletion and amortization	16,170	22,324	1,367	2,459	42,320	1,315	43,635
Expenditures for long-lived assets	8,014	10,599	6,460	2,286	27,359	1,388	28,747
Assets	342,819	235,547	127,708	21,502	727,576	44,527	772,103
2010							
Sales to external customers	\$ 878,994	\$ 293,757	\$ 61,894	\$ 67,450	\$ 1,302,095	\$ 219	\$ 1,302,314
Intersegment sales	1,718	6,086	397	2,597	10,798	—	10,798
Operating profit (loss)	39,454	27,150	10,046	5,331	81,981	(8,348)	) 73,633
Depreciation, depletion and amortization	16,443	14,186	1,070	2,449	34,148	1,246	35,394
Expenditures for long-lived assets	5,170	17,060	29,123	950	52,303	1,359	53,662
Assets	339,490	219,094	119,117	22,751	700,452	34,958	735,410

Intersegment sales are eliminated in consolidation. The sales to external customers are presented net of intersegment sales. Segments are evaluated at the operating profit level.

The All Other column includes the parent company expenses, the operating results for Materion Services Inc., a wholly owned subsidiary, and other corporate charges. Materion Services Inc. provides administrative and financial services to the other businesses in the Company on a cost-plus basis.

The assets shown in the All Other column include the assets used by Materion Services Inc. and the parent company as well as cash and long-term deferred income taxes.

Other geographic information includes the following:

(Thousands)	2012	2011	2010
Sales from U.S. operations	\$1,064,779	\$1,306,192	\$1,079,700
Sales based upon location of customers			
United States	\$881,968	\$1,143,720	\$933,264
All other	391,110	383,010	369,050
Total	\$1,273,078	\$1,526,730	\$1,302,314
Long-lived assets by country deployed			
United States	\$354,122	\$349,988	\$363,738
All other	36,042	32,441	11,915
Total	\$390,164	\$382,429	\$375,653

No individual country, other than the United States, or customer accounted for 10% or more of the Company's sales for the years presented. Sales outside the United States are primarily to Asia and Europe.

Note N — Other-net

Other-net expense is summarized for 2012, 2011 and 2010 as follows:

	Income (Expense)		
(Thousands)	2012	2011	2010
Foreign currency exchange/translation gain (loss)	\$1,477	\$(2,775)	\$(759)
Amortization of intangible assets	(6,008)	(6,144)	(6,462)
Metal consignment fees	(9,011)	(9,877)	(6,539)
Changes to earn-out valuation	—	1,052	848
Equipment write-off (see below)	(1,603)	—	—
Other items	(464)	1,970	(1,915)
Total	\$(15,609)	\$(15,774)	\$(14,827)

During 2012, the Company announced the consolidation of four of its smaller operations in order to improve efficiencies and cash flows. This program included closing three facilities and transferring their business volumes and portions of their equipment to other existing facilities and the consolidation of one operation from four buildings into two. One of the facilities was closed by year-end 2012, with the balance of the activity scheduled to be completed in 2013. Costs associated with the consolidation program, including severance, equipment relocation, equipment write-offs and other related items, totaled \$4.8 million in 2012, with \$1.6 million recorded in cost of sales, \$1.6 million in selling, general and administrative expense and \$1.6 million in other-net. The \$1.6 million equipment write-off resulted from the abandonment of equipment with no realizable value. The costs are recorded within the Company's Advanced Material Technologies segment. Costs to complete the consolidations are estimated to be \$2.6 million in 2013.

Other items in the chart above include legal settlements, bad debt expense, cash discounts, gains and losses on the sale of fixed assets and other miscellaneous items.

Note O — Interest

The following chart summarizes the interest incurred, capitalized and paid, as well as the amortization of capitalized interest for 2012, 2011 and 2010:

(Thousands)	2012	2011	2010
Interest incurred	\$3,334	\$2,860	\$2,696
Less capitalized interest	200	48	31
Total net expense	\$3,134	\$2,812	\$2,665
Interest paid	\$2,639	\$2,211	\$2,225
Amortization of capitalized interest included in cost of sales	\$336	\$441	\$499

The difference in expense among 2012, 2011 and 2010 was primarily due to changes in the level of outstanding debt, capital leases and the average borrowing rate. Amortization of deferred financing costs within interest expense was \$0.6 million in 2012, \$0.6 million in 2011 and \$0.5 million in 2010.

Note P — Income Taxes

Income before income taxes and income taxes (benefit) are comprised of the following:

(Thousands)	2012	2011	2010
Income before income taxes:			
Domestic	\$23,379	\$53,648	\$65,489
Foreign	10,263	618	5,479
Total income before income taxes	\$33,642	\$54,266	\$70,968

Income taxes:

Current income taxes:

Domestic	\$7,825	\$15,487	\$10,130
Foreign	3,615	468	788
Total current	\$11,440	\$15,955	\$10,918

Deferred income taxes:

Domestic	\$(3,084)	) \$(2,710	) \$14,075
Foreign	(44	) (351	) 719
Valuation allowance	666	1,393	(1,171)
Total deferred	\$(2,462)	) \$(1,668	) \$13,623

Total income taxes	\$8,978	\$14,287	\$24,541
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The reconciliation of the federal statutory and effective income tax rates follows:

	2012		2011		2010	
Federal statutory rate	35.0	%	35.0	%	35.0	%
State and local income taxes, net of federal tax effect	(0.3	)	0.7		(0.4	)
Effect of excess of percentage depletion over cost depletion	(7.3	)	(3.9	)	(2.5	)
Medicare Part D	—		—		2.2	
Manufacturing production deduction	(2.2	)	(3.5	)	(1.9	)
Officers' compensation	1.1		0.7		1.5	
Adjustment to unrecognized tax benefits	(0.6	)	(3.4	)	0.8	
Taxes on foreign source income	(0.1	)	(0.2	)	(1.3	)
Retiree medical expense	(2.0	)	—		—	
Valuation allowance	2.0		2.5		1.6	
Other items	1.1		(1.6	)	(0.4	)
Effective tax rate	26.7	%	26.3	%	34.6	%

Included in domestic income taxes, as shown in the Consolidated Statements of Income, are \$(0.1) million, \$0.6 million and \$(0.4) million of state and local income taxes in 2012, 2011 and 2010, respectively.

The Company had domestic and foreign income tax payments of \$13.2 million, \$20.7 million and \$8.8 million in 2012, 2011 and 2010, respectively.

Deferred tax assets and liabilities are determined based on temporary differences between the financial reporting bases and the tax bases of assets and liabilities. Deferred tax assets and (liabilities) recorded in the Consolidated Balance Sheets consist of the following:

(Thousands)	December 31,	
Asset (liability)	2012	2011
Post-retirement benefits other than pensions	\$12,003	\$11,047
Other reserves	12,804	11,476
Environmental reserves	1,958	1,932
Inventory	4,303	3,776
Pensions	27,547	21,790
Net operating loss and credit carryforwards	5,186	5,199
Miscellaneous	357	377
Subtotal	64,158	55,597
Valuation allowance	(4,584	) (3,917
Total deferred tax assets	59,574	51,680
Depreciation	(19,388	) (21,133
Amortization	(7,939	) (8,016
Capitalized interest expense	(195	) (224
Mine development	(2,832	) (782
Derivative instruments and hedging activities	(168	) (581
Total deferred tax liabilities	(30,522	) (30,736
Net deferred tax asset	\$29,052	\$20,944

The Company had deferred income tax assets offset with a valuation allowance for state and foreign net operating losses and state investment tax credit carryforwards. The Company intends to maintain a valuation allowance on these deferred tax assets until a realization event occurs to support reversal of all or a portion of the allowance.

At December 31, 2012, for income tax purposes, the Company had foreign net operating loss carryforwards of \$2.9 million that do not expire, and \$11.8 million that expire in calendar years 2013 through 2021. The Company had state net operating loss carryforwards of \$18.3 million that expire in calendar years 2013 through 2029. The Company had state tax credits of \$2.6 million that expire in calendar years 2013 through 2026.

The Company files income tax returns in the U.S. federal jurisdiction, and in various state, local and foreign jurisdictions. With limited exceptions, the Company is no longer subject to U.S. federal examinations for years before 2009, state and local examinations for years before 2008, and foreign examinations for tax years before 2006. The Company is presently under examination for the income tax filings in four state jurisdictions.

A reconciliation of the Company's unrecognized tax benefits for the year-to-date period ending December 31, 2012 is as follows:

(Thousands)	2012	2011
Balance as of January 1	\$1,969	\$2,944
Additions to tax provisions related to the current year	149	—
Additions to tax positions related to prior years	174	878
Reduction to tax positions related to prior years	(20)	) —
Lapses on statutes of limitations	(455)	) (1,853)
Settlements	(50)	) —
Balance as of December 31	\$1,767	\$1,969

At December 31, 2012, the Company had \$1.8 million of unrecognized tax benefits, of which \$0.8 million would affect the Company's effective tax rate if recognized.

The Company classifies all interest and penalties as income tax expense. The amount of interest and penalties, net of related federal tax benefit, recognized in earnings was immaterial during 2012 and 2011. As of December 31, 2012 and 2011, accrued interest and penalties, net of related federal tax benefit, was immaterial and \$0.1 million, respectively.

A provision has not been made with respect to \$41.7 million of unremitted earnings at December 31, 2012 because such earnings may be considered to be reinvested indefinitely. It is not practical to estimate the amount of unrecognized deferred tax liability for undistributed foreign earnings.

Note Q — Earnings Per Share

The following table sets forth the computation of basic and diluted EPS:

(Thousands except per share amounts)	2012	2011	2010
Numerator for basic and diluted EPS:			
Net income	\$24,664	\$39,979	\$46,427
Denominator:			
Denominator for basic EPS:			
Weighted-average shares outstanding	20,418	20,365	20,282
Effect of dilutive securities:			
Stock options and stock appreciation rights	163	237	156
Restricted stock	94	152	151
Performance restricted shares	4	—	1
Diluted potential common shares	261	389	308
Denominator for diluted EPS:			
Adjusted weighted-average shares outstanding	20,679	20,754	20,590
Basic EPS	\$1.21	\$1.96	\$2.29
Diluted EPS	\$1.19	\$1.93	\$2.25

Stock appreciation rights with grants in excess of the average annual share price totaling 465,000 in 2012, 152,000 in 2011 and 69,000 in 2010 were excluded from the diluted EPS calculation as their effect would have been anti-dilutive.

Note R — Related Party Transactions

The Company had outstanding loans of \$0.1 million with two employees at December 31, 2012 and outstanding loans of \$0.1 million with three employees, including one executive officer at December 31, 2011. The loans were made in the first quarter 2002 pursuant to life insurance agreements between the Company and the employees. The portion of the premiums paid by the Company is treated as a loan from the Company to the employees and the loans are secured by the insurance policies, which are owned by the employees. The agreements require each employee to maintain the insurance policy's cash surrender value in an amount at least equal to the outstanding loan balance. The loans are payable from the insurance proceeds upon the employee's death or at an earlier date due to the occurrence of specified events. The loans bear an interest rate equal to the applicable federal rate. There have been no modifications to the loan terms since the inception of the agreements.

Note S — Quarterly Data (Unaudited)

The following tables summarize selected quarterly financial data for the years ended December 31, 2012 and 2011:

	2012					
(Dollars in thousands except per share amounts)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total	
Net sales	\$353,630	\$325,088	\$290,601	\$303,759	\$1,273,078	
Gross margin	49,418	53,024	52,369	43,972	198,783	
Percent of sales	14.0	% 16.3	% 18.0	% 14.5	% 15.6	%
Net income	\$6,118	\$7,929	\$8,114	\$2,503	\$24,664	
Net income per share of common stock:						
Basic	0.30	0.39	0.40	0.12	1.21	
Diluted	0.30	0.38	0.39	0.12	1.19	
Dividends per share of common stock	—	0.075	0.075	0.075	0.225	
Stock price range:						
High	32.91	29.37	25.57	25.93		
Low	24.77	20.37	17.59	18.84		
	2011					
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total	
Net sales	\$374,805	\$424,710	\$392,794	\$334,421	\$1,526,730	
Gross margin	55,800	62,671	57,350	39,500	215,321	
Percent of sales	14.9	% 14.8	% 14.6	% 11.8	% 14.1	%
Net income	\$11,818	\$13,872	\$13,527	\$762	\$39,979	
Net income per share of common stock:						
Basic	0.58	0.68	0.66	0.04	1.96	
Diluted	0.57	0.67	0.65	0.04	1.93	
Stock price range:						
High	44.94	44.00	42.05	30.15		
Low	33.99	33.02	21.11	19.53		

The Company recorded a \$7.4 million pre-tax expense in the fourth quarter 2012 for a net inventory loss. A portion of this expense may have been applicable to the third quarter 2012. Any insurance recoveries will be recorded in the future as they become probable and estimable.

The Company recorded a \$2.4 million expense in the fourth quarter 2011 that consisted of a net inventory loss of \$3.6 million and the associated reduction in incentive compensation expense of \$1.2 million. A portion of this \$2.4 million pre-tax expense may have been applicable to the second or third quarters of 2011.

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

None.

Item 9A. CONTROLS AND PROCEDURES

a) Evaluation of Disclosure Controls and Procedures

We carried out an evaluation under the supervision and with participation of our management, including the chief executive officer and chief financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2012 pursuant to Rule 13a-15(b) and 15d-15(b) under the Securities Exchange Act of 1934, as amended (Exchange Act). Based upon that evaluation, our management, including the chief executive officer and chief financial officer, concluded that our disclosure controls and procedures were effective as of the evaluation date.

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

The Report of Management on Internal Control over Financial Reporting and of the Report of Independent Registered Public Accounting Firm thereon are set forth in Item 8 of this Form 10-K and are incorporated herein by reference.

c) Changes in Internal Control over Financial Reporting

During the fourth quarter 2012, the Company implemented additional controls around inventory at one of its precious metals facilities. Those additional controls included requiring quarterly physical inventory counts and enhancing controls within SAP (which was implemented in the third quarter). Those controls identified a \$7.4 million inventory loss. After evaluation of the loss, we determined we had, in an interim period, ineffective controls over existence of inventory at this facility that we concluded was a material weakness in internal control over financial reporting. With the implementation of the additional controls by year end, we had fully remediated the material weakness.

Except as otherwise disclosed above, there were no other changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2012 that have materially affected, or are reasonably likely to affect, our internal control over financial reporting.

Item 9B. OTHER INFORMATION

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information under “Election of Directors” in the proxy statement for our 2013 annual meeting of shareholders, to be filed with the Securities and Exchange Commission pursuant to Regulation 14A, is incorporated herein by reference. The information required by Item 10 relating to our executive officers is included under the caption “Executive Officers of the Registrant” in Part I of this Form 10-K and is incorporated herein by reference. The information required by Item 10 with respect to directors, the Audit Committee of the Board of Directors and Audit Committee financial experts is incorporated herein by reference from the section entitled “Corporate Governance; Committees of the Board of Directors — Audit Committee” and “— Audit Committee Expert, Financial Literacy and Independence” in the proxy statement for our 2013 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A. The information required by Item 10 regarding compliance with Section 16(a) of the Exchange Act is incorporated herein by reference from the section entitled “Section 16(a) Beneficial Ownership Reporting Compliance” in the proxy statement for our 2013 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A.

We have adopted a Policy Statement on Significant Corporate Governance Issues and a Code of Conduct Policy that applies to our chief executive officer and senior financial officers, including the principal financial and accounting officer, controller and other persons performing similar functions, in compliance with applicable New York Stock Exchange and Securities and Exchange Commission requirements. The aforementioned materials, along with the charters of the Audit, Governance and Organization and Compensation Committees of our Board of Directors, which also comply with applicable requirements, are available on our web site at <http://materion.com>, and copies are also available upon request by any shareholder to Secretary, Materion Corporation, 6070 Parkland Blvd., Mayfield Heights, Ohio 44124. We make our reports on Forms 10-K, 10-Q and 8-K available on our web site, free of charge, as soon as reasonably practicable after these reports are filed with the Securities and Exchange Commission, and any amendments and/or waivers to our Code of Conduct Policy, Statement on Significant Corporate Governance Issues and Committee Charters will also be made available on our web site. The information on our web site is not incorporated by reference into this Form 10-K.

Item 11. EXECUTIVE COMPENSATION

The information required under Item 11 is incorporated by reference from the sections entitled “Executive Compensation” and “2012 Director Compensation” in the proxy statement for our 2013 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A.

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

The information required under Item 12 regarding security ownership is incorporated by reference from the section entitled “Security Ownership of Certain Beneficial Owners and Management” in the proxy statement for our 2013 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A. The information required by Item 12 regarding securities authorized for issuance under equity compensation plans is incorporated by reference from the section entitled “Equity Compensation Plan Information” in the proxy statement for our 2013 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A.

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

The information required under Item 13 is incorporated herein by reference from the sections entitled “Related Party Transactions” and “Corporate Governance; Committees of the Board of Directors — Director Independence” of the proxy statement for our 2013 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required under Item 14 is incorporated herein by reference from the section entitled “Ratification of Independent Registered Public Accounting Firm” of the proxy statement for our 2013 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) 1. Financial Statements and Supplemental Information

The financial statements listed in the accompanying index to financial statements are included in Item 8 of this Form 10-K.

(a) 2. Financial Statement Schedules

The following consolidated financial information for the years ended December 31, 2012, 2011 and 2010 is submitted herewith:

Schedule II — Valuation and qualifying accounts.

All other schedules for which provision is made in the applicable accounting regulations of the Securities and Exchange Commission are not required under the related instructions or are inapplicable, and therefore have been omitted.

(a) 3. Exhibits

All documents referenced below were filed pursuant to the Exchange Act by Materion Corporation, file number 001-15885, unless otherwise noted.

- (3a) Amended and Restated Articles of Incorporation of Brush Engineered Materials Inc. (filed as Annex B to the Registration Statement on Form S-4 (File No. 1-15885) filed by the Company on February 1, 2000, Registration No. 333-95917), incorporated herein by reference.
- (3b) Amendment to Amended and Restated Articles of Incorporation (filed as Exhibit 3(a) to the Company's Form 8-K (File No. 1-15885) on March 8, 2011), incorporated herein by reference.
- (3c) Amended and Restated Code of Regulations (filed as Exhibit 3 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ending on July 1, 2011), incorporated herein by reference.
- (4a) Indenture Modification between Toledo-Lucas County Port Authority, dated as of May 30, 2003 (filed as Exhibit 4 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ending June 27, 2003), incorporated herein by reference.
- (4b) Pursuant to Regulation S-K, Item 601(b)(4), the Company agrees to furnish to the Securities and Exchange Commission, upon its request, a copy of the instruments defining the rights of holders of long-term debt of the Company that are not being filed with this report.
- (4c) Amended and Restated Credit Agreement dated July 13, 2011 among Materion Corporation, Materion Advanced Materials Technologies and Services Netherlands B.V., JPMorgan Chase Bank, N.A. and other lenders from time to time party thereto (filed as Exhibit 10.1 to the Registrant's Form 8-K (File No. 1-15885) filed on July 18, 2011), incorporated herein by reference.
- (4d) Third Amended and Restated Precious Metals Agreement dated October 1, 2010, between Brush Engineered Materials Inc. and other borrowers and The Bank of Nova Scotia (filed as Exhibit 4.2 to the Company's Form 8-K (File No. 1-15885) on October 4, 2010), incorporated herein by reference.

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- (4e) Amendment No. 1 to the Third Amended and Restated Precious Metals Agreement dated March 31, 2011, among Materion Corporation and other borrowers and The Bank of Nova Scotia (filed as Exhibit 10.1 to the Company's Form 8-K (File No. 1-15885) on April 6, 2011), incorporated herein by reference.
- (4f) Amendment No. 2 to the Third Amended and Restated Precious Metals Agreement dated August 18, 2011, among Materion Corporation and other borrowers and The Bank of Nova Scotia (filed as Exhibit 10.1 to the Company's Form 8-K (File No. 1-15885) filed on August 22, 2011), incorporated herein by reference.
- (4g) Amendment No. 3 to the Third Amended and Restated Precious Metals Agreement dated October 17, 2011, among Materion Corporation and other borrowers and The Bank of Nova Scotia (filed as Exhibit 10.1 to the Company's Form 8-K (File No. 1-15885) filed on October 18, 2011), incorporated herein by reference.
- (10a) Form of Indemnification Agreement entered into by the Company and its executive officers (filed as Exhibit 10a to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2008), incorporated herein by reference.

- (10b) Form of Indemnification Agreement entered into by the Company and its directors (filed as Exhibit 10b to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2008), incorporated herein by reference.
- (10c)* Amended and Restated Form of Severance Agreement for Executive Officers (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ending June 27, 2008), incorporated herein by reference.
- (10d)* Amendment No. 1 to Amended and Restated Severance Agreement, dated May 4, 2011 (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ending July 1, 2011), incorporated herein by reference.
- (10e)* Amended and Restated Form of Severance Agreement for Key Employees (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ending June 27, 2008), incorporated herein by reference.
- (10f)* Form of Executive Insurance Agreement entered into by the Company and certain employees dated January 2, 2002 (filed as Exhibit 10g to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 1994), incorporated herein by reference.
- (10g)* Form of Trust Agreement between the Company and Key Trust Company of Ohio, N.A. (formerly Ameritrust Company National Association) on behalf of the Company's executive officers (filed as Exhibit 10e to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 1994), incorporated herein by reference.
- (10h)* 2012 Management Incentive Plan (filed as Exhibit 10i to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2011), incorporated herein by reference.
- (10i)*# 2013 Management Incentive Plan.
- (10j)* 1979 Stock Option Plan, as amended pursuant to approval of shareholders on April 21, 1982 (filed by Brush Wellman Inc. as Exhibit 15A to Post-Effective Amendment No. 3 to Registration Statement (File No. 1-15885) No. 2-64080), incorporated herein by reference.
- (10k)* Amendment, effective May 16, 2000, to the 1979 Stock Option Plan (filed as Exhibit 4b to Post-Effective Amendment No. 5 to Registration Statement on Form S-8 (File No. 1-15885), Registration No. 2-64080), incorporated herein by reference.
- (10l)* 1984 Stock Option Plan as amended by the Board of Directors on April 18, 1984 and February 24, 1987 (filed by Brush Wellman Inc. as Exhibit 4.4 to Registration Statement on Form S-8 (File No. 1-15885), Registration No. 33-28605), incorporated herein by reference.
- (10m)* Amendment, effective May 16, 2000, to the 1984 Stock Option Plan (filed as Exhibit 4b to Post-Effective Amendment No. 1 to Registration Statement on Form S-8 (File No. 1-15885), Registration No. 2-90724), incorporated herein by reference.
- (10n)* 1989 Stock Option Plan (filed as Exhibit 4.5 to Registration Statement on Form S-8 (File No. 1-15885), Registration No. 33-28605), incorporated herein by reference.

- (10o)* Amendment, effective May 16, 2000, to the 1989 Stock Option Plan (filed as Exhibit 4b to Post-Effective Amendment No. 1 to Registration Statement on Form S-8 (File No. 1-15885), Registration No. 33-28605), incorporated herein by reference.
- (10p)* 1995 Stock Incentive Plan (as Amended March 3, 1998) (filed as Appendix A to the Company's Proxy Statement (File No. 1-15885) dated March 16, 1998), incorporated herein by reference.
- (10q)* Amendment No. 1, effective May 16, 2000, to the 1995 Stock Incentive Plan (filed as Exhibit 4b to Post-Effective Amendment No. 1 to Registration Statement (File No. 1-15885) No. 333-63357), incorporated herein by reference.
- (10r)* Amendment No. 2, effective February 1, 2005, to the 1995 Stock Incentive Plan (filed as Exhibit 10.4 to the Current Report on Form 8-K (File No. 1-15885) filed by the Company on February 7, 2005) incorporated herein by reference.
- (10s)* Amended and Restated 2006 Stock Incentive Plan (filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ended June 27, 2008), incorporated herein by reference.

- (10t)* Amended and Restated Materion Corporation 2006 Stock Incentive Plan (as Amended and Restated as of May 4, 2011) (filed as Exhibit 10.1 to the Registrant's Form 8-K (File No. 1-15885) filed on May 5, 2011), incorporated herein by reference.
- (10u)* Form of Nonqualified Stock Option Agreement, (filed as Exhibit 10t to the Company's Form 10-K (File No. 1-15885) Annual Report for the year ended December 31, 2004) incorporated herein by reference.
- (10v)* Form of Nonqualified Stock Option Agreement (filed as Exhibit 10.7 to the Current Report on Form 8-K (File No. 1-15885) filed by the Company on February 7, 2005) incorporated herein by reference.
- (10w)* Form of 2010 Restricted Stock Agreement (filed as Exhibit 10z to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2009), incorporated herein by reference.
- (10x)* Form of 2010 Restricted Stock Units Agreement (filed as Exhibit 10aa to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2009), incorporated herein by reference.
- (10y)* Form of 2011 Restricted Stock Units Agreement (Stock-settled) (filed as Exhibit 10.1 to the Company's Form 8-K (File No. 1-15885) filed on March 3, 2011), incorporated herein by reference.
- (10z)* Form of 2011 Restricted Stock Units Agreement (Cash-settled) (filed as Exhibit 10.2 to the Company's Form 8-K (File No. 1-15885) filed on March 3, 2011), incorporated herein by reference.
- (10aa)*# Form of 2012 Restricted Stock Units Agreement (Cash-Settled).
- (10ab)*# Form of 2012 Restricted Stock Units Agreement (Stock-Settled).
- (10ac)* Form of 2006 Stock Appreciation Rights Agreement (filed as Exhibit 10.3 to the Current Report on Form 8-K (File No. 1-15885) filed by the Company on May 8, 2006), incorporated herein by reference.
- (10ad)*# Form of 2012 Performance-Based Restricted Stock Units and Performance Shares Agreement (Cash-settled).
- (10ae)*# Form of 2012 Performance-Based Restricted Stock Units and Performance Shares Agreement (Stock-settled).
- (10af)* Form of 2007 Stock Appreciation Rights Agreement (filed as Exhibit 10.5 to Amendment No. 1 to the Current Report on Form 8-K (File No. 1-15885) filed by the Company on February 16, 2007), incorporated herein by reference.
- (10ag)* Form of 2008 Stock Appreciation Rights Agreement (filed as Exhibit 10an to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2007), incorporated herein by reference.
- (10ah)*

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Form of 2009 Stock Appreciation Rights Agreement (filed as Exhibit 10ag to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2008), incorporated herein by reference.

- (10ai)* Form of 2010 Stock Appreciation Rights Agreement (filed as Exhibit 10ah to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2009), incorporated herein by reference.
- (10aj)* Form of 2011 Stock Appreciation Rights Agreement (filed as Exhibit 10.3 to the Company's Form 8-K (File No. 1-15885) filed on March 3, 2011), incorporated herein by reference.
- (10ak)* Materion Corporation Supplemental Retirement Benefit Plan (filed as Exhibit 10.1 to the Company's Form 8-K (File No. 1-15885) filed on September 19, 2011), incorporated herein by reference.
- (10al)*# Amendment No. 1 to the Supplemental Retirement Benefit Plan.
- (10am)* Key Employee Share Option Plan (filed as Exhibit 4.1 to the Registration Statement on Form S-8 (File No. 1-15885), Registration No. 333-52141, filed by Brush Wellman Inc. on May 5, 1998), incorporated herein by reference.
- (10an)* Amendment No. 1 to the Key Employee Share Option Plan, (effective May 16, 2005) (filed as Exhibit 4b to Post-Effective Amendment No. 1 to Registration Statement on Form S-8 (File No. 1-15885), Registration No. 333-52141), incorporated herein by reference.
- (10ao)* Amendment No. 2 to the Key Employee Share Option Plan dated June 10, 2005 (filed as Exhibit 10aw to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2006), incorporated herein by reference.
- (10ap)* Amendment No. 3 to the Key Employee Share Option Plan dated July 12, 2011 (filed as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ending July 1, 2011), incorporated herein by reference.

- (10aq)* 1997 Stock Incentive Plan for Non-employee Directors, (As Amended and Restated as of May 1, 2001) (filed as Appendix B to the Company's Proxy Statement (File No. 1-15885) dated March 19, 2001), incorporated herein by reference.
- (10ar)* Amendment No. 1 to the 1997 Stock Incentive Plan for Non-employee Directors, (filed as Exhibit 10gg to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2003), incorporated herein by reference.
- (10as)* Form of Nonqualified Stock Option Agreement for Non-employee Directors (filed as Exhibit 10mm to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2004), incorporated herein by reference.
- (10at)* 1992 Deferred Compensation Plan for Non-employee Directors (As Amended and Restated as of December 2, 1997) (filed as Exhibit 4d to the Registration Statement on Form S-8 (File No. 1-15885), Registration No. 333-63355, filed by Brush Wellman Inc.), incorporated herein by reference.
- (10au)* 2000 Reorganization Amendment, dated May 16, 2000, to the 1997 Deferred Compensation Plan for Non-employee Directors (filed as Exhibit 4b to Post-Effective Amendment No. 1 to Registration Statement (File No. 1-15885) No. 333-63353), incorporated herein by reference.
- (10av)* Amendment No. 1 (effective September 11, 2001) to the 1992 Deferred Compensation Plan for Non-employee Directors (filed as Exhibit 4c to the Company's Post-Effective Amendment No. 1 to Registration Statement (File No. 1-15885) No. 333-74296), incorporated herein by reference.
- (10aw)* Amendment No. 2 (effective September 13, 2004) to the 1992 Deferred Compensation Plan for Non-employee Directors (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ended October 1, 2004), incorporated herein by reference.
- (10ax)* Amendment No. 3 (effective January 1, 2005) to the 1992 Deferred Compensation Plan for Non-employee Directors (filed as Exhibit 10rr to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2004), incorporated herein by reference.
- (10ay)* Amendment No. 4 (effective April 1, 2009) to the 1992 Deferred Compensation Plan for Non-employee Directors (filed as Exhibit 10bb to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2008), incorporated herein by reference.
- (10az)* Amended and Restated 2005 Deferred Compensation Plan for Non-employee Directors (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ended September 26, 2008), incorporated herein by reference.
- (10ba)* Amended and Restated Materion Corporation 2006 Non-employee Director Equity Plan (as Amended and Restated as of May 4, 2011) (filed as Appendix B to the Registrant's Proxy Statement (File No. 1-15885) filed on March 25, 2011), incorporated herein by reference.
- (10bb)*# First Amendment to the 2006 Non-employee Director Equity Plan (as Amended and Restated as of May 4, 2011).
- (10bc)*

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Amended and Restated Executive Deferred Compensation Plan II (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ended March 28, 2008), incorporated herein by reference.

(10bd)* Amendment No. 1 to the Amended and Restated Executive Deferred Compensation Plan II (filed as Exhibit 10bf to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2008), incorporated herein by reference.

(10be)* Amendment No. 2 to the Amended and Restated Executive Deferred Compensation Plan II (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ended July 3, 2009), incorporated herein by reference.

(10bf)* Amendment No. 3 to the Amended and Restated Executive Deferred Compensation Plan II, dated July 6, 2011 (filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ending July 1, 2011), incorporated herein by reference.

(10bg)* Trust Agreement between the Company and Fidelity Investments dated September 26, 2006 for certain deferred compensation plans for Non-employee Directors of the Company (filed as Exhibit 99.4 to the Current Report on Form 8-K (File No. 1-15885) filed by the Company on September 29, 2006), incorporated herein by reference.

(10bh)* Trust Agreement between the Company and Fidelity Management Trust Company, dated June 25, 2009 relating to the Executive Deferred Compensation Plan II (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ended July 3, 2009), incorporated herein by reference.

- (10bi) Trust Agreement between the Company and Fifth Third Bank N.A. dated September 25, 2006 relating to the Key Employee Share Option Plan (filed as Exhibit 99.3 to the Current Report on Form 8-K (File No. 1-15885) filed by the Company on September 29, 2006), incorporated herein by reference.
- (10bj) Lease dated as of October 1, 1996, between Brush Wellman Inc. and Toledo-Lucas County Port Authority (filed as Exhibit 10v to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 1996), incorporated herein by reference.
- (10bk) Amended and Restated Inducement Agreement with the Prudential Insurance Company of America dated May 30, 2003 (filed as Exhibit 10 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ended June 27, 2003), incorporated herein by reference.
- (10bl) Amended and Restated Supply Agreement between RWE Nukem, Inc. and Brush Wellman Inc. for the sale and purchase of beryllium products (filed as Exhibit 10 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ended September 26, 2003), incorporated herein by reference.
- (10bm) Supply Agreement between the Defense Logistics Agency and Brush Wellman Inc. for the sale and purchase of beryllium products (filed as Exhibit 10tt to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2004), incorporated herein by reference.
- (10bn) Asset Purchase Agreement by and between Williams Advanced Materials Inc. and Techni-Met, Inc. dated December 20, 2007 (filed as Exhibit 10bw to the Company's Annual Report on Form 10-K (File No. 1-15885) for the year ended December 31, 2007), incorporated herein by reference.
- (10bo) Consignment Agreement dated October 2, 2009 between Brush Engineered Materials Inc. and Canadian Imperial Bank of Commerce and CIBC World Markets Inc. (filed as Exhibit 10.1 to the Company's Form 8-K (File No. 1-15885) on October 8, 2009), incorporated herein by reference.
- (10bp) Amendment No. 1 to the Consignment Agreement dated October 2, 2009 between Brush Engineered Materials Inc. and Canadian Imperial Bank of Commerce and CIBC World Markets Inc. (filed as Exhibit 99.1 to the Company's Form 8-K (File No. 1-15885) on March 12, 2010), incorporated herein by reference.
- (10bq) Amendment No. 2 to the Consignment Agreement dated June 11, 2010 between Brush Engineered Materials Inc. and Canadian Imperial Bank of Commerce and CIBC World Markets Inc., (filed as Exhibit 99.1 to the Company's Form 8-K (File No. 1-15885) filed on June 14, 2010), incorporated herein by reference.
- (10br) Amendment No. 3 to the Consignment Agreement dated September 30, 2010 between Brush Engineered Materials Inc. and Canadian Imperial Bank of Commerce and CIBC World Markets Inc. (filed as Exhibit 10.1 to the Company's Form 8-K (File No. 1-15885), on October 4, 2010), incorporated herein by reference.
- (10bs) Amendment No. 4 to the Consignment Agreement dated November 10, 2010 between Brush Engineered Materials Inc. and Canadian Imperial Bank of Commerce and CIBC World Markets Inc. (filed as Exhibit 99.1 to the Company's Form 8-K (File No. 1-15885), on November 12, 2010), incorporated herein by reference.

- (10bt) Amendment No. 5 to the Consignment Agreement dated March 7, 2011 between Brush Engineered Materials Inc. and Canadian Imperial Bank of Commerce and CIBC World Markets Inc. (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 1-15885) for the period ended April 1, 2011), incorporated herein by reference.
- (10bu) Amendment No. 6 to the Consignment Agreement dated September 13, 2011 between Materion Corporation and Canadian Imperial Bank of Commerce and CIBC World Markets Inc. (filed as Exhibit 10.1 to the Company's Form 8-K (File No. 1-15885) filed on September 16, 2011), incorporated herein by reference.
- (10bv) Amendment No. 7 to the Consignment Agreement dated August 24, 2012 between Materion Corporation and Canadian Imperial Bank of Commerce and CIBC World Markets Inc., (filed as Exhibit 10.1 to the Company's Form 8-K (File No. 1-15885) on August 31, 2012), incorporated herein by reference.
- (21)# Subsidiaries of the Registrant.
- (23)# Consent of Ernst & Young LLP.
- (24)# Power of Attorney.
- (31.1)# Certification of Chief Executive Officer required by Rule 13a-14(a) or 15d-14(a).
- (31.2)# Certification of Chief Financial Officer required by Rule 13a-14(a) or 15d-14(a).
- (32)# Certifications of Chief Executive Officer and Chief Financial Officer required by 18 U.S.C. Section 1350.

(95)# Mine Safety Disclosure Pursuant to Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the Fiscal Year Ended December 31, 2012.

(101.INS)^ XBRL Instance Document.

(101.SCH)^ XBRL Taxonomy Extension Schema Document.

(101.CAL)^ XBRL Taxonomy Extension Calculation Linkbase Document.

(101.DEF)^ XBRL Taxonomy Extension Definition Linkbase Document.

(101.LAB)^ XBRL Taxonomy Extension Label Linkbase Document.

(101.PRE)^ XBRL Taxonomy Extension Presentation Linkbase Document.

* Denotes a compensatory plan or arrangement.

Filed herewith.

^ XBRL (Extensible Business Reporting Language) information is furnished and not filed or a part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, and otherwise is not subject to liability under these sections.

SIGNATURES

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

MATERION CORPORATION

By: /s/ RICHARD J. HIPPLE
Richard J. Hipple
Chairman of the Board, President
and Chief Executive Officer

March 8, 2013

By: /s/ JOHN D. GRAMPA
John D. Grampa
Senior Vice President Finance
and Chief Financial Officer

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

/s/ RICHARD J. HIPPLE	Chairman of the Board, President, Chief Executive Officer and Director (Principal Executive Officer)	March 8, 2013
Richard J. Hipple		
/s/ JOHN D. GRAMPA	Senior Vice President Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	March 8, 2013
John D. Grampa		
/s/ JOSEPH P. KEITHLEY*	Director	March 8, 2013
Joseph P. Keithley*		
/s/ VINOD M. KHILNANI*	Director	March 8, 2013
Vinod M. Khilnani*		
/s/ WILLIAM B. LAWRENCE*	Director	March 8, 2013
William B. Lawrence*		
/s/ N. MOHAN REDDY*	Director	March 8, 2013
N. Mohan Reddy*		
/s/ WILLIAM R. ROBERTSON*	Director	March 8, 2013
William R. Robertson*		
/s/ JOHN SHERWIN, JR.*	Director	March 8, 2013
John Sherwin, Jr.*		
/s/ CRAIG S. SHULAR*	Director	March 8, 2013
Craig S. Shular*		
/s/ DARLENE J. S. SOLOMON*	Director	March 8, 2013
Darlene J. S. Solomon*		
/s/ ROBERT B. TOTH*	Director	March 8, 2013
Robert B. Toth*		
/s/ GEOFFREY WILD*	Director	March 8, 2013
Geoffrey Wild*		

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* The undersigned, by signing his/her name hereto, does sign and execute this report on behalf of each of the above-named officers and directors of Materion Corporation, pursuant to Powers of Attorney executed by each such officer and director filed with the Securities and Exchange Commission.

By: /s/ JOHN D. GRAMPA
John D. Grampa
Attorney-in-Fact

March 8, 2013

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Materion Corporation and Subsidiaries
Schedule II—Valuation and Qualifying Accounts
Years Ended December 31, 2012, 2011 and 2010

COL. A	COL. B	COL. C		COL. D	COL. E
(Thousands)	Balance at Beginning of Period	ADDITIONS (1) Charged to Costs and Expenses	(2) Charged to Other Accounts-Describe	Deduction- Describe	Balance at End of Period
Year ended December 31, 2012					
Deducted from asset accounts:					
Allowance for doubtful accounts receivable	\$1,490	\$560	\$ (305)	\$ 342	(B) \$1,403
Inventory reserves and obsolescence	5,005	2,836	—	3,024	(C) 4,817
Year ended December 31, 2011					
Deducted from asset accounts:					
Allowance for doubtful accounts receivable	1,452	285	—	247	(B) 1,490
Inventory reserves and obsolescence	4,609	878	—	482	(C) 5,005
Year ended December 31, 2010					
Deducted from asset accounts:					
Allowance for doubtful accounts receivable	1,397	423	315	(A) 683	(B) 1,452
Inventory reserves and obsolescence	4,228	3,309	46	(A) 2,974	(C) 4,609
Note (A)-Beginning balance from acquisition					
Note (B)-Bad debts written-off, net of recoveries					
Note (C)-Inventory write-off					