For the transition period from to

## Commission file number 001-15885

## MATERION CORPORATION

(Exact name of Registrant as specified in charter)

## Ohio

(State or other jurisdiction of incorporation or organization)

6070 Parkland Blvd., Mayfield Hts., Ohio
(Address of principal executive offices)

34-1919973
(I.R.S. Employer Identification No.)

Registrant's telephone number, including area code:
216-486-4200
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 $\square$ 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 $\square$ No

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 $12 \mathrm{~b}-2$ of the Exchange Act.

Large accelerated filer $\square \quad$ Accelerated filer $\square \quad$ Non-accelerated filer $\square \quad$ Smaller reporting company
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes $\qquad$ No $\downarrow$
As of July 26, 2013, there were 20,585,447 common shares, no par value, outstanding.

## Explanatory Note

Materion Corporation (the Company) is filing this amended Quarterly Report on Form 10-Q (Form 10-Q/A) for the quarterly period ended June 28, 2013 because the Consolidated Financial Statements previously reported in the Original Form 10-Q for the quarterly period ended June 28, 2013 should no longer be relied upon due to an error in the reconciliation of a physical inventory count taken during that quarter that was not identified until the fourth quarter 2013. As a result of the error, cost of sales was understated by $\$ 6.8$ million and net income was overstated by $\$ 4.8$ million, or $\$ 0.23$ per share, diluted, for the three-month and six-month periods ended June 28, 2013.

On February 24, 2014, the Audit Committee of the Company's Board of Directors approved management's recommendation to restate its Consolidated Financial Statements for the three-month and six-month periods ended June 28, 2013 by filing an amendment to the Original Form 10-Q after consulting with the full Board of Directors and Ernst \& Young LLP, the Company's independent registered public accounting firm. The error, including the specific line items on each of the Company's financial statements that were restated, is described in greater detail in Note A1 - Restatement contained in this Form 10-Q/A.

This Form 10-Q/A amends and restates in their entireties Items 1, 2 and 4 of Part I and Item 6 of Part II of the Original Form 10-Q, and no other information in that report is amended hereby. This Form $10-\mathrm{Q} / \mathrm{A}$ continues to speak as of the date of the Original Form 10-Q and the Company has not updated disclosures contained herein to reflect any events that occurred at a later date.

## PART I FINANCIAL INFORMATION MATERION CORPORATION AND SUBSIDIARIES

## Item 1. Financial Statements

The consolidated financial statements of Materion Corporation and its subsidiaries for the second quarter and first half ended June 28, 2013 are as follows:

Consolidated Statements of Income -
Second quarter and first half ended June 28, 2013 and June 29, 2012

Consolidated Statements of Comprehensive Income -
Second quarter and first half ended June 28, 2013 and June 29, 2012

Consolidated Statements of Cash Flows -
First half ended June 28, 2013 and June 29, 2012

Consolidated Balance Sheets -
June 28, 2013 and December 31, 2012

Materion Corporation and Subsidiaries
Consolidated Statements of Income (Unaudited)

| (Thousands, except per share amounts) | Second Quarter Ended |  |  |  | First Half Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | June 28, 2013 |  | June 29, 2012 |  | June 28, 2013 <br> Restated |  | June 29, 2012 |  |
|  |  | stated |  |  |  |  |  |  |
| Net sales | \$ | 306,141 | \$ | 325,088 | \$ | 605,310 | \$ | 678,718 |
| Cost of sales |  | 260,149 |  | 272,064 |  | 510,979 |  | 576,276 |
| Gross margin |  | 45,992 |  | 53,024 |  | 94,331 |  | 102,442 |
| Selling, general and administrative expense |  | 33,327 |  | 33,453 |  | 66,106 |  | 66,107 |
| Research and development expense |  | 3,154 |  | 3,198 |  | 6,711 |  | 6,290 |
| Other-net |  | 2,950 |  | 3,928 |  | 5,431 |  | 7,716 |
| Operating profit |  | 6,561 |  | 12,445 |  | 16,083 |  | 22,329 |
| Interest expense-net |  | 813 |  | 820 |  | 1,641 |  | 1,518 |
| Income before income taxes |  | 5,748 |  | 11,625 |  | 14,442 |  | 20,811 |
| Income tax expense |  | 1,593 |  | 3,696 |  | 3,502 |  | 6,764 |
| Net income | \$ | 4,155 | \$ | 7,929 | \$ | 10,940 | \$ | 14,047 |
| Basic earnings per share: |  |  |  |  |  |  |  |  |
| Net income per share of common stock | \$ | 0.20 | \$ | 0.39 | \$ | 0.53 | \$ | 0.69 |
| Diluted earnings per share: |  |  |  |  |  |  |  |  |
| Net income per share of common stock | \$ | 0.20 | \$ | 0.38 | \$ | 0.52 | \$ | 0.68 |
| Cash dividends per share | \$ | 0.080 | \$ | 0.075 | \$ | 0.155 | \$ | 0.075 |
| Weighted-average number of shares of common stock outstanding: |  |  |  |  |  |  |  |  |
| Basic |  | 20,566 |  | 20,430 |  | 20,524 |  | 20,400 |
| Diluted |  | 20,869 |  | 20,666 |  | 20,845 |  | 20,687 |

See Notes to Consolidated Financial Statements.

## Materion Corporation and Subsidiaries Consolidated Statements of Comprehensive Income (Unaudited)

| (Thousands) | Second Quarter Ended |  |  |  | First Half Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | June 28, 2013 |  | June 29, 2012 |  | June 28, 2013 |  | June 29, 2012 |  |
|  | Restated |  |  |  |  | tated |  |  |
| Net income | \$ | 4,155 | \$ | 7,929 | \$ | 10,940 | \$ | 14,047 |
| Other comprehensive income: |  |  |  |  |  |  |  |  |
| Foreign currency translation adjustment |  | (626) |  | (68) |  | $(3,380)$ |  | (822) |
| Derivative and hedging activity, net of tax |  | (247) |  | (155) |  | 155 |  | (337) |
| Pension and post employment benefit adjustment, net of tax |  | 1,220 |  | 835 |  | 2,439 |  | 1,669 |
| Net change in accumulated other comprehensive income |  | 347 |  | 612 |  | (786) |  | 510 |
| Comprehensive income | \$ | 4,502 | \$ | 8,541 | \$ | 10,154 | \$ | 14,557 |

See Notes to Consolidated Financial Statements.

## Materion Corporation and Subsidiaries Consolidated Statements of Cash Flows (Unaudited)

| (Thousands) | First Half Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | June 28, 2013 |  | June 29, 2012 |  |
|  | Restated |  |  |  |
| Cash flows from operating activities: |  |  |  |  |
| Net income | \$ | 10,940 | \$ | 14,047 |
| Adjustments to reconcile net income to net cash provided from (used in) operating activities: |  |  |  |  |
| Depreciation, depletion and amortization |  | 18,656 |  | 20,440 |
| Amortization of deferred financing costs in interest expense |  | 325 |  | 325 |
| Stock-based compensation expense |  | 2,676 |  | 2,828 |
| Changes in assets and liabilities net of acquired assets and liabilities: |  |  |  |  |
| Decrease (increase) in accounts receivable |  | $(5,116)$ |  | $(5,502)$ |
| Decrease (increase) in other receivables |  | (40) |  | 3,873 |
| Decrease (increase) in inventory |  | 4,212 |  | $(21,953)$ |
| Decrease (increase) in prepaid and other current assets |  | 9,029 |  | $(1,235)$ |
| Decrease (increase) in deferred income taxes |  | 1,166 |  | $(1,360)$ |
| Increase (decrease) in accounts payable and accrued expenses |  | $(27,143)$ |  | $(12,942)$ |
| Increase (decrease) in unearned revenue |  | $(1,077)$ |  | $(1,470)$ |
| Increase (decrease) in interest and taxes payable |  | 177 |  | 200 |
| Increase (decrease) in long-term liabilities |  | 2,409 |  | $(6,459)$ |
| Other-net |  | 1,906 |  | 161 |
| Net cash provided from (used in) operating activities |  | 18,120 |  | $(9,047)$ |
| Cash flows from investing activities: |  |  |  |  |
| Payments for purchase of property, plant and equipment |  | $(13,023)$ |  | $(17,957)$ |
| Payments for mine development |  | $(4,382)$ |  | (822) |
| Reimbursements for capital equipment under government contracts |  | - |  | 991 |
| Payments for purchase of business net of cash received |  | - |  | $(3,953)$ |
| Proceeds from sale of property, plant and equipment |  | 67 |  | - |
| Other investments-net |  | 20 |  | 1,742 |
| Net cash used in investing activities |  | $(17,318)$ |  | $(19,999)$ |
| Cash flows from financing activities: |  |  |  |  |
| Proceeds from issuance (repayments) of short-term debt |  | $(12,729)$ |  | 16,322 |
| Proceeds from issuance of long-term debt |  | 70,240 |  | 25,207 |
| Repayment of long-term debt |  | $(55,541)$ |  | $(7,494)$ |
| Debt issuance costs |  | $(1,301)$ |  | - |
| Principal payments under capital lease obligations |  | (329) |  | (383) |
| Payment of dividends |  | $(3,198)$ |  | $(1,550)$ |
| Issuance of common stock under stock option plans |  | 849 |  | 139 |
| Tax benefit from stock compensation realization |  | 1,316 |  | 73 |
| Net cash (used in) provided from financing activities |  | (693) |  | 32,314 |
| Effects of exchange rate changes |  | (439) |  | (93) |
| Net change in cash and cash equivalents |  | (330) |  | 3,175 |
| Cash and cash equivalents at beginning of period |  | 16,056 |  | 12,255 |
| Cash and cash equivalents at end of period | \$ | 15,726 | \$ | 15,430 |

[^0]
## Materion Corporation and Subsidiaries Consolidated Balance Sheets (Unaudited)

| (Thousands) |  | $\begin{aligned} & \text { e 28, } 2013 \\ & \text { Restated } \end{aligned}$ | Dec. 31, 2012 |  |
| :---: | :---: | :---: | :---: | :---: |
| Assets |  |  |  |  |
| Current assets |  |  |  |  |
| Cash and cash equivalents | \$ | 15,726 | \$ | 16,056 |
| Accounts receivable |  | 129,831 |  | 126,482 |
| Other receivables |  | 445 |  | 405 |
| Inventories |  | 200,804 |  | 206,125 |
| Prepaid expenses |  | 32,666 |  | 41,685 |
| Deferred income taxes |  | 8,460 |  | 10,236 |
| Total current assets |  | 387,932 |  | 400,989 |
| Related-party notes receivable |  | 11 |  | 51 |
| Long-term deferred income taxes |  | 20,483 |  | 19,946 |
| Property, plant and equipment-cost |  | 794,389 |  | 779,785 |
| Less allowances for depreciation, depletion and amortization |  | $(523,659)$ |  | $(507,243)$ |
| Property, plant and equipment-net |  | 270,730 |  | 272,542 |
| Intangible assets |  | 26,594 |  | 28,869 |
| Other assets |  | 4,240 |  | 3,767 |
| Goodwill |  | 88,753 |  | 88,753 |
| Total assets | \$ | 798,743 | \$ | 814,917 |
| Liabilities and shareholders' equity |  |  |  |  |
| Current liabilities |  |  |  |  |
| Short-term debt | \$ | 36,562 | \$ | 49,432 |
| Accounts payable |  | 28,828 |  | 42,281 |
| Other liabilities and accrued items |  | 46,579 |  | 55,811 |
| Unearned revenue |  | 466 |  | 1,543 |
| Total current liabilities |  | 112,435 |  | 149,067 |
| Other long-term liabilities |  | 16,299 |  | 16,173 |
| Retirement and post-employment benefits |  | 123,448 |  | 125,978 |
| Unearned income |  | 58,837 |  | 61,184 |
| Long-term income taxes |  | 1,510 |  | 1,510 |
| Deferred income taxes |  | 614 |  | 1,130 |
| Long-term debt |  | 59,578 |  | 44,880 |
| Shareholders' equity |  | 426,022 |  | 414,995 |
| Total liabilities and shareholders' equity | \$ | 798,743 | \$ | 814,917 |

See Notes to Consolidated Financial Statements.

## Materion Corporation and Subsidiaries Notes to Consolidated Financial Statements (Unaudited)

## Note A1 - Restatement

During the fourth quarter 2013, the Company identified an error in the second quarter 2013 physical inventory count reconciliation process at one of its operations in the Advanced Material Technologies reporting segment that was not detected by management's review controls on a timely basis. The error overstated the amount of inventory on hand by $\$ 6.8$ million as of the end of the second quarter 2013. To correct the error, inventory was reduced on the Consolidated Balance Sheets as of June 28, 2013 and cost of sales was increased on the Consolidated Statements of Income for the three-month and six-month periods ended June 28, 2013. Income tax expense was also restated for the reduction in income before income taxes, with the offset recorded against prepaid income taxes on the Consolidated Balance Sheets. Net income and earnings per share were restated for the impact of these items for the three-month and six-month periods ended June 28, 2013. The Consolidated Statements of Comprehensive Income for the three-month and six-month periods ended June 28, 2013 and the Consolidated Statements of Cash Flows for the six-month period ended June 28, 2013 were also restated for the impact of the error.

The restatement corrects the following line items in the Company's Consolidated Financial Statements for the periods ended June 28, 2013:

| (Thousands) | Second Quarter Ended June 28, 2013 |  |  |  |  |  | First Half Ended June 28, 2013 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Previously <br> Reported |  | Restatement Adjustment |  | As <br> Corrected |  | Previously <br> Reported |  | Restatement <br> Adjustment |  | As <br> Corrected |  |
| Consolidated Statements of Income |  |  |  |  |  |  |  |  |  |  |  |  |
| Cost of sales | \$ | 253,320 | \$ | 6,829 | \$ | 260,149 | \$ | 504,150 | \$ | 6,829 | \$ | 510,979 |
| Gross margin |  | 52,821 |  | $(6,829)$ |  | 45,992 |  | 101,160 |  | $(6,829)$ |  | 94,331 |
| Operating profit |  | 13,390 |  | $(6,829)$ |  | 6,561 |  | 22,912 |  | $(6,829)$ |  | 16,083 |
| Income before income taxes |  | 12,577 |  | $(6,829)$ |  | 5,748 |  | 21,271 |  | $(6,829)$ |  | 14,442 |
| Income tax expense |  | 3,668 |  | $(2,075)$ |  | 1,593 |  | 5,577 |  | $(2,075)$ |  | 3,502 |
| Net income |  | 8,909 |  | $(4,754)$ |  | 4,155 |  | 15,694 |  | $(4,754)$ |  | 10,940 |
| Earnings per share - basic |  | 0.43 |  | (0.23) |  | 0.20 |  | 0.76 |  | (0.23) |  | 0.53 |
| Earnings per share - diluted |  | 0.43 |  | (0.23) |  | 0.20 |  | 0.75 |  | (0.23) |  | 0.52 |
| Consolidated Statements of Comprehensive Income |  |  |  |  |  |  |  |  |  |  |  |  |
| Net income |  | 8,909 |  | $(4,754)$ |  | 4,155 |  | 15,694 |  | $(4,754)$ |  | 10,940 |
| Comprehensive income |  | 9,256 |  | $(4,754)$ |  | 4,502 |  | 14,908 |  | $(4,754)$ |  | 10,154 |


|  | First Half Ended June 28, 2013 |  |  |  |
| :--- | :--- | :---: | :---: | :---: |
| (Thousands) | Previously <br> Reported | Restatement <br> Adjustment | As <br> Corrected |  |
| Consolidated Statements of Cash Flows | $\$$ |  |  |  |
| Net income | 15,694 | $\$$ | $(4,754)$ | $\$$ |
| Decrease (increase) in inventory | $(2,617)$ | 6,829 | 4,940 |  |
| Decrease (increase) in prepaids and other current assets | 11,104 | $(2,075)$ | 9,029 |  |

## Materion Corporation and Subsidiaries Notes to Consolidated Financial Statements (Unaudited)

|  | First Half Ended June 28, 2013 |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| (Thousands) | Previously <br> Reported | Restatement <br> Adjustment | As <br> Corrected |  |
| Consolidated Balance Sheets |  |  |  |  |
| Inventory | 207,633 | $\$$ | $(6,829)$ | $\$$ |
| Prepaid expenses | 30,591 | 2,075 | 32,804 |  |
| Retained earnings | 430,776 | $(4,754)$ | 426,022 |  |

Footnote B - Inventory, Footnote E-Segment Reporting and Footnote H - Income Taxes to the Consolidated Financial Statements for the period ended June 28, 2013 have also been restated to correct this error.

## Note A - Accounting Policies

In management's opinion, the accompanying consolidated financial statements contain all adjustments necessary to present fairly the financial position as of June 28, 2013 and December 31, 2012 and the results of operations for the second quarter and first half ended June 28, 2013 and June 29, 2012. All adjustments were of a normal and recurring nature.

## Note B - Inventories (Restated)

Inventories on the Consolidated Balance Sheets are summarized as follows:

| (Thousands) |  | $\begin{aligned} & \text { e 28, } 2013 \\ & \text { estated } \end{aligned}$ | Dec. 31, 2012 |  |
| :---: | :---: | :---: | :---: | :---: |
| Principally average cost: |  |  |  |  |
| Raw materials and supplies | \$ | 39,796 | \$ | 42,751 |
| Work in process |  | 195,465 |  | 203,179 |
| Finished goods |  | 49,827 |  | 51,094 |
| Gross inventories |  | 285,088 |  | 297,024 |
| Excess of average cost over LIFO inventory value |  | 84,284 |  | 90,899 |
| Net inventories | \$ | 200,804 | \$ | 206,125 |

## Materion Corporation and Subsidiaries

Notes to Consolidated Financial Statements
(Unaudited)

## Note C - Pensions and Other Post-employment Benefits

The following is a summary of the second quarter and first half 2013 and 2012 net periodic benefit cost for the domestic pension plans (which include the defined benefit plan and the supplemental retirement plans) and the domestic retiree medical plan.

| (Thousands) | Pension Benefits |  |  |  | Other Benefits |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Second Quarter Ended |  |  |  | Second Quarter Ended |  |  |  |
|  | June 28, <br> 2013 |  | June 29, <br> 2012 |  | June 28, <br> 2013 |  | June 29, <br> 2012 |  |
| Components of net periodic benefit cost |  |  |  |  |  |  |  |  |
| Service cost | \$ | 2,356 | \$ | 1,966 | \$ | 76 | \$ | 93 |
| Interest cost |  | 2,353 |  | 2,341 |  | 311 |  | 360 |
| Expected return on plan assets |  | $(2,996)$ |  | $(2,926)$ |  | - |  | - |
| Amortization of prior service cost (benefit) |  | (86) |  | (118) |  | 29 |  | - |
| Amortization of net loss |  | 1,933 |  | 1,402 |  | - |  | - |
| Net periodic benefit cost | \$ | 3,560 | \$ | 2,665 | \$ | 416 | \$ | 453 |


| (Thousands) | Pension Benefits |  |  |  | Other Benefits |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | First Half Ended |  |  |  | First Half Ended |  |  |  |
|  | June 28, <br> 2013 |  | June 29, <br> 2012 |  | June 28,$2013$ |  | June 29, <br> 2012 |  |
| Components of net periodic benefit cost |  |  |  |  |  |  |  |  |
| Service cost | \$ | 4,711 | \$ | 3,934 | \$ | 152 | \$ | 186 |
| Interest cost |  | 4,707 |  | 4,672 |  | 622 |  | 720 |
| Expected return on plan assets |  | $(5,992)$ |  | $(5,852)$ |  | - |  | - |
| Amortization of prior service cost (benefit) |  | (170) |  | (236) |  | 58 |  | - |
| Amortization of net loss |  | 3,865 |  | 2,804 |  | - |  | - |
| Net periodic benefit cost | S | 7,121 | \$ | 5,322 | \$ | 832 | \$ | 906 |

The Company made contributions to the domestic defined benefit pension plan of $\$ 5.5$ million in the first half of 2013.

## Note D-Contingencies

Materion Brush Inc., one of the Company's wholly owned subsidiaries, is a defendant from time to time in legal proceedings where the plaintiffs allege they have contracted chronic beryllium disease (CBD) or related ailments as a result of exposure to beryllium. The Company will record a reserve for CBD or other litigation when a loss from either settlement or verdict is probable and estimable. Claims filed by thirdparty plaintiffs where the alleged exposure occurred prior to December 31, 2007 may be covered by insurance subject to an annual deductible of $\$ 1.0$ million. Reserves are recorded for asserted claims only and defense costs are expensed as incurred. One CBD case, which was filed in 2012, was outstanding as of the end of the second quarter 2013. No other cases were filed or dismissed during the first half of 2013. A loss reserve of $\$ 0.1$ million was recorded for this case as of the end of the second quarter 2013, unchanged from year-end 2012.

The Company has an active environmental compliance program and records reserves for the probable cost of identified environmental remediation projects. The reserves are established based upon analyses conducted by the Company's engineers and outside consultants and are adjusted from time to time based upon ongoing studies, the difference between actual and estimated costs and other factors. The reserves may also be affected by rulings and negotiations with regulatory agencies. The undiscounted reserve balance was $\$ 5.2$ million as of the end of the second quarter 2013 and $\$ 5.3$ million at December 31, 2012. Environmental projects tend to be long term and the final actual remediation costs may differ from the amounts currently recorded.

## Materion Corporation and Subsidiaries <br> Notes to Consolidated Financial Statements <br> (Unaudited)

## Note E-Segment Reporting (Restated)

Operating profit for the Advanced Material Technologies segment and the consolidated total were restated for the second quarter 2013 and the first half of 2013. Assets as of the end of the first half of 2013 were also restated for Advanced Material Technologies and the consolidated total. See Note A1 to the Consolidated Financial Statements.

| (Thousands) | Advanced Material Technologies |  | Performance Alloys |  | Beryllium and Composites |  | Technical Materials |  | Subtotal |  | All <br> Other |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Second Quarter 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sales to external customers | \$ | 196,011 | \$ | 74,335 | \$ | 16,187 | \$ | 19,608 | \$ | 306,141 | \$ | - | \$ | 306,141 |
| Intersegment sales |  | 777 |  | 611 |  | 63 |  | 214 |  | 1,665 |  | - |  | 1,665 |
| Operating profit (loss) |  | $(2,286)$ |  | 6,898 |  | 822 |  | 2,389 |  | 7,823 |  | $(1,262)$ |  | 6,561 |
| Second Quarter 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sales to external customers | \$ | 221,931 | \$ | 72,506 | \$ | 12,567 | \$ | 18,084 | \$ | 325,088 | \$ | - | \$ | 325,088 |
| Intersegment sales |  | 506 |  | 672 |  | 129 |  | 207 |  | 1,514 |  | - |  | 1,514 |
| Operating profit (loss) |  | 7,514 |  | 6,685 |  | $(2,017)$ |  | 1,967 |  | 14,149 |  | $(1,704)$ |  | 12,445 |
| First Half 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sales to external customers | \$ | 389,864 | \$ | 148,857 | \$ | 28,509 | \$ | 38,080 | \$ | 605,310 | \$ | - | \$ | 605,310 |
| Intersegment sales |  | 1,525 |  | 1,041 |  | 133 |  | 444 |  | 3,143 |  | - |  | 3,143 |
| Operating profit (loss) |  | 1,065 |  | 14,134 |  | (474) |  | 3,825 |  | 18,550 |  | $(2,467)$ |  | 16,083 |
| Assets |  | 318,917 |  | 266,561 |  | 141,509 |  | 24,530 |  | 751,517 |  | 47,226 |  | 798,743 |
| First Half 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sales to external customers | \$ | 463,737 | \$ | 147,734 | \$ | 28,684 | \$ | 38,484 | \$ | 678,639 | \$ | 79 | \$ | 678,718 |
| Intersegment sales |  | 1,171 |  | 1,369 |  | 329 |  | 471 |  | 3,340 |  | - |  | 3,340 |
| Operating profit (loss) |  | 12,799 |  | 12,945 |  | $(3,308)$ |  | 3,860 |  | 26,296 |  | $(3,967)$ |  | 22,329 |
| Assets |  | 353,824 |  | 248,086 |  | 130,309 |  | 23,824 |  | 756,043 |  | 44,071 |  | 800,114 |

## Note F - Stock-based Compensation Expense

Stock-based compensation expense was $\$ 1.5$ million in the second quarter 2013 and $\$ 1.4$ million in the second quarter 2012. For the first half of the year, stock-based compensation was $\$ 2.7$ million in 2013 and $\$ 2.8$ million in 2012.

The Company granted approximately 147,000 stock appreciation rights (SARs) to certain employees in the first quarter 2013 at a strike price of $\$ 28.32$ per share. The fair value of the SARs, which was determined on the grant date using a Black-Scholes model, was $\$ 12.54$ per share and will be amortized over the vesting period of three years. The SARs expire in seven years from the date of the grant.

The Company granted approximately 42,000 shares of restricted stock units to certain employees in the first quarter 2013 at a weightedaverage fair value of $\$ 28.32$ per share. The fair value was determined using the closing price of the Company's common stock on the grant date and will be amortized over the vesting period of three years. The holders of the restricted stock units will forfeit their shares if their employment is terminated prior to the end of the vesting period.

The Company granted approximately 42,000 shares of performance-based restricted stock units to certain employees in the first quarter 2013 at a fair value of $\$ 23.90$ per share. The fair value will be expensed over the vesting period of three years. The final share payout to the employees will be based upon the Company's total return to shareholders over the vesting period relative to a peer group's performance over the same period.

The Company received $\$ 0.8$ million for the exercise of approximately 56,000 options during the first half of 2013 and $\$ 0.1$ million for the exercise of approximately 13,000 options during the first half of 2012. Exercises of SARs totaled approximately 57,000 in the first half of 2013 and 27,000 in the first half of 2012.

## Materion Corporation and Subsidiaries Notes to Consolidated Financial Statements (Unaudited)

## Note G - Other-net

Other-net income (expense) for the second quarter and first half of 2013 and 2012 is summarized as follows:

| (Thousands) | Second Quarter Ended |  |  |  | First Half Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | June 28,$2013$ |  | June 29, <br> 2012 |  | June 28,$2013$ |  | June 29, <br> 2012 |  |
| Foreign currency exchange/translation gain | \$ | 426 | \$ | 177 | \$ | 1,145 | \$ | 420 |
| Amortization of intangible assets |  | $(1,324)$ |  | $(1,435)$ |  | $(2,642)$ |  | $(2,869)$ |
| Metal consignment fees |  | $(1,701)$ |  | $(2,648)$ |  | $(3,518)$ |  | $(4,869)$ |
| Other items |  | (351) |  | (22) |  | (416) |  | (398) |
| Total | \$ | $(2,950)$ | \$ | $(3,928)$ | \$ | $(5,431)$ | \$ | $(7,716)$ |

## Note H - Income Taxes (Restated)

The tax expense of $\$ 1.6$ million in the second quarter 2013 was calculated by applying a rate of $27.7 \%$ against income before income taxes while the tax expense of $\$ 3.7$ million in the second quarter 2012 was calculated by applying a rate of $31.8 \%$ against the income before income taxes in that period.

In the first half of 2013, the tax expense of $\$ 3.5$ million was calculated using an effective rate of $24.2 \%$. The tax expense was $\$ 6.8$ million in the first half of 2012 and the effective rate was $32.5 \%$ in that period.

The differences between the statutory and effective rates in the second quarter and first half of both years was due to the impact of percentage depletion, the production deduction, foreign source income and deductions, executive compensation, state and local taxes, discrete events and other factors. The research and experimentation credit for 2013 also reduced the effective tax rate in the second quarter and first half of 2013.

The Company recorded a discrete tax benefit of $\$ 0.6$ million in the first quarter 2013 primarily for the research and experimentation credit for 2012. The research and experimentation credit was not recorded in 2012 as the U.S. Congress did not extend the credit for 2012 until the first quarter 2013 and accounting regulations require tax expense to be recorded based upon the laws that were in effect as of year end.

Discrete events totaled $\$ 0.1$ million in the first half of 2012.

## Note I - Depreciation

The Company received $\$ 63.5$ million from the Department of Defense ( DoD ) in previous periods for reimbursement of the DoD's share of the cost of capital equipment acquired by the Company under a Title III contract. The Company recorded the cost of the equipment in property, plant and equipment and the reimbursements as unearned income, a liability on the Consolidated Balance Sheet. The equipment was placed in service during the third quarter 2012 and its full cost is being depreciated in accordance with Company policy. The unearned income liability is being reduced ratably with the depreciation expense recorded over the life of the equipment.

In the first half of 2013, the depreciation expense on the equipment subject to reimbursement was $\$ 2.3$ million. Unearned income was reduced by $\$ 2.3$ million, accordingly, with the offset recorded as a credit to cost of sales. Depreciation, depletion and amortization expense on the Consolidated Statement of Cash Flows is shown net of reduction in unearned income.

## Materion Corporation and Subsidiaries <br> Notes to Consolidated Financial Statements <br> (Unaudited)

## Note J — Fair Value of Financial Instruments

The Company measures and records financial instruments at their fair values. A fair value hierarchy is used for those instruments measured at fair value that distinguishes between assumptions based on 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 - 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 June 28, 2013:

| (Thousands) | Total |  | Fair Value Measurements |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Quoted Prices in Active Markets for Identical Assets (Level 1) |  | Significant Other Observable Inputs (Level 2) |  | Significant Unobservable Inputs (Level 3) |  |
| Financial Assets |  |  |  |  |  |  |  |  |
| Directors' deferred compensation investments | \$ | 494 | \$ | 494 | \$ | - | \$ | - |
| Foreign currency forward contracts |  | 553 |  | - |  | 553 |  | - |
| Precious metal forward contracts |  | 23 |  | - |  | 23 |  | - |
| Total | \$ | 1,070 | \$ | 494 | \$ | 576 | \$ | - |
| Financial Liabilities |  |  |  |  |  |  |  |  |
| Directors' deferred compensation liability | \$ | 494 | \$ | 494 | \$ | - | \$ | - |
| Total | \$ | 494 | \$ | 494 | \$ | - | \$ | - |

The Company uses a market approach to value the assets and liabilities for outstanding derivative contracts in the table above. Foreign currency forward contracts 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 June 28, 2013.

## Note K - Derivative Instruments and Hedging Activity

The Company uses derivative contracts to hedge portions of its foreign currency and precious metal exposures. The objectives 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 uses 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 dollar value of the 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.

Materion Corporation and Subsidiaries Notes to Consolidated Financial Statements (Unaudited)

The use of foreign currency derivative contracts is governed by policies approved by the Audit Committee of the Board of Directors. 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 within the confines of the policy. 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. Hedge contracts are typically layered in at different times for a specified exposure period in order to minimize the impact of rate movements.

Precious Metals. The Company maintains the majority of its precious metal production requirements on consignment in order to reduce the 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 and that price forms the basis for the price to be charged to the customer.

In certain circumstances, a customer may want to establish the price for the precious metal when the sales order is placed rather than at the time of the shipment. Setting the selling 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 a stated quantity of precious metal at a fixed price on a specified date in the future. The price in the forward contract serves as the basis for the price to be charged to the customer. By so doing, the selling and purchase prices are matched and the Company's market 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 to be paid for a number of orders over a period of time. The Company may then enter into a hedge contract, either a forward contract or a swap, to fix the price for the estimated quantity of refined metal to be purchased thereby reducing the exposure to adverse movements in the market price of the metal.

The Company will only enter into a derivative contract if there is an underlying identified exposure. Contracts are typically held until maturity. The Company does not engage in derivative trading activities and does not use derivatives for speculative purposes. The Company only uses currency hedge contracts that are denominated in the same currency as the underlying exposure and precious metal hedge contracts denominated in the same metal as the underlying exposure.

All derivatives are recorded 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 ( OCI ) until the hedged item is recognized in earnings. The ineffective portion of a derivative's fair value, if any, is recognized in earnings immediately. If a derivative is not a hedge, changes in the fair value are adjusted through income. The fair values of the outstanding derivatives are recorded on the balance sheet 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 outstanding foreign currency forward contracts had a notional value of $\$ 17.9$ million as of June 28,2013 . All of these contracts were designated and effective as cash flow hedges. The fair values of these contracts of $\$ 0.6$ million was recorded in prepaid expenses on the Consolidated Balance Sheet as of June 28, 2013. The outstanding precious metal forward contracts had a notional value of $\$ 0.1$ million and a fair value of less than $\$ 0.1$ million as of June 28, 2013.

There was no ineffectiveness associated with the contracts outstanding at June 28, 2013 and no ineffectiveness expense was recorded in the first six months of 2013 or 2012.

Changes in the fair value of outstanding cash flow hedges recorded in OCI totaled $\$ 0.6$ million at June 28, 2013 and $\$ 1.2$ million at June 29, 2012. The Company expects to relieve the entire balance in OCI as of June 28, 2013 to income on the Consolidated Statements of Income during the twelve month period beginning June 29, 2013. See Note L to the Consolidated Financial Statements for additional OCI details.

## Materion Corporation and Subsidiaries <br> Notes to Consolidated Financial Statements <br> (Unaudited)

## Note L - Accumulated Other Comprehensive Income

Changes in the components of accumulated other comprehensive income, including the amounts reclassified out, for the second quarter and first half of 2013 and 2012 are as follows:

| (Thousands) | Gains and Losses On Cash Flow Hedges |  |  |  | Pension and Post Employment Benefits |  | Foreign Currency Translation |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Foreign Currency |  | Precious Metals |  |  |  |  |  |  |  |
| Balance, March 29, 2013 | \$ | 969 | \$ | - | \$ | $(125,665)$ | \$ | 1,323 | \$ | $(123,373)$ |
| Other comprehensive income (loss) before reclassifications |  | 13 |  | 23 |  | - |  | (626) |  | (590) |
| Amounts reclassified from accumulated other comprehensive income |  | (429) |  | - |  | 1,876 |  | - |  | 1,447 |
| Net current period other comprehensive income (loss) |  | (416) |  | 23 |  | 1,876 |  | (626) |  | 857 |
| Balance, June 28, 2013 | \$ | 553 | \$ | 23 | \$ | $(123,789)$ | \$ | 697 | \$ | $(122,516)$ |
|  |  |  |  |  |  |  |  |  |  |  |
| Balance, March 30, 2012 | \$ | 1,197 | \$ | - | \$ | $(103,952)$ | \$ | 4,193 | \$ | $(98,562)$ |
| Other comprehensive income (loss) before reclassifications |  | 466 |  | (550) |  | - |  | (68) |  | (152) |
| Amounts reclassified from accumulated other comprehensive income |  | (462) |  | 393 |  | 1,284 |  | - |  | 1,215 |
| Net current period other comprehensive income (loss) |  | 4 |  | (157) |  | 1,284 |  | (68) |  | 1,063 |
| Balance, June 29, 2012 | \$ | 1,201 | \$ | (157) | \$ | $(102,668)$ | \$ | 4,125 | \$ | $(97,499)$ |
|  |  |  |  |  |  |  |  |  |  |  |
| Balance, December 31, 2012 | \$ | 253 | \$ | 97 | \$ | $(127,541)$ | \$ | 4,077 | \$ | $(123,114)$ |
| Other comprehensive income (loss) before reclassifications |  | 871 |  | 23 |  | - |  | $(3,380)$ |  | $(2,486)$ |
| Amounts reclassified from accumulated other comprehensive income |  | (571) |  | (97) |  | 3,752 |  | - |  | 3,084 |
| Net current period other comprehensive income (loss) |  | 300 |  | (74) |  | 3,752 |  | $(3,380)$ |  | 598 |
| Balance, June 28, 2013 | \$ | 553 | \$ | 23 | \$ | $(123,789)$ | \$ | 697 | \$ | $(122,516)$ |
|  |  |  |  |  |  |  |  |  |  |  |
| Balance, December 31, 2011 | \$ | 1,399 | \$ | 51 | \$ | $(105,236)$ | \$ | 4,947 | \$ | $(98,839)$ |
| Other comprehensive income (loss) before reclassifications |  | 679 |  | (550) |  | - |  | (822) |  | (693) |
| Amounts reclassified from accumulated other comprehensive income |  | (877) |  | 342 |  | 2,568 |  | - |  | 2,033 |
| Net current period other comprehensive income (loss) |  | (198) |  | (208) |  | 2,568 |  | (822) |  | 1,340 |
| Balance, June 29, 2012 | \$ | 1,201 | \$ | (157) | \$ | $(102,668)$ | \$ | 4,125 | \$ | $\underline{(97,499)}$ |

Reclassifications from accumulated other comprehensive income of gains and losses on foreign currency cash flow hedges are recorded in other-net on the Consolidated Statement of Income while the gains and losses on precious metal cash cash flow hedges are recorded in cost of sales on the Consolidated Statement of Income. See Note K to the Consolidated Financial Statements for additional details on cash flow hedges.

## Materion Corporation and Subsidiaries Notes to Consolidated Financial Statements (Unaudited)

Reclassifications from accumulated other comprehensive income for pension and post employment benefits are included in the computation of the net periodic pension and post employment benefit expense. See Note C to the Consolidated Financial Statements for additional details on pension and post employment expenses.

All amounts in the above table are presented on a pre-tax basis.

## Item 2. 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, energy, medical, automotive electronics, telecommunications infrastructure and appliance.

Second quarter 2013 sales of $\$ 306.1$ million were $6 \%$ lower than sales in the second quarter 2012. The majority of this sales decline was due to lower pass-through metal prices in the second quarter 2013.

Shipments into a number of key markets, including defense and science, automotive electronics and industrial components and commercial aerospace, improved in the second quarter 2013 over the second quarter 2012. Medical market sales softened temporarily in the second quarter, but are anticipated to grow in the third quarter 2013.

Gross margin was $\$ 46.0$ million in the second quarter 2013 compared to $\$ 53.0$ million in the second quarter 2012. The decline was due in part to lower yields, higher manufacturing overhead costs and an unfavorable change in product mix, offset in part by improved manufacturing performance at various facilities, including the output from the new beryllium plant.

Operating profit was $\$ 6.6$ million in the second quarter 2013, a decline of $47 \%$ from the second quarter 2012. Earnings per share were $\$ 0.20$ in the second quarter 2013 compared to $\$ 0.38$ in the second quarter 2012.

We increased the quarterly dividend to $\$ 0.08$ per share and paid $\$ 1.6$ million to shareholders in the second quarter 2013.
Cash flow from operations was $\$ 18.1$ million in the first half of 2013. Total debt, after increasing in the first quarter 2013, declined in the second quarter 2013, primarily due to the improved cash flow in that period. As of the end of the second quarter 2013, debt was up $\$ 1.8$ million from year-end 2012, but the debt-to-debt-plus-equity ratio was $18 \%$ compared to $19 \%$ at year-end 2012 .

During the second quarter 2013, we secured a new revolving credit facility to replace the existing facility that was scheduled to mature in 2016. The borrowing capacity is $\$ 50.0$ million higher and the borrowing spreads are lower under the new facility than they were under the prior facility. The new facility matures in 2018.

## RESULTS OF OPERATIONS

|  | Second Quarter Ended |  |  |  | First Half Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (Millions, except per share data) | June 28, <br> 2013 |  | $\begin{gathered} \text { June 29, } \\ 2012 \end{gathered}$ |  | June 28,$2013$ |  | $\begin{gathered} \text { June } 29, \\ 2012 \end{gathered}$ |  |
| Sales | \$ | 306,141 | \$ | 325,088 | \$ | 605,310 | \$ | 678,718 |
| Operating profit |  | 6,561 |  | 12,445 |  | 16,083 |  | 22,329 |
| Income before income taxes |  | 5,748 |  | 11,625 |  | 14,442 |  | 20,811 |
| Net income |  | 4,155 |  | 7,929 |  | 10,940 |  | 14,047 |
| Diluted earnings per share | \$ | 0.20 | \$ | 0.38 | \$ | 0.52 | \$ | 0.68 |

Sales of $\$ 306.1$ million in the second quarter 2013 were $\$ 19.0$ million, or $6 \%$, lower than sales of $\$ 325.1$ million in the second quarter 2012. Sales from three of our reportable segments - Performance Alloys, Beryllium and Composites and Technical Materials - grew in the second quarter 2013 over the second quarter 2012, while sales from Advanced Material Technologies declined. The prices of key raw materials, including gold, silver and copper, were lower in the second quarter 2013 than the second quarter 2012 and the lower pass-through metal prices reduced sales in the second quarter 2013 by an estimated $\$ 22.0$ million.

Sales in the first half of 2013 of $\$ 605.3$ million were $11 \%$ lower than sales of $\$ 678.7$ million in the first half of 2012. Lower pass-through metal prices accounted for an estimated $\$ 25.2$ million of the $\$ 73.4$ million decline in sales in the first half of the year.

The comparisons of sales in the second quarter and first half of 2013 to the respective periods in 2012 were also affected by changes in foreign currency translation rates, a change in the amount of customer-supplied precious metals, the discontinuation of a non-strategic product line and other items.

Domestic sales declined approximately $7 \%$ in the second quarter 2013 from the second quarter 2012 and $15 \%$ in the first half of 2013 from the first half of 2012. International sales were $3 \%$ lower in the second quarter 2013 than the second quarter 2012 as softer sales in Asia and other parts of the world were partially offset by higher sales in Europe. International sales were down approximately $1 \%$ in the first half of 2013 from the first half of 2012.

Sales order entry over the first two quarters of 2013 was approximately equal to sales.
The cost of gold, silver, platinum, palladium and copper are typically passed through to customers and therefore movements in the prices of these metals will affect sales, but may not have a commensurate impact on margins. Internally, we manage our business on a value-added sales basis. Value-added sales is a non-GAAP measure that deducts the cost of these pass-through metals from sales and removes the potential distortion caused by differences in metal values sold. Value-added sales were $\$ 152.5$ million in the second quarter 2013 , a $1 \%$ decrease from value-added sales of $\$ 154.5$ million in the second quarter 2012. Value-added sales were $\$ 303.8$ million in the first half of 2013 and $\$ 311.9$ million in the first half of 2012. A reconciliation of sales to value-added sales is provided in a later section of this Management's Discussion and Analysis.

Value-added sales to the consumer electronics market, our largest market with approximately $26 \%$ of our total value-added sales in the second quarter 2013, were $12 \%$ lower in the second quarter 2013 than the second quarter 2012 and $8 \%$ lower in the first half of 2013 than the first half of 2012. The phase-out of an application for disk drive arms was a main cause for the decline in the second quarter and first half of 2013 while lower shipments of copper-based alloys in the first quarter 2013 contributed to the fall-off in value-added sales in the first half of the year. Value-added sales of precious metals for semiconductor and other microelectronic applications declined in the second quarter 2013 after improving slightly in the first quarter 2013 from the comparable periods of 2012.

As a material supplier to this market, we sell to stamping houses and sub-assembly shops and we are several steps removed from the enduse 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, not necessarily by changes in sales of the final product or in consumer demand for that period. Technologies can change quickly in this market and applications can have short life spans.

Value-added sales to the industrial components and commercial aerospace market improved approximately $3 \%$ in the second quarter 2013 over the second quarter 2012. Value-added sales to this market in the first half of 2013, however, were $2 \%$ lower than the first half of 2012. Value-added sales of our ToughMet ${ }^{\circledR}$ products for heavy equipment and other applications, which were a key driver for the growth in this market in 2012, have been relatively flat throughout the first half of 2013. The industrial components and commercial aerospace market is our second largest market, accounting for $18 \%$ of our value-added sales in the second quarter 2013.

Value-added sales to the medical market, after growing approximately $20 \%$ in the first quarter 2013 over the first quarter 2012, softened approximately $12 \%$ in the second quarter 2013 from the second quarter 2012. The softness in the second quarter 2013 was due to lower shipments for blood glucose test strip and x-ray window applications.

Value-added sales to the defense and science market in the second quarter 2013 were approximately $21 \%$ higher than the second quarter 2012 and $30 \%$ higher than the first quarter 2013. Value-added sales to this market were $5 \%$ lower in the first half of 2013 than the first half of 2012 as a result of the softer first quarter 2013. The improvement in the second quarter 2013 was largely due to increased shipments of beryllium products. Shipments of optics throughout the first half of 2013 were lower than the first half of 2012 primarily as a result of government spending cut-backs.

Energy market value-added sales grew $3 \%$ in the second quarter 2013 over the second quarter 2012. Value-added sales to this market were $8 \%$ lower in the first half of 2013 than the first half of 2012 . The growth in the second quarter 2013 was partially due to architectural glass applications. The value-added sales to the oil and gas sector, which were weak in the first quarter 2013 due to market conditions, improved in the second quarter 2013 over the first quarter 2013.

Automotive electronics market value-added sales grew approximately $21 \%$ in the second quarter 2013 over the second quarter 2012 after growing $13 \%$ in the first quarter 2013 over the first quarter 2012. The growth was due to improved market conditions and new application development. Value-added sales to the automotive electronics market were approximately $12 \%$ of our total value-added sales in the second quarter 2013.

Gross margin was $\$ 46.0$ million, or $15 \%$ of sales, in the second quarter 2013 compared to $\$ 53.0$ million, or $16 \%$ of sales, in the second quarter 2012. Gross margin in the first half of 2013 was $\$ 94.3$ million, or $16 \%$ of sales, versus $\$ 102.4$ million, or $15 \%$ of sales, in the first half of 2012. Gross margin as a percent of value-added sales was $30 \%$ in the second quarter 2013 compared to $34 \%$ in the second quarter 2012 . Gross margin was $31 \%$ of value-added sales in the first half of 2013 and $33 \%$ of value-added sales in the first half of 2012.

The decline in the gross margin in the second quarter 2013 from the second quarter 2012 was largely due to lower manufacturing yields in our precious metal operations, slightly higher manufacturing overhead costs, an unfavorable change in product mix and an unfavorable movement in currency translation rates offset in part by higher production volumes and improved efficiencies at various operations.

The volume impact on gross margins in the first half of 2013 was unfavorable as were the change in product mix and the movement in currency translation rates. Manufacturing yields within our precious metal operations were also lower in the first half of 2013 than the first half of 2012. We recorded a physical inventory loss at our Albuquerque, New Mexico facility of $\$ 2.3$ million in the first quarter 2013. The impact of these items was partially offset by manufacturing improvements at several facilities and lower manufacturing overhead costs.

Gross margin in the second quarter 2013 and first half of 2013 benefitted from the improved manufacturing performance of the new beryllium plant in Elmore, Ohio. The plant had its highest output to date in the second quarter 2013 and output levels have increased for four consecutive quarters.

Selling, general and administrative (SG\&A) expenses totaled $\$ 33.3$ million in the second quarter 2013 compared to $\$ 33.5$ million in the second quarter 2012. SG\&A expenses were $\$ 66.1$ million in the first half of 2013 , unchanged from the first half of 2012 . SG\&A expenses were $11 \%$ of sales in the first half of 2013 and $10 \%$ of sales in the first half of 2012 . SG\&A expenses were $21 \%$ of value-added sales in the first half of 2013 and 2012.

Facility consolidation and closure costs under the program initiated in 2012 totaled $\$ 0.3$ million in the second quarter 2013 and $\$ 0.7$ million in the first half of 2013. One small facility was closed in the fourth quarter 2012, while two others are scheduled to be closed with portions of the businesses relocated to other facilities. A fourth operation will be consolidated into a smaller building during 2013. The costs in the first half of 2013 were primarily for employee retention and severance and other items associated with relocating the operations. Facility consolidation and closure costs totaled $\$ 0.6$ million in the first half of 2012 , all of which was recorded in the second quarter of that year.

The expense for the domestic defined benefit pension plan was $\$ 0.9$ million higher in the second quarter 2013 than the second quarter 2012 and $\$ 1.8$ million higher in the first half of 2013 than the first half of 2012. The increase was caused by a reduction in the discount rate used to value the plan liability, changes in mortality assumptions and other factors. The increased expense was recorded mainly in SG\&A as well as cost of sales.

The incentive compensation expense under cash-based plans was $\$ 0.5$ million higher in the second quarter 2013 than the second quarter 2012 and $\$ 1.6$ million higher in the first half of 2013 than the first half of 2012. The increase was caused by differences in the projected level of annual profit relative to the plans' targets in each year and other factors.

Stock-based compensation expense was $\$ 1.5$ million in the second quarter 2013 and $\$ 1.4$ million in the second quarter 2012. Stock-based compensation expense in the first half of 2013 was $\$ 2.7$ million compared to $\$ 2.8$ million in the first half of 2012. Movements in stock-based compensation between periods may be caused by differences in the number of grants, the fair value of the grants and other items.

Offsetting a portion of the above cost increases were the savings from the plant consolidation program, reductions in expenses in China in response to the current business levels and other cost control measures.

Movements in the exchange rates between periods resulted in a reduction in the translated value of various foreign currency denominated expenses of $\$ 0.3$ million in the second quarter 2013 and $\$ 0.5$ million in the first half of 2013 relative to the respective periods of 2012.

Research and development (R\&D) expenses were $\$ 3.2$ million in the second quarter 2013 and the second quarter 2012. R\&D expenses of $\$ 6.7$ million in the first half of 2013 increased $7 \%$ over the $\$ 6.3$ million expense in the first half of 2012 . The increase was due to various projects and higher activity levels across portions of our business. R\&D expense was approximately $1 \%$ of sales in the first half of 2013 and 2012.

Other-net expense totaled $\$ 3.0$ million in the second quarter 2013 compared to $\$ 3.9$ million in the second quarter 2012. Other-net expense was $\$ 5.4$ million in the first half of 2013 and $\$ 7.7$ million in the first half of 2012. See Note G to the Consolidated Financial Statements for details of the major components within other-net expense.

The metal consignment fee of $\$ 1.7$ million in the second quarter 2013 was $\$ 0.9$ million lower than the fee of $\$ 2.6$ million in the second quarter 2012 while the fee for the first six months of 2013 of $\$ 3.5$ million was $\$ 1.4$ million lower than the comparable period of 2012 . The lower fee resulted from a reduction in the quantity of metal on hand and lower metal prices.

The net foreign currency exchange and translation gain was $\$ 0.2$ million higher in the second quarter 2013 and $\$ 0.7$ million higher in the first half of 2013 than the respective periods of 2012 as a result of the movement in the value of the U.S. dollar versus certain other currencies and their impact on transactions and balances and in relation to the strike prices in currency hedge contracts.

Other-net expense also includes amortization expense, bad debt expense, gains and losses on the disposal of fixed assets, cash discounts and other items.

Operating profit of $\$ 6.6$ million in the second quarter 2013 was $\$ 5.8$ million lower than the operating profit of $\$ 12.4$ million in the second quarter 2012. The decline in operating profit was primarily due to lower value-added sales, reduced manufacturing yields and higher manufacturing overhead costs off set in part by the lower metal consignment fee and other items. Operating profit of $\$ 16.1 \mathrm{million}$ ( $3 \%$ of sales) in the first half of 2013 was $28 \%$ lower than the operating profit of $\$ 22.3$ million ( $3 \%$ of sales) in the first half of 2012. Operating profit was $5 \%$ of value-added sales in the first half of 2013 and $7 \%$ of value-added sales in the first half of 2012.

Interest expense - net was $\$ 0.8$ million in the second quarter 2013, unchanged from the second quarter 2012. For the first half of 2013, interest expense-net was $\$ 1.6$ million compared to $\$ 1.5$ million in the first half of 2012 . Average debt levels and the effective borrowing rates were fairly similar over the first half of 2013 and the first half of 2012.

Income before income taxes and income tax expense for the second quarter and first half of 2013 and 2012 were as follows:

|  | Second Quarter Ended |  | First Half Ended |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| (Dollars in millions) | June 28, | June 29, | June 28, | June 29, |  |
| Income before income taxes | 2013 | 2012 | 2013 | 2012 |  |
| Income tax expense | $\$$ | 5.7 | $\$$ | 11.6 | $\$$ |
| Effective tax rate | 1.6 | 3.7 | $\$$ | 20.8 |  |

The effects of percentage depletion, the production deduction, executive compensation, foreign source income and credits, state and local taxes and other items were major factors for the difference between the effective and statutory rates in the second quarter and first half of 2013 and 2012.

The tax expense for the first half of 2013 included a net discrete tax benefit of $\$ 0.6$ million recorded in the first quarter 2013 that primarily represented the estimated full value of the research and experimentation credit for 2012. This benefit was not included in our tax rate for 2012 as accounting regulations require us to record tax expense based upon the laws in effect as of the end of the year and the U.S. Congress did not extend the research and experimentation credit for 2012 until January 2013. The effective tax rate in the second quarter and first half of 2013 also included a proportionate share of the estimated research and experimentation credit for 2013.

The tax expense in the first half of 2012 included $\$ 0.1$ million for discrete items in that period.
Net income was $\$ 4.2$ million (or $\$ 0.20$ per share, diluted) in the second quarter 2013 versus to $\$ 7.9$ million (or $\$ 0.38$ per share, diluted) in the second quarter 2012. Net income was $\$ 10.9$ million (or $\$ 0.52$ per share, diluted) in the first half of 2013 and $\$ 14.0$ million (or $\$ 0.68$ per share, diluted) in the first half of 2012.

## Segment Results

Results by segment are depicted in Note E to the Consolidated Financial Statements. The All Other column in the segment reporting 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.

The operating loss within All Other in the second quarter 2013 was $\$ 0.4$ million lower than the second quarter 2012 and $\$ 1.5$ million lower in the first half of 2013 than the first half of 2012. Incurred costs at corporate were higher in the second quarter and first half of 2013, partially as a result of legal and other administrative costs associated with the investigation into the potential inventory theft in 2012 , but these costs were more than offset by an increase in char ges out of other costs to the business units.

## Advanced Material Technologies



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 $\$ 196.0$ million in the second quarter 2013, a decline of $\$ 25.9$ million, or $12 \%$, from sales of $\$ 221.9$ million in the second quarter 2012. Sales in the first half of 2013 of $\$ 389.9$ million were $\$ 73.8$ million, or $16 \%$, lower than sales of $\$ 463.7$ million in the first half of 2012 . Lower pass-through metal prices accounted for an estimated $\$ 20.7$ million of the decline in sales in the second quarter 2013 from the second quarter 2012 and $\$ 24.3$ million of the decline in sales in the first half of 2013 from the first half of 2012.

Value-added sales of $\$ 65.2$ million in the second quarter 2013 were $11 \%$ lower than value-added sales of $\$ 73.5$ million in the second quarter 2012. Value-added sales in the first half of 2013 were $\$ 133.9$ million, a $6 \%$ decline from the value-added sales of $\$ 143.0$ million in the first half of 2012.

Consumer electronics is Advanced Material Technologies' largest market, accounting for approximately $36 \%$ of the segment's valueadded sales. Value-added sales to this market in the second quarter 2013 were $15 \%$ lower than the year ago period and $7 \%$ lower in the first half of 2013 than the first half of 2012. Value-added sales of precious metals for LED applications have declined as manufacturers are redesigning their products to use lower quantities of precious metals in order to reduce costs and the ultimate price to the end-use consumers. Offsetting a portion of this decline is the growth in value-added sales of phosphors for LED applications in the second quarter and first half of 2013 over the respective periods in 2012 due to the improved performance that these materials provide. Value-added sales for wireless applications improved in the second quarter 2013 over the second quarter 2012 while value-added sales for data storage applications softened.

Value-added sales to the medical market, primarily precious metal coated precision polymer films, declined approximately $10 \%$ in the second quarter 2013 from the second quarter 2012. Value-added sales to the medical market had grown in the first quarter 2013 over the first quarter 2012 and value-added sales in the first half of 2013 were $6 \%$ higher than value-added sales in the first half of 2012. Manufacturing issues at an outside vendor caused delays in shipments to a key customer in the second quarter 2013. Those issues have been resolved and shipments were resumed late in the quarter. Based upon order entry patterns and other market information, we anticipate that shipments to the medical market will be strong in the third quarter 2013. The medical market is this segment's second largest market, accounting for approximately $16 \%$ of value-added sales in the second quarter 2013.

Value-added sales from refining and shield kit cleaning operations declined in the second quarter 2013 from the second quarter 2012 after growing the first quarter of 2013 over the first quarter of 2012 . The level of value-added sales from these
operations is partially a function of the ounces in the supply chain available to be reclaimed and the purity levels of those ounces. We have expanded our domestic operations to provide additional capacity and improved processing times in order to capture additional market share. The closure of the shield kit cleaning operations in the Czech Republic in the fourth quarter 2012 had a slightly unfavorable impact on our value-added sales in the first half of 2013.

Defense and science value-added sales declined approximately $6 \%$ in the second quarter 2013 and $12 \%$ in the first half of 2013 from the comparable periods in 2012. The decline was largely due to lower shipments of optics as a result of government spending cut-backs. A number of defense applications for optics are funded and remain active. However, the order entry rate has been soft and orders could be more severely impacted by potential government spending cuts with the beginning of the new federal government fiscal year in October.

The value-added sales to the energy market, after softening in the first quarter 2013 from the first quarter 2012, grew $12 \%$ in the second quarter 2013 over the second quarter 2012. The growth in the second quarter 2013 was largely due to shipments of silver-containing products for architectural glass applications as market conditions for these materials have improved. The value-added for solar applications also improved slightly in the second quarter 2013, but the overall shipment levels and market conditions remained weak.

We discontinued sales of silver investment bars in the third quarter 2012, as this non-strategic product line generated extremely low margins that could not justify the associated level of working capital and overhead. This action accounted for a reduction in sales of $\$ 4.1$ million in the second quarter 2013 and $\$ 8.5$ million in the first half of 2013 from the comparable periods in 2012. The value-added impact was only $\$ 0.1$ million in the second quarter 2013 and $\$ 0.2$ million in the first half of 2013.

The plant consolidation program has had minimal impact on our sales and value-added sales in the first half of 2013. The manufacturing of microelectronic packages was in transition, moving from our small facility in Massachusetts to Singapore (with the relocation scheduled to be completed in the third quarter 2013), but sales of packages from the Massachusetts facility were $5 \%$ higher in the first half of 2013 than the first half of 2012.

Gross margin generated by Advanced Material Technologies was $\$ 19.2$ million, or $10 \%$ of sales, in the second quarter 2013 versus $\$ 29.7$ million, or $13 \%$ of sales, in the second quarter 2012. For the first half of 2013 , gross margin was $\$ 44.2$ million, or $11 \%$ of sales, compared to $\$ 55.8$ million, or $12 \%$ of sales, in the first half or 2012 . Gross margin was $30 \%$ of value-added sales in the second quarter 2013 and $33 \%$ of value-added sales in the first half of 2013. Gross margin was $40 \%$ of value-added sales in the second quarter 2012 and $39 \%$ of value-added sales in the first half of 2012.

The gross margin was lower in the second quarter 2013 and first half of 2013 partially as a result of the margin impact from the lower value-added sales in both periods. Process improvements and yield gains provided a benefit to the gross margin the first quarter of 2013, but significantly lower manufacturing yields at the Buffalo, New York facility, largely in the precious metal refinery, was a main cause for the margin decline in the second quarter 2013 and first half of 2013. The change in product mix was unfavorable in the second quarter 2013 and first half of 2013. Manufacturing overhead costs in the second quarter 2013 were unchanged from the second quarter 2012 and $4 \%$ lower in the first half of 2013 than the first half of 2012. A physical inventory loss at the Albuquerque facility of $\$ 2.3$ million in the first quarter 2013 contributed to the margin decline in the first half of 2013.

Total SG\&A, R\&D and other-net expenses were $\$ 21.5$ million ( $11 \%$ of sales) in the second quarter 2013 compared to $\$ 22.2$ million ( $10 \%$ of sales) in the second quarter 2012. These expenses totaled $\$ 43.1$ million ( $11 \%$ of sales) in the first half of 2013 and $\$ 43.0$ million ( $9 \%$ of sales) in the first half of 2012. Expenses were $31 \%$ of value-added sales in the first half of 2013 and $30 \%$ of value-added sales in the first half of 2012 .

The metal consignment fee was lower in the second quarter and first half of 2013 compared to the same periods in 2012 due to a combination of lower metal prices and reduced quantities of metal on hand. SG\&A expenses declined throughout the first half of 2013 due, in part, to savings resulting from the facility closure activities and other cost control measures. Costs were reduced at the Shanghai facility in the first half of 2013 in response to the current business levels. The aforementioned costs to implement the facility consolidations flowed through this segment's expenses. R\&D expenses were higher in the second quarter and first half of 2013 due to increased activity. Corporate charges and incentive compensation expenses also were higher in the second quarter and first half of 2013 than the comparable periods in 2012.

Advanced Material Technologies generated an operating loss of $\$ 2.3$ million in the second quarter 2013 compared to an operating profit of $\$ 7.5$ million in the second quarter 2012. Operating profit was $\$ 1.1$ million (less than $1 \%$ of sales) in the first half of 2013 compared to $\$ 12.8$ million ( $3 \%$ of sales) in the first half of 2012 . Operating profit was $1 \%$ of value-added sales in the first half of 2013 and $9 \%$ of value-added sales in the first half of 2012.

## Performance Alloys



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;

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, typically twice a year.

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 of $\$ 74.3$ million in the second quarter 2013 were $3 \%$ higher than sales of $\$ 72.5$ million in the second quarter 2012, while sales of $\$ 148.9$ million in the first half of 2013 were $1 \%$ higher than the first half of 2012.

Total volumes shipped in the second quarter 2013 were $6 \%$ higher than the second quarter 2012. Shipments of strip products accounted for this growth as bulk product shipments were unchanged. Volumes shipped were $2 \%$ higher in the first half of 2013 than the first half of 2012 as the growth in strip product shipments more than offset a decline in shipments of bulk products. As previously noted, shipments of ToughMet ${ }^{\circledR}$ products, our non-beryllium containing alloy manufactured in strip and bulk forms, were relatively flat in the second quarter and first half of 2013 compared to the respective periods of 2012.

There were no sales of beryllium hydroxide in the second quarter 2013 or 2012 while beryllium hydroxide sales in the first half of 2013 were $\$ 0.7$ million higher than in the first half of 2012.

Copper pass-through prices were lower in the second quarter 2013 than the second quarter 2012 after being higher in the first quarter 2013 than the first quarter 2012. The U.S. dollar strengthened against the currencies in which we sell during the first half of 2013. The impact of the stronger dollar on the translated value of foreign currency denominated sales coupled with the impact of the changes in copper prices reduced Performance Alloys' sales by an estimated $\$ 3.2$ million in the second quarter 2013 and $\$ 3.9$ million in the first half of 2013 from the respective periods in 2012.

The sales order entry rate softened slightly in the second quarter 2013 and for the first half of 2013 , order entry was approximately $2 \%$ lower than sales.

Performance Alloys' value-added sales totaled $\$ 58.8$ million in the second quarter 2013 and $\$ 56.7$ million in the second quarter 2012. Value-added of sales in the first half of 2013 of $\$ 118.1$ million were $2 \%$ higher than value-added sales of $\$ 116.1$ million in the first half of 2012.

Value-added sales to the automotive electronics market, primarily strip products, grew approximately $37 \%$ in the second quarter 2013 and $32 \%$ in the first half of 2013 over the respective periods of 2012 as a result of improved market conditions and the development of new applications.

Consumer electronics value-added sales in the second quarter 2013 were flat with the second quarter 2012, but $8 \%$ higher than the first quarter 2013. Value-added sales into the consumer electronics market were down $4 \%$ in the first half of 2013 from the first half of 2012. Due to changes in technologies, downstream inventory positions and other factors, our shipments into the consumer electronics market in a given period are not necessarily driven by sales of the final product or by consumer demand in that period.

Value-added sales from the industrial components and commercial aerospace market, Performance Alloys' largest market, were up $4 \%$ in the second quarter 2013 over the second quarter 2012 and $2 \%$ in the first half of 2013 over the first half of 2012. The commercial aerospace sector accounted for the growth in the second quarter 2013.

The value-added sales into the energy market declined $10 \%$ in the second quarter 2013 from a strong second quarter 2012 and $17 \%$ in the first half of 2013 from the first half of 2012. This decline was largely due to a reduction in the oil and gas rig count. Value-added sales grew $11 \%$ in the second quarter 2013 over the first quarter 2013 as market conditions have recently improved.

The value-added sales to various smaller markets, including defense and science, medical and telecommunications infrastructure, improved in the second quarter 2013 while the value-added sales to the appliance market remained weak.

The gross margin on Performance Alloys' sales was $\$ 17.8$ million, or $24 \%$ of sales, in the second quarter 2013 and $\$ 17.9$ million, or $25 \%$ of sales, in the second quarter 2012. Gross margin was $\$ 35.1$ million, or $24 \%$ of sales, in the first half of 2013 versus $\$ 34.9$ million, or $24 \%$ of sales, in the first half of 2012. Gross margin was $30 \%$ of value-added sales in the second quarter 2013, down from $32 \%$ of value-added sales in the second quarter 2012, and $30 \%$ of value-added sales in the first half of 2013, unchanged from the same period in 2012.

The slight decline in gross margin dollars in the second quarter 2013 from the second quarter 2012 resulted from the additional margin generated by the increased value-added sales, the benefits from improved shop floor performance and a slightly favorable change in product mix being more than offset by the impact of currency translation rates, lower production volumes as inventories were pulled down in the second quarter 2013, an increase in manufacture overhead costs and other factors.

The higher gross margin dollars generated in the first half of 2013 from the first half of 2012 resulted in part from the increased sales of hydroxide, higher shipments of strip and bulk products and the improved shop floor performance. Price increases also provided a minor benefit to gross margin in the first half of 2013. These benefits were partially offset by the unfavorable movement in translation rates, differences in production volumes, higher overhead costs and other factors.

Total SG\&A, R\&D and other-net expenses were $\$ 10.9$ million ( $15 \%$ of sales) in the second quarter 2013 versus $\$ 11.2$ million ( $15 \%$ of sales) in the second quarter 2012. These expenses totaled $\$ 21.0$ million ( $14 \%$ of sales) in the first half of 2013 compared to $\$ 22.0 \mathrm{million}$ ( $15 \%$ of sales) in the first half of 2012. These expenses were $18 \%$ of value-added sales in the first half of 2013 and $19 \%$ of value-added sales in the first half of 2012.

The primary causes for the lower expenses in the second quarter and first half of 2013 included differences in foreign currency exchange gains (as a result of movements in the exchange rates and matured hedge contracts and that offset part of the negative impact the exchange rates had on gross margins) and the currency rate impact on the translation of foreign currency expenses into U.S. dollars. The incentive compensation expense was also lower in the second quarter 2013 and first half of 2013 than the comparable periods of 2012. These benefits were offset in part by increases in $\mathrm{R} \& D$ expenses, due to higher activity levels, and corporate charges in the second quarter and first half of 2013.

Performance Alloys generated an operating profit of $\$ 6.9$ million in the second quarter 2013 compared to $\$ 6.7$ million in the second quarter 2012. Operating profit was $\$ 14.1$ million in the first half of 2013, an improvement of $\$ 1.2$ million over the operating profit of $\$ 12.9$ million in the first half of 2012. Operating profit was $9 \%$ of sales in the first half 2013 and the first half of 2012. Operating profit was also $12 \%$ of value-added sales in the first half of 2013 and $11 \%$ of sales in the first half of 2012.

## Beryllium and Composites

| (Millions) | Second Quarter Ended |  |  |  | First Half Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | June 28, <br> 2013 |  | June 29, <br> 2012 |  | June 28, <br> 2013 |  | June 29, <br> 2012 |  |
| Sales | \$ | 16.2 | \$ | 12.6 | \$ | 28.5 | \$ | 28.7 |
| Operating (loss) profit |  | 0.8 |  | (2.0) |  | (0.5) |  | (3.3) |

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 Aerospace Metal Composites Limited (AMC) in the first quarter 2012 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. Manufacturing facilities for Beryllium and Composites are located in Ohio, California, Arizona and England.

Beryllium and Composites' sales of $\$ 16.2$ million in the second quarter 2013 were $\$ 3.6$ million, or $29 \%$, higher than sales of $\$ 12.6$ million in the second quarter 2012. Sales of $\$ 28.5$ million in the first half of 2013 were $1 \%$ lower than sales of $\$ 28.7$ million in the first half of 2012. Beryllium and Composites does not directly pass through changes in the costs of its materials sold, so under our definition, sales and valueadded sales for this segment are the same.

Sales to the defense and science market improved $51 \%$ in the second quarter 2013 from the second quarter 2012 and accounted for the majority of the growth in sales from Beryllium and Composites. Defense and science sales in the second quarter 2013 also improved $61 \%$ over the first quarter 2013. Sales to this market were down $1 \%$ in the first half of 2013 from the first half of 2012. A portion of the increased sales in the second quarter 2013 was due to orders that were initially scheduled to be shipped in the first quarter 2013 but did not ship until the second quarter due to manufacturing delays. These manufacturing delays were unrelated to the new beryllium plant. While the government budgetary spending reductions and the sequestration has impacted the order entry rate, our quarterly sales during 2013 are more dependent upon the timing of government programs. A portion of the sales improvement in this market in the second quarter was in science applications, which is a growth platform for Beryllium and Composites, as opposed to traditional defense related applications.

Industrial components and commercial aerospace sales improved $24 \%$ in the second quarter 2013 over a weak second quarter 2012 and $12 \%$ in the first half of 2013 over the first half of 2012.

Sales to the medical market, primarily for x-ray window applications, were softer in the second quarter and first half of 2013 than the comparable periods of 2012 while sales to the telecommunications infrastructure market, mainly beryllia ceramic products, grew slightly in the first half of 2013 over the first half of 2012.

The order entry level softened in the second quarter 2013. For the first half of 2013 , order entry was approximately $4 \%$ lower than sales.
The gross margin on Beryllium and Composites' sales was $\$ 4.5$ million ( $28 \%$ of sales) in the second quarter 2013 and $\$ 1.7$ million ( $14 \%$ of sales) in the second quarter 2012. Gross margin in the first half of 2013 was $\$ 7.3$ million ( $26 \%$ of sales) compared to $\$ 3.9$ million ( $14 \%$ of sales) in the first half of 2012.

The $\$ 2.8$ million increase in gross margin in the second quarter 2013 over the second quarter 2012 resulted primarily from the higher sales volume, increased production volumes and the improved performance of the new beryllium plant. Gross margin grew in the first half of 2013 over the first half of 2012 due to the performance of the new plant, improved scrap utilization, higher production volumes and a favorable change in product mix.

While the performance of the new plant continued to improve, additional beryllium material was purchased during the second quarter 2013 in order to help satisfy the demand requirements in the second half of 2013.

SG\&A, R\&D and other-net expenses for Beryllium and Composites totaled $\$ 3.7$ million in the second quarter 2013, unchanged from the second quarter 2012. These expenses were $\$ 7.7$ million in the first half of 2013 compared to $\$ 7.2$ million in the first half of 2012. In the second quarter 2013, increases in selling expenses, corporate charges and other items were offset by reductions in R\&D and incentive compensation expenses. The increased expenses in the first half of 2013 over the first half
of 2012 were largely due to increased R\&D activity on various projects in the first quarter of 2013 , higher corporate charges and other expenses, including amortization expenses at AMC.

Beryllium and Composites generated an operating profit of $\$ 0.8$ million in the second quarter 2013 compared to an operating loss of $\$ 2.0$ million in the second quarter 2012. In the first half of 2013, Beryllium and Composites lost $\$ 0.5$ million compared to an operating loss of $\$ 3.3$ million in the first half of 2012.

## Technical Materials

|  | Second Quarter Ended |  |  |  | First Half Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (Millions) | June 28, <br> 2013 |  | June 29, <br> 2012 |  | June 28, <br> 2013 |  | June 29, <br> 2012 |  |
| Sales | \$ | 19.6 | \$ | 18.1 | \$ | 38.0 | \$ | 38.5 |
| Operating profit |  | 2.4 |  | 2.0 |  | 3.8 |  | 3.9 |

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.

Sales from Technical Materials of $\$ 19.6$ million in the second quarter 2013 grew $8 \%$ from sales of $\$ 18.1$ million in the second quarter 2012. Sales in the first half of 2013 of $\$ 38.0$ million were $1 \%$ lower than sales of $\$ 38.5$ million in the first half of 2012 . The increased sales in the second quarter 2013 were across the majority of product lines, with inlay and milling products showing the largest growth. Order entry levels remained inconsistent throughout the first half of 2013. Order entry was approximately equal to sales in the second quarter 2013 and $5 \%$ higher than sales in the first half of 2013.

Value-added sales of $\$ 12.3$ million in the second quarter 2013 were approximately $5 \%$ higher than value-added sales in the second quarter 2012 while value-added sales of $\$ 23.3$ million in the first half of 2013 were approximately $3 \%$ lower than the first half of 2012.

Value-added sales to the automotive electronics market improved in the second quarter and first half of 2013 over the comparable periods in 2012. The improvement was in both the domestic and international markets. Value-added sales to the energy market also improved in the second quarter and first half of 2013 from the respective periods in 2012 due to fuel cell and other new product development programs. Valueadded sales to the consumer electronics market softened in the second quarter and first half of 2013 largely due to changes in technologies and the phase-out of the existing disk drive application .

Technical Materials' gross margin was $\$ 4.6$ million, or $24 \%$ of sales, in the second quarter 2013 and $\$ 4.2$ million, or $23 \%$ of sales, in the second quarter 2012. Gross margin for this segment was $\$ 8.2$ million in the first half of 2013 and $\$ 8.6$ million in the first half of 2012 . Gross margin was $22 \%$ of sales in both the first half of 2013 and 2012. Gross margin improved to $38 \%$ of value-added sales in the second quarter 2013 from $36 \%$ of value-added sales in the second quarter 2012. In the first half of 2013 , gross margin was $35 \%$ of value-added sales compared to $36 \%$ of value-added sales in the first half of 2012.

The margin growth in the second quarter 2013 was due to a combination of the higher sales volumes and improved yields on inlay products resulting from lean sigma efforts. These benefits were partially offset by higher manufacturing overhead costs, including exempt salary and fringe benefit costs. The lower gross margin in the first half of 2013 resulted from the lower volumes and higher manufacturing overhead costs offset in part by improved manufacturing efficiencies.

SG\&A, R\&D and other-net expenses totaled $\$ 2.2$ million in the second quarter 2013, unchanged from the second quarter 2012. Theses expenses totaled $\$ 4.4$ million in the first half of 2013 compared to $\$ 4.7$ million in the first half of 2012 and were $12 \%$ of sales in both periods. Expenses were $19 \%$ of value-added sales in the first half of 2013 and $20 \%$ of value-added sales in the first half of 2012. The lower expense dollars in the first half of 2013 resulted from a reduction in manpower and other administrative costs as well as a reduction in various selling expenses in the first quarter 2013.

Operating profit generated by Technical Materials was $\$ 2.4$ million in the second quarter 2013 compared to $\$ 2.0$ million in the second quarter 2012. Operating profit of $\$ 3.8$ million in the first half of 2013 was slightly lower than the operating profit of $\$ 3.9$ million in first half of 2012. Operating profit was $10 \%$ of sales and $16 \%$ of value-added sales in the first half of 2013 and the first half of 2012.

## Value-Added Sales - Reconciliation of Non-GAAP Measure

A reconciliation of sales to value-added sales, a non-GAAP measure, for each reportable segment and for the Company in total for the second quarter and first half of 2013 and 2012 is as follows:

| (Millions) | Second Quarter Ended |  |  |  | First Half Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { June } 28, \\ 2013 \end{gathered}$ |  | June 29, <br> 2012 |  | June 28, <br> 2013 |  | $\begin{gathered} \hline \text { June } 29, \\ 2012 \\ \hline \end{gathered}$ |  |
| Sales |  |  |  |  |  |  |  |  |
| Advanced Material Technologies | \$ | 196.0 | \$ | 221.9 | \$ | 389.9 | \$ | 463.7 |
| Performance Alloys |  | 74.3 |  | 72.5 |  | 148.9 |  | 147.7 |
| Beryllium and Composites |  | 16.2 |  | 12.6 |  | 28.5 |  | 28.7 |
| Technical Materials |  | 19.6 |  | 18.1 |  | 38.0 |  | 38.5 |
| All Other |  | - |  | - |  | - |  | 0.1 |
| Total | \$ | 306.1 | \$ | 325.1 | \$ | 605.3 | \$ | 678.7 |
|  |  |  |  |  |  |  |  |  |
| Less: Pass-through Metal Cost |  |  |  |  |  |  |  |  |
| Advanced Material Technologies | \$ | 130.8 | \$ | 148.4 | \$ | 256.0 | \$ | 320.7 |
| Performance Alloys |  | 15.5 |  | 15.8 |  | 30.8 |  | 31.6 |
| Beryllium and Composites |  | - |  | - |  | - |  | - |
| Technical Materials |  | 7.3 |  | 6.4 |  | 14.7 |  | 14.5 |
| All Other |  | - |  | - |  | - |  | - |
| Total | \$ | 153.6 | \$ | 170.6 | \$ | 301.5 | \$ | 366.8 |
|  |  |  |  |  |  |  |  |  |
| Value-added Sales |  |  |  |  |  |  |  |  |
| Advanced Material Technologies | \$ | 65.2 | \$ | 73.5 | \$ | 133.9 | \$ | 143.0 |
| Performance Alloys |  | 58.8 |  | 56.7 |  | 118.1 |  | 116.1 |
| Beryllium and Composites |  | 16.2 |  | 12.6 |  | 28.5 |  | 28.7 |
| Technical Materials |  | 12.3 |  | 11.7 |  | 23.3 |  | 24.0 |
| All Other |  | - |  | - |  | - |  | 0.1 |
| Total | \$ | 152.5 | \$ | 154.5 | \$ | 303.8 | \$ | 311.9 |

The cost of gold, silver, platinum, palladium and copper can be quite volatile. Our pricing policy is to directly pass the cost of these metals on to the customer in order to mitigate the impact of metal price volatility on our results from operations. Trends and comparisons of sales are affected by movements in the market prices of these metals, but changes in sales may not directly impact our profitability.

Internally, management reviews sales on a value-added basis. Value-added sales is a non-GAAP measure that deducts the value of the pass-through metals sold from sales. Value-added sales allows management to assess the impact of differences in sales between periods, segments or markets and analyze the resulting margins and profitability without the distortion of the movements in the pass-through metal values. The dollar amount of gross margin and operating profit is not affected by the value-added sales calculation. We sell other metals and materials that are not considered direct pass-throughs and their costs are not deducted from sales when calculating value-added sales.

Our sales are also affected by changes in the use of customer-supplied metal. When we manufacture a precious metal product, the customer may purchase metal from us or may elect to provide its own metal, in which case we process the metal on a toll basis and the metal value does not flow through sales or cost of sales. In either case, we generally earn our margin based upon our fabrication efforts. The relationship of that margin to sales can change depending upon whether the product was made from our metal or the customer's. The use of value-added sales removes the potential distortion in the comparison of sales caused by changes in the level of customer-supplied metal.

By presenting information on sales and value-added sales, it is our intention to allow users of our financial statements to review our sales with and without the impact of the pass-through metals.

## LEGAL

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.

One of our subsidiaries, Materion Brush Inc., is a defendant from time to time in legal proceedings where the plaintiffs allege they have contracted chronic beryllium disease (CBD) or other ailments as a result of exposure to beryllium. One CBD case, which was filed in 2012 , was outstanding as of the second quarter of 2013. There were no CBD settlement payments made in the first half of 2013.

## FINANCIAL POSITION

Net cash provided from operations was $\$ 18.1$ million in the first half of 2013, as net income, the effects of depreciation, amortization and stock compensation expense and other items offset the decrease in accounts payable and accrued items (which was partially due to the payment of the 2012 incentive compensation to employees during the first quarter 2013).

Cash was $\$ 15.7$ million as of the end of the second quarter 2013 compared to $\$ 16.1$ million as of year-end 2012.

Accounts receivable of $\$ 129.8$ million as of the end of the second quarter 2013 were $\$ 3.3$ million, or $3 \%$, higher than the receivable balance of $\$ 126.5$ million as of year-end 2012. The increase was primarily due to higher sales in the second quarter 2013 than the fourth quarter 2012. The days sales outstanding (DSO), a measure of the average collection time, slowed from 37 days as of year-end 2012 to 38 days as of the end of the second quarter 2013 and contributed to the increase in the receivable balance. While this DSO level is within our historical operating range, we continue to aggressively monitor and manage our credit exposures and the collectability of our receivables. The bad debt expense in the first half of 2013 was immaterial.

Inventories totaled $\$ 200.8$ million as of the end of the second quarter 2013, a decrease of $\$ 5.3$ million since year-end 2012. The inventory turnover ratio, a measure of how effectively inventory is utilized, improved slightly during the second quarter 2013 from year-end 2012.

The inventory decline was due to a reduction in precious metals within the refine processing stream offset in part by an increase in beryllium metal inventories resulting from the purchase of beryllium feedstock during the second quarter 2013 that will be used to augment production from the new beryllium plant in order to meet the increased sales demand in the second half of the year.

We use the last-in, first-out (LIFO) method for valuing a large portion of our domestic inventories. By so doing, the most recent cost of various raw materials, including gold, copper and nickel, is charged to cost of sales in the current period. The older, and often lower, costs are used to value the inventory on hand. Therefore, current changes in the cost of raw materials subject to the LIFO valuation method have only a minimal impact on changes in the inventory carrying value.

In the second quarter 2013, gold prices declined from the year-end 2012 levels. These lower prices were charged to cost of sales, matching the pass-through prices charged to the customers, and did not have a significant impact on the inventory value.

Capital expenditures for the first half of 2013 and 2012 are summarized as follows:

| (Millions) | First Half Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | June 28, <br> 2013 |  | June 29, <br> 2012 |  |
| Capital expenditures | \$ | 13.0 | \$ | 18.0 |
| Mine development |  | 4.4 |  | 0.8 |
| Subtotal |  | 17.4 |  | 18.8 |
| Reimbursement for spending under government contract |  | - |  | 1.0 |
| Net spending | \$ | 17.4 | \$ | 17.8 |

The multi-year $\$ 104.9$ million Title III contract with the U.S. Department of Defense for the design and development of a new facility for the production of primary beryllium was largely completed during 2012 and, therefore, there was no additional spending under the contract or any reimbursements received during the first half of 2013. We did spend an additional $\$ 0.9$ million outside of the Title III contract during the first half of 2013 on the beryllium facility to improve the performance of specific pieces of equipment and related infrastructure.

Spending on major projects in the first half of 2013 included the large optics initiative at the Westford, Massachusetts facility, new vertical casting equipment to increase the capacity to manufacture ToughMet ${ }^{\circledR}$ products at our Lorain, Ohio facility, upgrades to the rolling equipment at the Reading, Pennsylvania operations to allow for improved quality of thin gauge strip product, upgrades to the strip and bulk product processing equipment at the Elmore facility and an upgrade and expansion of the welding line capabilities at the Lincoln, Rhode Island operations. Capital spending in the first half of 2013 also included various information technology projects.

Mine development costs of $\$ 4.4$ million in the second quarter 2013 were part of a $\$ 14.5$ million pit in Utah that was started in 2012. Extraction of ore from this pit began late in the second quarter of this year.

Intangible assets were $\$ 26.6$ million at the end of the second quarter 2013, a decrease of $\$ 2.3$ million since the end of 2012. The decrease was due to current period amortization net of deferred financing costs incurred in support of the new revolving credit facility .

Other liabilities and accrued items were $\$ 46.6$ million at the end of the second quarter 2013, a decrease of $\$ 9.2$ million from year-end 2012. The payment of the 2012 annual incentive compensation to employees in the first quarter 2013 was the main cause of the decline. The fair value of derivative financial instruments declined due to maturities and changes in market rates while various other balances also declined due to business levels, seasonal factors or other causes.

Unearned revenue, which is a liability representing products invoiced to customers but not yet shipped, was $\$ 0.5$ million at the end of the second quarter 2013 compared to $\$ 1.5$ million as of December 31, 2012. Revenue and the associated margin will be recognized for these transactions when the goods ship, title passes and all other revenue recognition criteria are met. Invoicing in advance of the shipment, which is only done in certain circumstances, allows us to collect cash sooner than we would otherwise.

Other long-term liabilities totaled $\$ 16.3$ million at the end of the second quarter 2013 compared to $\$ 16.2$ million at year-end 2012 as increases in long-term compensation plan accruals were partially offset by the amortization of capital lease balances.

Unearned income was $\$ 58.8$ million at the end of the second quarter 2013 compared to $\$ 61.2$ million as of year-end 2012. This balance represents the unamortized reimbursements from the government for equipment purchases for the new beryllium facility made under the Title III program. The reduction to unearned income in the first half of 2013 was recorded against cost of sales on the Consolidated Statement of Income and offset the depreciation expense recorded on the underlying equipment. Depreciation and amortization expense on the Consolidated Statement of Cash Flows is depicted net of the corresponding reduction in unearned income. See Note I to the Consolidated Financial Statements.

The retirement and post-employment benefit liability was $\$ 123.4$ million at the end of the second quarter 2013 compared to $\$ 126.0$ million as of December 31, 2012. This balance represents the liability under our domestic defined benefit pension plan, the retiree medical plan and other retirement plans and post-employment obligations.

The liability for the domestic defined benefit pension plan declined $\$ 2.5$ million in the first half of 2013 as a result of a contribution to the plan totaling $\$ 5.5$ million and an adjustment to other comprehensive income of $\$ 3.6$ million offset in part by an expense of $\$ 6.6$ million.

The retirement and post-employment benefit liability was also affected by differences between the payments made under other plans, the quarterly expense for these plans and other factors.

Debt totaled $\$ 96.1$ million as of the end of the second quarter 2013, an increase of $\$ 1.8$ million over the year-end 2012 balance of $\$ 94.3$ million. Debt increased $\$ 19.1$ million in the first quarter 2013 in order to fund the payment of the 2012 incentive compensation to employees in the first quarter 2013, other working capital items, capital expenditures and the dividend to shareholders. Debt then declined $\$ 17.3$ million in the second quarter 2013 as a result of the improved net income and other changes in working capital items.

Outstanding short-term debt was $\$ 36.5$ million as of the end of the second quarter 2013, while long-term debt totaled $\$ 59.6$ million.
We were in compliance with all of our debt covenants as of the end of the second quarter 2013.
Shareholders' equity of $\$ 426.0$ million as of the end of the second quarter 2013 was $\$ 11.0$ million higher than the balance of $\$ 415.0$ million as of year-end 2012. The primary cause for the increase in equity in the first half of 2013 was comprehensive income of $\$ 10.2$ million. This increase to equity was partially offset by declared dividends of $\$ 3.2$ million in the first half of 2013. Equity was also affected by stock compensatio $n$ expense, the exercise of stock options and other factors.

## Prior Year Financial Position

Net cash used in operating activities was $\$ 9.0$ million in the first half of 2012 as net income and the effects of depreciation were more than offset by the net change in working capital items, including an increase in inventory and a decrease in accounts payable and other liabilities and accrued items. In the second quarter 2012, cash provided from operations totaled $\$ 14.0$ million as the majority of the net growth in working capital in the first half of 2012 occurred during the first quarter 2012.

The accounts receivable balance of $\$ 123.0$ million at the end of the second quarter 2012 was $\$ 5.2$ million, or $4 \%$, higher than the year-end 2011 balance as a result of a slower collection period. Inventories increased $\$ 21.9$ million, or $12 \%$, in the first half of 2012, largely due to the timing of production scheduling and to support future sales growth within Performance Alloys. The acquisition of AMC had a minor impact on the inventory growth in the first half of 2012.

Other liabilities and accrued items declined $\$ 4.7$ million in the first half of 2012 largely due to the payment of the 2011 incentive compensation expense to employees during the period. The retirement and post-employment benefit balance was $\$ 2.9$ million lower at the end of the second quarter 2012 than year-end 2011 mainly due to the contribution to the domestic defined pension benefit plan of $\$ 5.2$ million offset in part by the expense recorded for the various plans and other factors.

Capital expenditures, net of reimbursements from the government for purchases made for the beryllium facility in accordance with the Title III contract, totaled $\$ 17.8$ million. Spending within Advanced Material Technologies totaled $\$ 6.7$ million while spending within Performance Alloys was $\$ 5.6$ million.

We acquired the outstanding shares of AMC for $\$ 3.3$ million, net of cash received, during the first quarter 2012.

Outstanding debt increased from $\$ 81.4$ million at year-end 2011 to $\$ 115.4$ million at the end of the second quarter 2012. The increase in debt was used to fund the growth in working capital, capital expenditures and the AMC acquisition.

Cash balances totaled $\$ 15.4$ million at the end of the second quarter 2012, an increase of $\$ 3.2$ million since year-end 2011.

## Off-balance Sheet Arrangements and Contractual Obligations

We maintain the majority of our precious metals and a portion of our copper that we use in production on a consignment basis in order to reduce our exposure to metal price movements and to reduce our working capital investment. The balance outstanding under these off-balance sheet consignment arrangements totaled $\$ 196.2$ million as of the end of the second quarter 2013 compared to $\$ 286.9$ million as of year-end 2012. The decline in the outstanding balance was primarily due to a reduction in the quantity of silver and gold on hand and lower metal prices.

We were in compliance with the covenants contained in our consignment agreements as of June 28, 2013.

We negotiated a new revolving credit facility in the second quarter 2013 that replaced the prior facility that was scheduled to mature in 2016. The new facility is secured and provides up to $\$ 375.0$ million of borrowing capacity, an increase of $\$ 50.0$ million over the prior facility. Borrowing rates are based on a spread over LIBOR, with the spreads being slightly lower under the new facility than they were under the old facility. The financial covenants remained unchanged. The new facility matures in 2018.

For additional information on our contractual obligations, please see page 38 of our Annual Report on Form 10-K for the year ended December 31, 2012.

## Liquidity

We believe funds 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.

Cash provided from operations was $\$ 18.1$ million in the first half of 2013. We generated cash in the second quarter 2013 after consuming cash in the first quarter 2013 due to higher net income and changes in working capital levels. We typically consume cash in the first quarter of a year and then generate cash over the balance of the year.

We paid quarterly dividends to our shareholders totaling $\$ 3.2$ million in the first half of 2013 under a program implemented in the second quarter 2012. The Board of Directors increased the dividend payout from $\$ 0.075$ per share to $\$ 0.08$ per share, an increase of approximately $7 \%$, in the second quarter 2013. 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.

Our domestic defined benefit pension plan was underfunded as of the end of the second quarter 2013. Contributions to the plan are determined by a variety of factors, including the plan funded ratio, plan investment performance, discount rates, actuarial assumptions, plan amendments, our policies and objectives, the availability of cash and other factors. We anticipate making contributions of approximately $\$ 13.0$ million to the plan during 2013. Contributions in the first half of 2013 totaled $\$ 5.5$ million. Contributions made during the second half of 2013 will be funded with cash from operations or borrowings under existing lines of credit.

We made lump sum payments of approximately $\$ 14.8$ million to terminated deferred vested participants in the domestic defined benefit pension plan in the second quarter 2013. Under this program, eligible participants were offered the opportunity to elect to receive a lump sum payment in the second quarter 2013 in lieu of an annuity upon retirement. The payments were made from the pension plan assets and additional Company contributions were not required to fund these payments. The lump sum program was part of our long-term objective of reducing the risks associated with this plan.

While debt increased slightly in the first half of 2013, equity increased by a greater amount and the total-debt-to-debt-plus-equity ratio, a measure of balance sheet leverage, improved to $18 \%$ as of the end of the second quarter 2013 from $21 \%$ as of the end of the first quarter 2013 and $19 \%$ as of year-end 2012.

The available and unused borrowing capacity under the existing lines of credit, which is subject to limitations set forth in the debt covenants, was $\$ 153.3$ million as of the end of the second quarter 2013.

By renegotiating and securing a new revolving credit facility in the second quarter 2013, we were able to extend the maturity date out two years, which provides us with additional stability and financial flexibility.

The available and unused capacity under the off-balance sheet consignment lines totaled $\$ 175.1$ million as of the end of the second quarter 2013.

We also had $\$ 15.7$ million of cash as of the end of the second quarter 2013.

## CRITICAL ACCOUNTING POLICIES

For additional information regarding critical accounting policies, please refer to pages 41 to 43 of our Annual Report on Form 10-K for the year ended December 31, 2012. There have been no material changes in our critical accounting policies since the inclusion of this discussion in our Annual Report on Form 10-K.

## MARKET RISK DISCLOSURES

For information regarding market risks, please refer to pages 45 and 46 of our Annual Report on Form 10-K for the year ended December 31, 2012. There have been no material changes in our market risks since the inclusion of this discussion in our Annual Report on Form 10-K.

## OUTLOOK

Market conditions remained mixed throughout the second quarter 2013, and we are cautious about overall market conditions in the second half of 2013.

Portions of the consumer electronics market have strengthened, particularly advanced chemicals for LED applications. The automotive electronics market was quite strong in the first half of 2013. The energy market, driven in part by oil and gas applications, has improved somewhat, but shipments have not returned to the levels seen in the early portions of 2012.

Government spending cut-backs and the sequestration has had an impact on our business, particularly our optics product line. We will closely monitor and assess the impact of the cut-backs in government spending budgets and make adjustments to this business as warranted. We believe that sales of beryllium products for defense and science applications will be solid in the second half of 2013 as various programs, including applications for the F-35 fighter jet and the SM-3 missile defense system, are funded. Sales for science applications should grow as well.

We believe that medical market sales will improve in the third quarter 2013 over the second quarter 2013 as the manufacturing issue with an outside vendor has been resolved and order entry rates have increased.

Precious metal prices declined significantly during the second quarter 2013. Should these lower prices continue throughout the year, our sales could be negatively affected, but all else remaining equal the lower prices should not result in a commensurate reduction in our valueadded sales.

The output and the performance of the new beryllium plant improved over the course of the first half of 2013 and we anticipate making additional improvements during the second half of the year.

We will incur additional costs in the remaining quarters of the year associated with the facility shutdown and consolidation program. We anticipate that the benefits from the program will offset these costs.

## 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, in particular the outlook provided above. 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 costs and 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 which we serve, whether defined geographically or by segment, with the major market segments being: consumer electronics, industrial components and commercial aerospace, defense and science, automotive electronics, medical, energy and telecommunications infrastructure;
* 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 and Aerospace Metal Composites Limited;
* Our success in moving the microelectronics packaging operations to Singapore;
* 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;
* The impact of the results of acquisitions on our ability to achieve fully the strategic and financial objectives related to these acquisitions;
Other financial factors, including the cost and availability of raw materials (both base and precious metals), physical inventory valuations, 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 the Company's 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 in Part 1, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2012.


## Item 4. Controls and Procedures

We carried out an evaluation under the supervision and with the 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 June 28,2013 pursuant to Rule 13a-15(b) and 15d-15(b) under the Securities Act of 1934, as amended. Based upon that evaluation, our management, including our chief executive officer and chief financial officer, concluded that our disclosure controls were not effective as of June 28 , 2013 due to the material weakness described below.

During the fourth quarter 2013, a deficiency was identified in our internal control over financial reporting. Specifically, our management review controls failed to detect errors in the physical inventory count reconciliation process at one of our facilities during the second quarter 2013. As a result of this material weakness, we concluded that we did not maintain effective control over financial reporting as of June 28 , 2013.

During 2014, certain actions are being implemented to remediate this material weakness, including: improving processes, implementing additional controls and increased precision around management's review controls, supplementing technical competence of our accounting staff with additional internal and, as needed, contract resources, and creating a new management level position of Inventory Controller who will report directly to the Corporate Vice President of Finance and be responsible for maintaining company-wide controls specifically over precious metal inventory.

There has been no change in our internal control over financial reporting that occurred during the quarter ended June 28, 2013 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

## PART II OTHER INFORMATION

## Item 6. Exhibits

10.1 Materion Corporation Management Incentive Plan (filed as Exhibit 10.1 to the Registrant's Form 8-K (File No. 115885) filed on May 29, 2013), incorporated herein by reference.
10.2 Second Amended and Restated Credit Agreement dated June 20, 2013 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 June 25, 2013), incorporated herein by reference.

11 Statement regarding computation of per share earnings.
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).

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 period ending June 28, 2013.
101.INS XBRL Instance Document.
101.SCH XBRL Taxonomy Extension Schema Document.
101.DEF XBRL Taxonomy Extension Definition Linkbase Document.
101.CAL XBRL Taxonomy Extension Calculation Linkbase Document.
101.LAB XBRL Taxonomy Extension Label Linkbase Document.
101.PRE XBRL Taxonomy Extension Presentation Linkbase Document.

* Previously filed.


## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

## MATERION CORPORATION

Dated: March 14, 2014
/s/ John D. Grampa
John D. Grampa
Senior Vice President Finance and
Chief Financial Officer

## Exhibit Index

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.

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101.PRE \# XBRL Taxonomy Extension Presentation Linkbase Document.

* Previously filed.
\# Submitted electronically herewith.


## MATERION CORPORATION AND SUBSIDIARIES <br> COMPUTATION OF PER SHARE EARNINGS

|  | Second Quarter Ended |  |  |  | First Half Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Jun. 28, 2013 <br> Restated |  | Jun. 29, 2012 |  | Jun. 28, 2013 <br> Restated |  | Jun. 29, 2012 |  |
| Basic: |  |  |  |  |  |  |  |  |
| Average shares outstanding |  | 20,566,000 |  | 20,430,000 |  | 20,524,000 |  | 20,400,000 |
| Net Income | \$ | 4,155,000 | \$ | 7,929,000 | \$ | 10,940,000 | \$ | 14,047,000 |
| Per share amount | \$ | 0.20 | \$ | 0.39 |  | 0.53 |  | 0.69 |
|  |  |  |  |  |  |  |  |  |
| Diluted: |  |  |  |  |  |  |  |  |
| Average shares outstanding |  | 20,566,000 |  | 20,430,000 |  | 20,524,000 |  | 20,400,000 |
| Dilutive stock securities based on the treasury stock method using average market price |  | 303,000 |  | 236,000 |  | 321,000 |  | 287,000 |
| Totals |  | 20,869,000 |  | 20,666,000 |  | 20,845,000 |  | 20,687,000 |
| Net Income | \$ | 4,155,000 | \$ | 7,929,000 | \$ | 10,940,000 | \$ | 14,047,000 |
| Per share amount | \$ | 0.20 | \$ | 0.38 |  | 0.52 |  | 0.68 |

## CERTIFICATIONS

I, Richard J. Hipple, certify that:

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

Dated: March 14, 2014
/s/ Richard J. Hipple
Richard J. Hipple
Chairman, President and Chief Executive Officer

## CERTIFICATIONS

I, John D. Grampa, certify that:

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

Dated: March 14, 2014
/s/ John D. Grampa

John D. Grampa<br>Senior Vice President Finance and Chief Financial Officer

## Certification Pursuant to <br> 18 U.S.C. Section 1350, <br> As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, in connection with the filing of the Quarterly Report on Form 10-Q/A of Materion Corporation (the "Company") for the quarter ended June 28, 2013, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies that, to such officer's knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78 m or $78 \mathrm{o}(\mathrm{d})$ ), and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Dated: March 14, 2014

| /s/ Richard J. Hipple |
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| Richard J. Hipple <br> Chairman, President and Chief Executive Officer |
| /s/ John D. Grampa |
| John D. Grampa |
| Senior Vice President Finance and Chief Financial Officer |


[^0]:    See Notes to Consolidated Financial Statements.

