

FERRO CORP
Form 10-Q
July 27, 2016
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2016

or

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

For the transition period from _____ to _____

Commission File Number 1-584

FERRO CORPORATION

(Exact name of registrant as specified in its charter)

| | |
|---|--------------------------------------|
| Ohio | 34-0217820 |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |
| 6060 Parkland Boulevard | 44124 |
| Suite 250 | (Zip Code) |
| Mayfield Heights, OH | |
| (Address of principal executive offices) | |
| 216-875-5600 | |
| (Registrant's telephone number, including area code) | |

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

YES NO

Indicate by check mark 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

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company” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Non-accelerated filer

(Do not check if a smaller reporting company)

Accelerated filer

Smaller reporting company

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

At June 30, 2016, there were 83,228,350 shares of Ferro Common Stock, par value \$1.00, outstanding.

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PART I — FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited)

Ferro Corporation and Subsidiaries

Condensed Consolidated Statements of Operations

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|--|--|------------|------------------------------|------------|
| | 2016 | 2015 | 2016 | 2015 |
| | (Dollars in thousands, except per share amounts) | | | |
| Net sales | \$ 297,977 | \$ 268,214 | \$ 575,428 | \$ 530,986 |
| Cost of sales | 199,604 | 190,574 | 392,826 | 382,711 |
| Gross profit | 98,373 | 77,640 | 182,602 | 148,275 |
| Selling, general and administrative expenses | 57,871 | 52,695 | 110,517 | 102,151 |
| Restructuring and impairment charges | 787 | 1,116 | 1,668 | 1,625 |
| Other expense (income): | | | | |
| Interest expense | 5,428 | 3,110 | 10,275 | 6,260 |
| Interest earned | (115) | (57) | (200) | (94) |
| Foreign currency losses, net | 389 | 2,827 | 2,000 | 4,555 |
| Miscellaneous expense (income), net | 669 | (161) | (2,784) | 238 |
| Income before income taxes | 33,344 | 18,110 | 61,126 | 33,540 |
| Income tax expense | 8,484 | 5,679 | 16,502 | 8,138 |
| Income from continuing operations | 24,860 | 12,431 | 44,624 | 25,402 |
| (Loss) from discontinued operations, net of income taxes | (5,748) | (5,646) | (35,242) | (9,602) |
| Net income | 19,112 | 6,785 | 9,382 | 15,800 |
| Less: Net income (loss) attributable to noncontrolling interests | 143 | 186 | 379 | (1,769) |
| Net income attributable to Ferro Corporation common shareholders | \$ 18,969 | \$ 6,599 | \$ 9,003 | \$ 17,569 |
| Earnings (loss) per share attributable to Ferro Corporation common shareholders: | | | | |
| Basic earnings (loss): | | | | |
| Continuing operations | \$ 0.30 | \$ 0.14 | \$ 0.53 | \$ 0.31 |
| Discontinued operations | (0.07) | (0.06) | (0.42) | (0.11) |
| | \$ 0.23 | \$ 0.08 | \$ 0.11 | \$ 0.20 |
| Diluted earnings (loss): | | | | |
| Continuing operations | \$ 0.29 | \$ 0.14 | \$ 0.53 | \$ 0.31 |
| Discontinued operations | (0.07) | (0.06) | (0.42) | (0.11) |
| | \$ 0.22 | \$ 0.08 | \$ 0.11 | \$ 0.20 |

See accompanying notes to condensed consolidated financial statements.

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Ferro Corporation and Subsidiaries

Condensed Consolidated Statements of Comprehensive Income (Loss)

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|--|--------------------------------|-----------|------------------------------|------------|
| | 2016 | 2015 | 2016 | 2015 |
| | (Dollars in thousands) | | | |
| Net income | \$ 19,112 | \$ 6,785 | \$ 9,382 | \$ 15,800 |
| Other comprehensive income (loss), net of income tax: | | | | |
| Foreign currency translation (loss) income | (3,269) | 9,407 | (4,947) | (28,389) |
| Postretirement benefit liabilities gain (loss) | 27 | (18) | 295 | (2) |
| Other comprehensive (loss) income, net of income tax | (3,242) | 9,389 | (4,652) | (28,391) |
| Total comprehensive income (loss) | 15,870 | 16,174 | 4,730 | (12,591) |
| Less: Comprehensive (loss) income attributable to noncontrolling interests | (9) | 185 | 259 | (2,908) |
| Comprehensive income (loss) attributable to Ferro Corporation | \$ 15,879 | \$ 15,989 | \$ 4,471 | \$ (9,683) |

See accompanying notes to condensed consolidated financial statements.

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Ferro Corporation and Subsidiaries

Condensed Consolidated Balance Sheets

| | June 30, 2016 | December 31, 2015 |
|---|------------------------|-------------------------|
| | (Dollars in thousands) | |
| ASSETS | | |
| Current assets | | |
| Cash and cash equivalents | \$ 49,416 | \$ 58,380 |
| Accounts receivable, net | 278,931 | 231,970 |
| Inventories | 207,299 | 184,854 |
| Deferred income taxes | — | 12,088 |
| Other receivables | 32,008 | 34,088 |
| Other current assets | 15,479 | 15,695 |
| Current assets held-for-sale | 18,648 | 16,215 |
| Total current assets | 601,781 | 553,290 |
| Other assets | | |
| Property, plant and equipment, net | 252,548 | 260,429 |
| Goodwill | 141,162 | 145,669 |
| Intangible assets, net | 110,493 | 106,633 |
| Deferred income taxes | 100,126 | 87,385 |
| Other non-current assets | 48,206 | 48,767 |
| Non-current assets held-for-sale | 370 | 23,178 |
| Total assets | \$ 1,254,686 | \$ 1,225,351 |
| LIABILITIES AND EQUITY | | |
| Current liabilities | | |
| Loans payable and current portion of long-term debt | \$ 10,451 | \$ 7,446 |
| Accounts payable | 129,946 | 120,380 |
| Accrued payrolls | 28,713 | 28,584 |
| Accrued expenses and other current liabilities | 60,525 | 54,664 |
| Current liabilities held-for-sale | 4,165 | 7,156 |
| Total current liabilities | 233,800 | 218,230 |
| Other liabilities | | |
| Long-term debt, less current portion | 485,436 | 466,108 |
| Postretirement and pension liabilities | 147,820 | 148,249 |
| Other non-current liabilities | 65,080 | 66,990 |
| Non-current liabilities held-for-sale | 1,643 | 1,493 |
| Total liabilities | 933,779 | 901,070 |
| Equity | | |
| Ferro Corporation shareholders' equity: | 93,436 | 93,436 |

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Common stock, par value \$1 per share; 300.0 million shares authorized; 93.4 million shares issued; 83.2 million and 84.0 million shares outstanding at June 30, 2016, and December 31, 2015, respectively

| | | |
|--|--------------|--------------|
| Paid-in capital | 307,059 | 314,854 |
| Retained earnings | 144,510 | 135,507 |
| Accumulated other comprehensive loss | (65,850) | (61,318) |
| Common shares in treasury, at cost | (166,329) | (166,020) |
| Total Ferro Corporation shareholders' equity | 312,826 | 316,459 |
| Noncontrolling interests | 8,081 | 7,822 |
| Total equity | 320,907 | 324,281 |
| Total liabilities and equity | \$ 1,254,686 | \$ 1,225,351 |

See accompanying notes to condensed consolidated financial statements.

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Ferro Corporation and Subsidiaries

Condensed Consolidated Statements of Equity

| | Ferro Corporation Shareholders Common Shares in Treasury | | Common Stock | Paid-in Capital | Retained Earnings | Accumulated Other Comprehensive (Loss) | Non- controlling Interests | Total Equity |
|---|--|--------------|-----------------|--------------------|----------------------|---|----------------------------------|-----------------|
| | Shares | Amount | | | | | | |
| Balances at December 31, 2014 | 6,445 | \$ (136,058) | \$ 93,436 | \$ 317,404 | \$ 71,407 | \$ (21,805) | \$ 11,632 | \$ 336,016 |
| Net income (loss) | — | — | — | — | 17,569 | — | (1,769) | 15,800 |
| Other comprehensive (loss) | — | — | — | — | — | (27,252) | (1,139) | (28,391) |
| Stock-based compensation transactions | (280) | 8,003 | — | (3,310) | — | — | — | 4,693 |
| Balances at June 30, 2015 | 6,165 | (128,055) | 93,436 | 314,094 | 88,976 | (49,057) | 8,724 | 328,118 |
| Balances at December 31, 2015 | 9,431 | (166,020) | 93,436 | 314,854 | 135,507 | (61,318) | 7,822 | 324,281 |
| Net income | — | — | — | — | 9,003 | — | 379 | 9,382 |
| Other comprehensive (loss) | — | — | — | — | — | (4,532) | (120) | (4,652) |
| Purchase of treasury stock | 1,175 | (11,429) | — | — | — | — | — | (11,429) |
| Stock-based compensation transactions | (399) | 11,120 | — | (7,795) | — | — | — | 3,325 |
| Balances at June 30, 2016 | 10,207 | \$ (166,329) | \$ 93,436 | \$ 307,059 | \$ 144,510 | \$ (65,850) | \$ 8,081 | \$ 320,907 |

See accompanying notes to condensed consolidated financial statements.

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Ferro Corporation and Subsidiaries

Condensed Consolidated Statements of Cash Flows

| | Six Months Ended | |
|--|------------------------|------------|
| | June 30, | |
| | 2016 | 2015 |
| | (Dollars in thousands) | |
| Cash flows from operating activities | | |
| Net cash (used in) provided by operating activities | \$ (1,975) | \$ 3,934 |
| Cash flows from investing activities | | |
| Capital expenditures for property, plant and equipment and other long lived assets | (14,044) | (26,554) |
| Proceeds from sale of assets | 3,597 | 125 |
| Business acquisitions, net of cash acquired | (6,639) | (5,479) |
| Net cash (used in) investing activities | (17,086) | (31,908) |
| Cash flows from financing activities | | |
| Net borrowings (repayments) under loans payable | 3,031 | (931) |
| Proceeds from revolving credit facility | 163,516 | 105,000 |
| Principal payments on revolving credit facility | (92,706) | — |
| Principal payments on term loan facility | (51,500) | (1,500) |
| Payment of debt issuance costs | (301) | — |
| Purchase of treasury stock | (11,429) | — |
| Other financing activities | 211 | (181) |
| Net cash provided by financing activities | 10,822 | 102,388 |
| Effect of exchange rate changes on cash and cash equivalents | (725) | (3,501) |
| (Decrease) increase in cash and cash equivalents | (8,964) | 70,913 |
| Cash and cash equivalents at beginning of period | 58,380 | 140,500 |
| Cash and cash equivalents at end of period | \$ 49,416 | \$ 211,413 |
| Cash paid during the period for: | | |
| Interest | \$ 9,283 | \$ 7,045 |
| Income taxes | \$ 7,432 | \$ 9,482 |

See accompanying notes to condensed consolidated financial statements.

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Ferro Corporation and Subsidiaries

Notes to Condensed Consolidated Financial Statements

1. Basis of Presentation

The accompanying unaudited condensed consolidated financial statements of Ferro Corporation (“Ferro,” “we,” “us” or “the Company”) have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”) for interim financial information, the instructions to Form 10-Q, and Article 10 of Regulation S-X. These statements reflect all normal and recurring adjustments which are, in the opinion of management, necessary to present fairly the financial position, results of operations and cash flows for the periods presented. The preparation of financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. These interim condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes included in our Annual Report on Form 10-K for the year ended December 31, 2015.

The Company owned 51% of an operating affiliate in Venezuela that was a consolidated subsidiary of Ferro. During the fourth quarter of 2015, we sold our interest in the operating affiliate in Venezuela for a cash purchase price of \$0.5 million. During the first quarter of 2015, the Ministry of Economy, Finance, and Public Banking, and the Central Bank of Venezuela published a new exchange rate, the Foreign Exchange Marginal System (“SIMADI”). We concluded in March 2015 that SIMADI was the most relevant exchange mechanism available, and began using SIMADI to translate the local currency financial statements. As a result of the revaluation, we recognized a \$1.9 million foreign currency loss and a \$2.6 million loss due to lower of cost or market charges against our inventory, prior to the adjustment for losses allocated to our noncontrolling interest partner, which is recorded within Foreign currency losses, net and Cost of sales, respectively, within our condensed consolidated statement of operations for the six months ended June 30, 2015.

During the second quarter of 2014, substantially all of the assets and liabilities of the Europe-based Polymer Additives business were classified as held-for-sale. As further discussed in Note 3, we have classified the assets and liabilities as held-for-sale in the accompanying condensed consolidated balance sheets and have classified the related operating results, net of income tax, as discontinued operations in the accompanying condensed consolidated statements of operations for all periods presented.

Operating results for the three and six months ended June 30, 2016, are not necessarily indicative of the results expected in subsequent quarters or for the full year ending December 31, 2016.

2. Recent Accounting Pronouncements

Accounting Standards Adopted in the period ended June 30, 2016

In November 2015, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2015-17, Income Taxes: Topic 740: Balance Sheet Classification of Deferred Taxes. ASU 2015-17 requires deferred tax assets and liabilities to be classified as noncurrent in a classified statement of financial position. During the second quarter of 2016, we elected to prospectively adopt ASU 2015-17, thus reclassifying current deferred tax assets to noncurrent on the accompanying condensed consolidated balance sheets as of June 30, 2016. The prior reporting period was not retrospectively adjusted. Other than this reclassification, the adoption of ASU 2015-17 did not have an impact on the Company’s condensed consolidated financial statements.

New Accounting Standards

In March 2016, the FASB issued ASU 2016-09, Compensation – Stock Compensation: Topic 718: Improvements to Employee Share-Based Payment Accounting. ASU 2016-09 is intended to simplify several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. This pronouncement is effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted. The Company is in the process of assessing the impact the adoption of this ASU will have on our condensed consolidated financial statements.

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In February 2016, the FASB issued ASU 2016-02, Leases: Topic 842. ASU 2016-02 requires companies to recognize a lease liability and asset on the balance sheet for operating leases with a term greater than one year. This pronouncement is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted. The Company is in the process of assessing the impact the adoption of this ASU will have on our condensed consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers: Topic 606. This ASU replaces nearly all existing U.S. GAAP guidance on revenue recognition. The standard prescribes a five-step model for recognizing revenue, the application of which will require significant judgment. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017. The Company is in the process of assessing the impact the adoption of this ASU will have on our condensed consolidated financial statements.

No other new accounting pronouncements issued or with effective dates during fiscal 2016 had or are expected to have a material impact of the Company's condensed consolidated financial statements.

3. Discontinued Operations

During the second quarter of 2014, we commenced a process to market for sale all of the assets within our Europe-based Polymer Additives business, including the Antwerp, Belgium dibenzoates manufacturing assets, and related Polymer Additives European headquarters and lab facilities. We determined that the criteria to classify these assets as held-for-sale under ASC Topic 360, Property, Plant and Equipment, have been met. We have classified the Europe-based Polymer Additives assets and liabilities as held-for-sale in the accompanying condensed consolidated balance sheets and have classified the related operating results, net of income tax, as discontinued operations in the accompanying condensed consolidated statements of operations for all periods presented. We expect resolution with respect to these assets during the third quarter, which could result in additional impairment charges and other related expenses of \$25 million to \$30 million. Additional impairment of the asset group's net working capital would be recognized upon disposition.

The table below summarizes results for the Europe-based Polymer Additives assets, for the three and six months ended June 30, 2016 and 2015, which are reflected in our condensed consolidated statements of operations as discontinued operations. Interest expense has been allocated to the discontinued operations based on the ratio of net assets of each business to consolidated net assets excluding debt.

| | Three Months Ended | | Six Months Ended | |
|--|------------------------|------------|------------------|------------|
| | June 30, 2016 | 2015 | June 30, 2016 | 2015 |
| | (Dollars in thousands) | | | |
| Net sales | \$ 6,900 | \$ 7,837 | \$ 14,650 | \$ 19,736 |
| Cost of sales | 10,789 | 11,903 | 22,819 | 26,458 |
| Gross loss | (3,889) | (4,066) | (8,169) | (6,722) |
| Selling, general and administrative expenses | 1,502 | 1,009 | 2,505 | 2,228 |
| Restructuring and impairment charges | — | — | 24,059 | — |
| Interest expense | 40 | 206 | 276 | 319 |
| Miscellaneous expense (income) | 30 | 365 | (387) | 333 |
| (Loss) from discontinued operations before income taxes | (5,461) | (5,646) | (34,622) | (9,602) |
| Income tax expense | 287 | — | 620 | — |
| (Loss) from discontinued operations, net of income taxes | \$ (5,748) | \$ (5,646) | \$ (35,242) | \$ (9,602) |

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The following table summarizes the assets and liabilities which are classified as held-for-sale at June 30, 2016, and December 31, 2015:

| | June 30, 2016 | December 31, 2015 |
|--|---------------------------|----------------------|
| | (Dollars in thousands) | |
| Accounts receivable, net | \$ 3,857 | \$ 4,028 |
| Inventories | 11,066 | 9,733 |
| Other current assets | 3,725 | 2,454 |
| Current assets held-for-sale | 18,648 | 16,215 |
| Property, plant and equipment, net | — | 22,973 |
| Other non-current assets | 370 | 205 |
| Total assets held-for-sale | \$ 19,018 | \$ 39,393 |
| Accounts payable | \$ 3,514 | \$ 5,736 |
| Accrued expenses and other current liabilities | 651 | 1,420 |
| Current liabilities held-for-sale | 4,165 | 7,156 |
| Other non-current liabilities | 1,643 | 1,493 |
| Total liabilities held-for-sale | \$ 5,808 | \$ 8,649 |

Included within non-current assets are deferred tax assets of \$37.8 million at June 30, 2016, and \$25.0 million at December 31, 2015, which are fully reserved for at both periods.

4. Acquisitions

Pinturas

On June 1, 2016, the Company acquired 100% of the equity of privately held Pinturas Benicarló, S.L. (“Pinturas”) for €16.2 million in cash (approximately \$18.0 million). The information included herein has been prepared based on the preliminary allocation of the purchase price using estimates of the fair value and useful lives of the assets acquired and liabilities assumed, which were determined with the assistance of third parties who performed independent valuations using discounted cash flow and comparative market approaches and estimates made by management. As of June 30, 2016, the purchase price allocation is subject to further adjustment until all information is fully evaluated by the Company. The Company preliminarily recorded \$8.5 million of amortizable intangible assets, \$3.8 million of goodwill, \$0.7 million of personal and real property, \$2.6 million of a deferred tax liability related to the amortizable intangible assets, and \$7.6 million of net working capital on the condensed consolidated balance sheet.

Ferer

On January 5, 2016, the Company completed the purchase of 100% of the equity of privately held Istanbul-based Ferer Dis Ticaret Ve Kimyasallar Anonim Sirketi A.S. (“Ferer”) on a cash-free and debt-free basis for approximately \$9.4 million in cash, subject to customary working capital and other adjustments. The information included herein has been prepared based on the preliminary allocation of the purchase price using estimates of the fair value and useful lives of the assets acquired and liabilities assumed, which were determined with the assistance of third parties who performed independent valuations using discounted cash flow and comparative market approaches and estimates made by management. As of June 30, 2016, the purchase price allocation is subject to further adjustment until all information is fully evaluated by the Company. The Company preliminarily recorded \$3.3 million of amortizable intangible assets, \$4.5 million of goodwill, \$0.6 million of personal and real property, \$0.7 million of a deferred tax liability related to the amortizable intangible assets, and \$1.7 million of net working capital on the condensed consolidated balance sheet.

Al Salomi

On November 17, 2015, the Company acquired 100% of the equity of Egypt-based tile coatings manufacturer Al Salomi for Frits and Glazes (“Al Salomi”) for EGP 307 million (approximately \$38.2 million), including the assumption of debt. The acquired business

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contributed net sales of \$6.4 million and \$12.0 million for the three and six months ended June 30, 2016 and net income attributable to Ferro Corporation of \$1.6 million and \$2.2 million for the three and six months ended June 30, 2016.

The information included herein has been prepared based on the preliminary allocation of the purchase price using estimates of the fair value and useful lives of the assets acquired and liabilities assumed, which were determined with the assistance of third parties who performed independent valuations using discounted cash flow and comparative market approaches and estimates made by management. As of June 30, 2016, the purchase price allocation is subject to further adjustment until all information is fully evaluated by the Company. The Company preliminarily recorded \$15.0 million of amortizable intangible assets, \$14.3 million of goodwill, \$10.7 million of personal and real property, \$4.8 million of a deferred tax liability related to the amortizable intangible assets, and \$3.0 million of net working capital on the condensed consolidated balance sheet.

Nubiola

On July 7, 2015, the Company acquired the entire share capital of Corporación Química Vhem, S.L., Dibon USA, LLC and Ivory Corporation, S.A. (together with their direct and indirect subsidiaries, “Nubiola”) on a cash-free and debt-free basis for €167 million (approximately \$184.2 million). The acquisition was funded with excess cash and borrowings under the Company’s existing revolving credit facility. See Note 8 for additional detail on the revolving credit facility. During the second quarter of 2016, the Company had a purchase price adjustment due to the settlement of an escrow that reduced the fair value of net assets acquired to \$168.1 million. As a result of the purchase price adjustment, the carrying amount of goodwill decreased by \$11.7 million, intangibles decreased \$6.4 million and the related deferred tax liability decreased \$1.9 million. The impact of the change on the condensed consolidated statements of operations was not material. Nubiola is a worldwide producer of specialty inorganic pigments and the world’s largest producer of Ultramarine Blue. Nubiola also produces specialty Iron Oxides, Chrome Oxide Greens and Corrosion Inhibitors. Nubiola has production facilities in Spain, Colombia, Romania, and India and a joint venture in China.

The information included herein has been prepared based on the preliminary allocation of the purchase price using estimates of the fair value and useful lives of the assets acquired and liabilities assumed, which were determined with the assistance of third parties who performed independent valuations using discounted cash flow and comparative market approaches and estimates made by management. As of June 30, 2016, the purchase price allocation is subject to further adjustment until all information is fully evaluated by the Company.

The following table summarizes the preliminary purchase price allocations:

| | June 30, 2016 (Dollars in thousands) |
|-------------------------|---|
| Net working capital (1) | \$ 46,642 |
| Cash and equivalents | 19,966 |

| | |
|------------------------------|------------|
| Personal property | 39,444 |
| Real property | 28,510 |
| Intangible assets | 26,757 |
| Other assets and liabilities | (20,733) |
| Goodwill | 27,498 |
| Net assets acquired | \$ 168,084 |

(1) Net working capital is defined as current assets, less cash, less current liabilities, and includes an estimate of potential transactional adjustments.

The acquired business contributed net sales of \$30.8 million and \$64.2 million for the three and six months ended June 30, 2016 and net income attributable to Ferro Corporation of \$9.0 million and \$14.2 million for the three and six months ended June 30, 2016.

The estimated fair value of the receivables acquired is \$24.5 million, with a gross contractual amount of \$25.2 million. The Company preliminarily recorded acquired intangible assets subject to amortization of \$21.1 million, which is comprised of \$5.4 million of customer relationships and \$15.7 million of technology/know-how, which will be amortized over 20 years and 15 years, respectively. The Company preliminarily recorded acquired indefinite-lived intangible assets of \$5.6 million related to trade names and trademarks. Goodwill is calculated as the excess of the purchase price over the estimated fair values of the assets acquired and the

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liabilities assumed in the acquisition and is a result of anticipated synergies. Goodwill is not expected to be deductible for tax purposes.

The following unaudited pro forma information represents the consolidated results of the Company as if the Nubiola acquisition occurred as of January 1, 2014:

| | Three months ended June 30, 2015 (unaudited) | Six months ended June 30, 2015 (unaudited) |
|--|--|--|
| | (In thousands, except per share amounts) | |
| Net sales | \$ 326,905 | \$ 622,727 |
| Net income attributable to Ferro Corporation common shareholders | \$ 14,666 | \$ 30,927 |
| Net earnings per share attributable to Ferro Corporation common shareholders - Basic | \$ 0.17 | \$ 0.35 |
| Net earnings per share attributable to Ferro Corporation common shareholders - Diluted | \$ 0.17 | \$ 0.35 |

The unaudited pro forma information has been adjusted with the respect to certain aspects of the acquisition to reflect the following:

- Additional depreciation and amortization expenses that would have been recognized assuming fair value adjustments to the existing Nubiola assets acquired, including intangible assets and fixed assets.
- Elimination of revenue and cost of goods sold for sales from Nubiola to the Company, which would be eliminated as intercompany transactions for Nubiola and the Company on a consolidated basis.
- Increased interest expense due to additional borrowings to fund the acquisition.
- Acquisition-related costs, which were included in the Company's results.
- Adjustments for the income tax effect of the pro forma adjustments related to the acquisition.

Thermark

In February 2015, the Company acquired TherMark Holdings, Inc., a leader in laser marking technology, for a cash purchase price of \$5.5 million. The Company recorded \$4.6 million of amortizable intangible assets, \$2.5 million of goodwill, \$1.7 million of a deferred tax liability related to the amortizable intangible assets, and \$0.1 million of net working capital on the condensed consolidated balance sheet.

5. Inventories

| | June 30, 2016 | December 31, 2015 |
|-------------------|------------------------|-------------------------|
| | (Dollars in thousands) | |
| Raw materials | \$ 62,518 | \$ 56,291 |
| Work in process | 34,890 | 33,099 |
| Finished goods | 109,891 | 95,464 |
| Total inventories | \$ 207,299 | \$ 184,854 |

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In the production of some of our products, we use precious metals, some of which we obtain from financial institutions under consignment agreements with terms of one year or less. The financial institutions retain ownership of the precious metals and charge us fees based on the amounts we consign. These fees were \$0.2 million for the three months ended June 30, 2016 and 2015, and were \$0.4 million for the six months ended June 30, 2016 and 2015. We had on-hand precious metals owned by participants in our precious metals consignment program of \$26.6 million at June 30, 2016, and \$20.5 million at December 31, 2015, measured at fair value based on market prices for identical assets and net of credits.

6. Property, Plant and Equipment

Property, plant and equipment is reported net of accumulated depreciation of \$437.0 million at June 30, 2016, and \$421.3 million at December 31, 2015. Unpaid capital expenditure liabilities, which are non-cash investing activities, were \$2.1 million at June 30, 2016, and \$3.8 million at June 30, 2015.

As discussed in Note 3 - Discontinued Operations, during the second quarter of 2014, our Europe-based Polymer Additives assets were classified as held-for-sale under ASC Topic 360, Property, Plant and Equipment. As such, at each reporting date, these assets are tested for impairment comparing the fair value of the assets less costs to sell to the carrying value. The fair value was determined using both the market approach and income approach, utilizing Level 3 measurements within the fair value hierarchy, which indicated the fair value less costs to sell was less than the carrying value during the first quarter of 2016, resulting in an impairment charge of \$24.1 million during the six months ended June 30, 2016. The impairment charge of \$24.1 million, representing the remaining carrying value of long-lived assets, is included in Loss from discontinued operations, net of income taxes in our condensed consolidated statements of operations for the six months ended June 30, 2016.

The following table presents information about the Company's impairment charges on assets that were measured on a fair value basis for the six months ended June 30, 2016, and for the year ended December 31, 2015. The table also indicates the level within the fair value hierarchy of the valuation techniques used by the Company to determine the fair value:

| Description | Fair Value Measurements Using | | | | Total (Losses) |
|----------------------|-------------------------------|---------|-----------|-----------|-------------------|
| | Level 1 | Level 2 | Level 3 | Total | |
| | (Dollars in thousands) | | | | |
| June 30, 2016 | | | | | |
| Assets held for sale | \$ — | \$ — | \$ 13,210 | \$ 13,210 | \$ (24,059) |

December 31, 2015

Assets held for sale \$ — \$ — \$ 33,711 \$ 33,711 \$ (11,792)

The inputs to the valuation techniques used to measure fair value are classified into the following categories:

Level 1: Quoted market prices in active markets for identical assets or liabilities.

Level 2: Observable market-based inputs or unobservable inputs that are corroborated by market data.

Level 3: Unobservable inputs that are not corroborated by market data.

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7. Goodwill and Other Intangible Assets

Details and activity in the Company's goodwill by segment follow:

| | Pigments, Powders | | Performance Colors and Glass | Total |
|-------------------------------|-------------------------|---------------|------------------------------------|------------------|
| | Performance Coatings | and Oxides | | |
| | (Dollars in thousands) | | | |
| December 31, 2015 | | | | |
| Gross goodwill | \$ 88,753 | \$ 48,794 | \$ 53,391 | \$ 190,938 |
| Accumulated impairment losses | (45,269) | — | — | (45,269) |
| | 43,484 | 48,794 | 53,391 | 145,669 |
| Acquisitions | — | (11,653)(3) | 8,286 | (1), (2) (3,367) |
| Foreign currency adjustments | (1,278) | 179 | (41) | (1,140) |
| June 30, 2016 | | | | |
| Gross goodwill | 87,475 | 37,320 | 61,636 | 186,431 |
| Accumulated impairment losses | (45,269) | — | — | (45,269) |
| | \$ 42,206 | \$ 37,320 | \$ 61,636 | \$ 141,162 |

- (1) During the first quarter of 2016, the Company recorded goodwill related to the Ferer acquisition. Refer to Note 4 for additional details.
- (2) During the second quarter of 2016, the Company recorded goodwill related to the Pinturas acquisition. Refer to Note 4 for additional details.
- (3) During the second quarter of 2016, the Company recorded a purchase price adjustment within the measurement period for goodwill related to the Nubiola acquisition. Refer to Note 4 for additional details.

Goodwill is calculated as the excess of the purchase price over the estimated fair values of the assets acquired and the liabilities assumed in the acquisition.

Goodwill is tested for impairment at the reporting unit level on an annual basis in the fourth quarter and between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value. As of June 30, 2016, the Company is not aware of any events or circumstances that occurred which would require a goodwill impairment test.

Amortizable intangible assets consisted of the following:

| | |
|------------------------|----------|
| | December |
| June 30, | 31, |
| 2016 | 2015 |
| (Dollars in thousands) | |

| | | |
|---|------------|-----------|
| Gross amortizable intangible assets: | | |
| Patents | \$ 5,238 | \$ 5,229 |
| Land rights | 4,875 | 4,947 |
| Technology/know-how and other | 82,387 | 66,558 |
| Customer relationships | 51,842 | 46,320 |
| Total gross amortizable intangible assets | 144,342 | 123,054 |
| Accumulated amortization: | | |
| Patents | (4,986) | (4,880) |
| Land rights | (2,697) | (2,671) |
| Technology/know-how and other | (32,166) | (16,473) |
| Customer relationships | (3,480) | (2,234) |
| Total accumulated amortization | (43,329) | (26,258) |
| Amortizable intangible assets, net | \$ 101,013 | \$ 96,796 |

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Indefinite-lived intangible assets consisted of the following:

| | June 30, 2016 | December 31, 2015 |
|--------------------------------------|------------------|-------------------------|
| Indefinite-lived intangibles assets: | | |
| Trade names and trademarks | \$ 9,480 | \$ 9,837 |

8. Debt

Loans payable and current portion of long-term debt consisted of the following:

| | June 30, 2016 | December 31, 2015 |
|--|------------------|-------------------------|
| | | |

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| | | |
|---|-----------|----------|
| Loans payable | \$ 5,819 | \$ 2,749 |
| Current portion of long-term debt | 4,632 | 4,697 |
| Loans payable and current portion of long-term debt | \$ 10,451 | \$ 7,446 |

Long-term debt consisted of the following:

| | June 30, 2016 | December 31, 2015 |
|---|------------------------|-------------------------|
| | (Dollars in thousands) | |
| Term loan facility, net of unamortized issuance costs | \$ 240,598 | \$ 291,717 |
| Revolving credit facility | 240,810 | 170,000 |
| Capital lease obligations | 3,945 | 4,478 |
| Other notes | 4,715 | 4,610 |
| Total long-term debt | 490,068 | 470,805 |
| Current portion of long-term debt | (4,632) | (4,697) |
| Long-term debt, less current portion | \$ 485,436 | \$ 466,108 |

Credit Facility

On July 31, 2014, the Company entered into a credit facility (the “Credit Facility”) with a group of lenders to refinance the majority of its then outstanding debt. The Credit Facility consisted of a \$200 million secured revolving line of credit with a term of five years and a \$300 million secured term loan facility with a term of seven years. On January 25, 2016, the Company amended the Credit Facility by entering into the Incremental Assumption Agreement (the “Incremental Agreement”) to increase the revolving line of credit commitment amount from \$200 million to \$300 million. The Company then used a portion of the increase in the revolving line of credit to repay \$50 million of the term loan facility. The Credit Facility was amended and a portion of the outstanding term loans were repaid to increase the amount of total liquidity available under the Credit Facility and reduce the total cost of borrowings.

Principal payments on the term loan facility of \$0.75 million quarterly, are payable commencing December 31, 2014, with the remaining balance due on the maturity date. At June 30, 2016, after taking into account all prior quarterly payments and the \$50 million prepayment that was made in January 2016, the Company had borrowed \$244.8 million under the term loan facility at an annual rate of 4.0%. There are no additional borrowings available under the term loan facility.

Subject to certain conditions, the Company can request up to \$100 million of additional commitments under the Credit Facility, though the lenders are not required to provide such additional commitments. In addition, up to \$100 million of the revolving line of credit will be available to certain of the Company’s subsidiaries in the form of revolving loans denominated in Euros.

Certain of the Company’s U.S. subsidiaries have guaranteed the Company’s obligations under the Credit Facility and such obligations are secured by (a) substantially all of the personal property of the Company and the U.S. subsidiary guarantors and (b) a

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pledge of 100% of the stock of most of the Company's U.S. subsidiaries and 65% of most of the stock of the Company's first tier foreign subsidiaries.

Interest Rate – Term Loan: The interest rates applicable to the term loans will be, at the Company's option, equal to either a base rate or a London Interbank Offered Rate ("LIBOR") rate plus, in both cases, an applicable margin.

- The base rate will be the highest of (i) the federal funds rate plus 0.50%, (ii) syndication agent's prime rate or (iii) the daily LIBOR rate plus 1.00%.
- The applicable margin for base rate loans is 2.25%.
- The LIBOR rate will be set as quoted by Bloomberg and shall not be less than 0.75%.
- The applicable margin for LIBOR rate loans is 3.25%.
- For LIBOR rate loans, the Company may choose to set the duration on individual borrowings for periods of one, two, three or six months, with the interest rate based on the applicable LIBOR rate for the corresponding duration.

Interest Rate – Revolving Credit Line: The interest rates applicable to loans under the revolving credit line will be, at the Company's option, equal to either a base rate or a LIBOR rate plus an applicable variable margin. The variable margin will be based on the ratio of (a) the Company's total consolidated debt outstanding at such time to (b) the Company's consolidated EBITDA computed for the period of four consecutive fiscal quarters most recently ended.

- The base rate will be the highest of (i) the federal funds rate plus 0.50%, (ii) syndication agent's prime rate or (iii) the daily LIBOR rate plus 1.00%.
- The applicable margin for base rate loans will vary between 1.50% and 2.00%.
- The LIBOR rate will be set as quoted by Bloomberg for U.S. Dollars.
- The applicable margin for LIBOR Rate Loans will vary between 2.50% and 3.00%.
- For LIBOR rate loans, the Company may choose to set the duration on individual borrowings for periods of one, two, three or six months, with the interest rate based on the applicable LIBOR rate for the corresponding duration.

At June 30, 2016, the Company had borrowed \$240.8 million under the revolving credit facilities at an annual weighted average interest rate of 3.6%. The borrowing on the revolving credit facilities was used to fund the acquisitions, the share repurchase programs, and for other general business purposes. After reductions for outstanding letters of credit secured by these facilities, we had \$54.8 million of additional borrowings available under the revolving credit facilities at June 30, 2016.

The Credit Facility contains customary restrictive covenants including, but not limited to, limitations on use of loan proceeds, limitations on the Company's ability to pay dividends and repurchase stock, limitations on acquisitions and dispositions and limitations on certain types of investments. The Credit Facility also contains standard provisions relating to conditions of borrowing and customary events of default, including the non-payment of obligations by the Company and the bankruptcy of the Company.

Specific to the revolving credit facility, the Company is subject to financial covenants regarding the Company's outstanding net indebtedness and interest coverage ratios.

If an event of default occurs, all amounts outstanding under the Credit Facility may be accelerated and become immediately due and payable. At June 30, 2016, we were in compliance with the covenants of the Credit Facility.

Other Financing Arrangements

We maintain other lines of credit to provide global flexibility for our short-term liquidity requirements. These facilities are uncommitted lines for our international operations and totaled \$7.6 million and \$8.0 million at June 30, 2016, and December 31, 2015, respectively. The unused portions of these lines provided additional liquidity of \$6.1 million at June 30, 2016, and \$7.3 million at December 31, 2015.

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9. Financial Instruments

The following financial instrument assets (liabilities) are presented at their respective carrying amount, fair value and classification within the fair value hierarchy:

| | June 30, 2016 | | Level 1 | Level 2 | Level 3 |
|---|------------------------|------------|-----------|-----------|---------|
| | Carrying | Fair Value | | | |
| | Amount | Total | | | |
| | (Dollars in thousands) | | | | |
| Cash and cash equivalents | \$ 49,416 | \$ 49,416 | \$ 49,416 | \$ — | \$ — |
| Loans payable | (5,819) | (5,819) | — | (5,819) | — |
| Term loan facility(1) | (240,598) | (241,186) | — | (241,186) | — |
| Revolving credit facility | (240,810) | (238,355) | — | (238,355) | — |
| Other long-term notes payable | (4,715) | (4,046) | — | (4,046) | — |
| Foreign currency forward contracts, net | 2,336 | 2,336 | — | 2,336 | — |

| | December 31, 2015 | | Level 1 | Level 2 | Level 3 |
|---|------------------------|------------|-----------|-----------|---------|
| | Carrying | Fair Value | | | |
| | Amount | Total | | | |
| | (Dollars in thousands) | | | | |
| Cash and cash equivalents | \$ 58,380 | \$ 58,380 | \$ 58,380 | \$ — | \$ — |
| Loans payable | (2,749) | (2,749) | — | (2,749) | — |
| Term loan facility(1) | (291,717) | (297,552) | — | (297,552) | — |
| Revolving credit facility | (170,000) | (169,019) | — | (169,019) | — |
| Other long-term notes payable | (4,610) | (3,956) | — | (3,956) | — |
| Foreign currency forward contracts, net | (1,207) | (1,207) | — | (1,207) | — |

(1) The carrying value of the term loan facility is net of unamortized debt issuance costs.

The fair values of cash and cash equivalents are based on the fair values of identical assets. The fair values of loans payable are based on the present value of expected future cash flows and approximate their carrying amounts due to the short periods to maturity. The fair values of the term loan facility, the revolving credit facility and other long-term notes payable are based on the present value of expected future cash flows and interest rates that would be currently

available to the Company for issuance of similar types of debt instruments with similar terms and remaining maturities adjusted for the Company's non-performance risk.

Foreign currency forward contracts. We manage foreign currency risks principally by entering into forward contracts to mitigate the impact of currency fluctuations on transactions. These forward contracts are not formally designated as hedges. Gains and losses on these foreign currency forward contracts are netted with gains and losses from currency fluctuations on transactions arising from international trade and reported as Foreign currency losses, net in the condensed consolidated statements of operations. We recognized net foreign currency losses of \$0.4 million and \$2.0 million in the three and six months ended June 30, 2016, respectively, and net foreign currency losses of \$2.8 million and \$4.6 million in the three and six months ended June 30, 2015, respectively, which is primarily comprised of the foreign exchange impact on transactions in countries where it is not economically feasible for us to enter into hedging arrangements and hedging inefficiencies, such as timing of transactions. We recognized net gains of \$5.9 million and net losses of \$4.7 million in the three and six months ended June 30, 2016, respectively, and net losses of \$0.3 million and net gains of \$1.3 million in the three and six months ended June 30, 2015, respectively, arising from the change in fair value of our financial instruments, which offset the related net gains and losses on international trade transactions. The fair values of these contracts are based on market prices for comparable contracts. The notional amount of foreign currency forward contracts was \$278.0 million at June 30, 2016, and \$338.4 million at December 31, 2015.

The following table presents the effect on our condensed consolidated statements of operations for the three and six months ended June 30, 2016 and 2015, respectively, of our foreign currency forward contracts:

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| | Amount of Gain (Loss) Recognized in Earnings Three Months Ended June 30, | | Location of Gain (Loss) in Earnings |
|------------------------------------|--|----------|-------------------------------------|
| | 2016 | 2015 | |
| Foreign currency forward contracts | \$ 5,884 | \$ (317) | Foreign currency losses, net |

| | Amount of (Loss) Gain Recognized in Earnings Six Months Ended June 30, | | Location of (Loss) Gain in Earnings |
|------------------------------------|---|----------|-------------------------------------|
| | 2016 | 2015 | |
| Foreign currency forward contracts | \$ (4,684) | \$ 1,328 | Foreign currency losses, net |

The following table presents the fair values on our condensed consolidated balance sheets of foreign currency forward contracts:

| | December | | |
|------------------------------------|------------------------|------------|--|
| | June 30, | 31, | Balance Sheet Location |
| | 2016 | 2015 | |
| | (Dollars in thousands) | | |
| Asset derivatives: | | | |
| Foreign currency forward contracts | \$ 2,722 | \$ 913 | Other current assets |
| Liability derivatives: | | | |
| Foreign currency forward contracts | \$ (386) | \$ (2,120) | Accrued expenses and other current liabilities |

10. Income Taxes

During the first half of 2016, income tax expense was \$16.5 million, or 27.0% of pre-tax income. In the first half of 2015, income tax expense was \$8.1 million, or 24.3% of pre-tax income. The tax expense in the first half of 2016 and 2015, as a percentage of pre-tax income, is lower than the U.S. federal statutory income tax rate of 35% primarily as a result of foreign statutory rate differences. The first half of 2015 tax expense was further lowered as a result of the amount of pre-tax losses in jurisdictions for which no tax benefit is recognized in proportion to the amount of pre-tax income in jurisdictions with no tax expense due to the utilization of fully valued tax attributes. Additionally, the first half of 2015 tax expense was benefited by certain discrete items, which had a favorable impact on the rate of approximately 5%, taking it from approximately 29.0% to 24.3%.

11. Contingent Liabilities

We have recorded environmental liabilities of \$7.9 million at June 30, 2016, and \$7.4 million at December 31, 2015, for costs associated with the remediation of certain of our properties that have been contaminated. The liability at June 30, 2016, and December 31, 2015, was primarily related to a non-operating facility in Brazil, and for retained environmental obligations related to a site in the United States that was part of the sale of our North American and Asian metal powders product lines in 2013. The costs include legal and consulting fees, site studies, the design and implementation of remediation plans, post-remediation monitoring and related activities. The ultimate liability could be affected by numerous uncertainties, including the extent of contamination found, the required period of monitoring and the ultimate cost of required remediation.

In the fourth quarter of 2013, the Supreme Court in Argentina ruled unfavorably related to certain export taxes associated with a divested operation. As a result of this ruling, we have recorded a \$8.3 million and a \$7.8 million liability at June 30, 2016, and December 31, 2015, respectively.

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There are various lawsuits and claims pending against the Company and its consolidated subsidiaries. We do not currently expect the resolution of these lawsuits and claims to materially affect the consolidated financial position, results of operations, or cash flows of the Company.

12. Retirement Benefits

Net periodic benefit (credit) cost of our U.S. pension plans (including our unfunded nonqualified plans), non-U.S. pension plans, and postretirement health care and life insurance benefit plans for the three months ended June 30, 2016 and 2015, respectively, follow:

| | U.S. Pension Plans | | Non-U.S. Pension Plans | | Other Benefit Plans | |
|------------------------------------|-----------------------------|------------|------------------------|--------|---------------------|--------|
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| | Three Months Ended June 30, | | | | | |
| | (Dollars in thousands) | | | | | |
| Service cost | \$ 4 | \$ 5 | \$ 371 | \$ 383 | \$ — | \$ — |
| Interest cost | 3,937 | 4,697 | 954 | 915 | 236 | 242 |
| Expected return on plan assets | (4,935) | (7,291) | (525) | (674) | — | — |
| Amortization of prior service cost | 3 | 3 | 11 | 15 | — | — |
| Net periodic benefit (credit) cost | \$ (991) | \$ (2,586) | \$ 811 | \$ 639 | \$ 236 | \$ 242 |

Net periodic benefit (credit) cost for the six months ended June 30, 2016 and 2015, respectively, follow:

| | U.S. Pension Plans | | Non-U.S. Pension Plans | | Other Benefit Plans | |
|---------------|---------------------------|-------|------------------------|--------|---------------------|------|
| | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 |
| | Six Months Ended June 30, | | | | | |
| | (Dollars in thousands) | | | | | |
| Service cost | \$ 9 | \$ 9 | \$ 734 | \$ 774 | \$ — | \$ — |
| Interest cost | 7,875 | 9,395 | 1,893 | 1,838 | 472 | 485 |

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| | | | | | | |
|------------------------------------|------------|------------|----------|----------|--------|--------|
| Expected return on plan assets | (9,870) | (14,583) | (1,045) | (1,349) | — | — |
| Amortization of prior service cost | 6 | 6 | 22 | 30 | — | — |
| Net periodic benefit (credit) cost | \$ (1,980) | \$ (5,173) | \$ 1,604 | \$ 1,293 | \$ 472 | \$ 485 |

Net periodic benefit (credit) for our U.S. pension plans for the six months ended June 30, 2016 decreased from the prior year due to reduced plan assets as a result of executing our terminated-vested buyout program in the fourth quarter of 2015. Net periodic benefit cost for our non-U.S. pension plans and our postretirement health care and life insurance benefit plans did not change significantly compared with the prior-year same period.

In 2015, the Company initiated and executed on a buyout of terminated vested participants in our U.S defined benefit pension plan. In October 2015, the buyout was funded and reduced plan assets and liability by approximately \$71 million.

13. Stock-Based Compensation

On May 22, 2013, our shareholders approved the 2013 Omnibus Incentive Plan (the “Plan”), which was adopted by the Board of Directors on February 22, 2013, subject to shareholder approval. The Plan’s purpose is to promote the Company’s long-term financial interests and growth by attracting, retaining and motivating high quality key employees and directors, motivating such employees and directors to achieve the Company’s short- and long-range performance goals and objectives and thereby align their interests with those of the Company’s shareholders. The Plan reserves 4,400,000 shares of common stock to be issued for grants of several different types of long-term incentives including stock options, stock appreciation rights, restricted shares, performance shares, other common stock based awards, and dividend equivalent rights.

In the first half of 2016, our Board of Directors granted 0.3 million stock options, 0.3 million performance share units and 0.3 million deferred stock units under the Plan.

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We estimate the fair value of each stock option on the date of grant using the Black-Scholes option pricing model. The following table details the weighted-average grant-date fair values and the assumptions used for estimating the fair values of stock option grants made during the six months ended June 30, 2016:

| | Stock Options |
|--|------------------|
| Weighted-average grant-date fair value | \$ 4.92 |
| Expected life, in years | 6.0 |
| Risk-free interest rate | 1.6 % |
| Expected volatility | 53.6 % |

The weighted average grant date fair value of our performance share units granted in the six months ended June 30, 2016, was \$10.02. We measure the fair value of performance share units based on the closing market price of our common stock on the date of the grant. These shares are evaluated each reporting period for likelihood of achieving the performance criteria.

We measure the fair value of deferred stock units based on the closing market price of our common stock on the date of the grant, which is when the awards immediately vest. The weighted-average fair value per unit for grants made during the six months ended June 30, 2016, was \$10.43.

We recognized stock-based compensation expense of \$2.2 million for the six months ended June 30, 2016, and \$8.0 million for the six months ended June 30, 2015. At June 30, 2016, unearned compensation cost related to the unvested portion of all stock-based awards was approximately \$10.5 million and is expected to be recognized over the remaining vesting period of the respective grants, through the first quarter of 2019.

14. Restructuring and Cost Reduction Programs

In 2013, we initiated a Global Cost Reduction Program that was designed to address three key areas of the company - (1) business realignment, (2) operational efficiency and (3) corporate and back office functions. Business realignment was targeted at right-sizing our commercial management organizations globally. The operational efficiency component of the program was designed to improve the efficiency of our plant operations and supply chain. The corporate and back office initiative relates to work that we are doing with our strategic partners in the areas of finance and accounting and information technology outsourcing, and procurement. The restructuring charges for the three and six months ended June 30, 2016, primarily consists of implementing this strategy for our recently acquired acquisitions. The cumulative charges incurred to date associated with this Program are \$51.3 million. Total costs related to the Program expected to be incurred, as of June 30, 2016, are approximately \$51.3 million. Total restructuring charges were \$0.8 million and \$1.7 million for the three and six months ended June 30, 2016, respectively, and \$1.1 million and \$1.5 million for the three and six months ended June 30, 2015, respectively.

The activities and accruals related to our restructuring and cost reduction programs are summarized below:

| | Employee Severance | Other Costs | Total |
|-------------------------------|------------------------|----------------|----------|
| | (Dollars in thousands) | | |
| Balances at December 31, 2015 | \$ 693 | \$ 2,077 | \$ 2,770 |
| Restructuring charges | 1,141 | 527 | 1,668 |
| Cash payments | (1,144) | (932) | (2,076) |
| Non-cash items | 19 | 36 | 55 |
| Balances at June 30, 2016 | \$ 709 | \$ 1,708 | \$ 2,417 |

We expect to make cash payments to settle the remaining liability for employee termination benefits and other costs over the next twelve months, except where legal or contractual restrictions prevent us from doing so.

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15. Earnings Per Share

Details of the calculation of basic and diluted earnings per share are shown below:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|--|-----------|------------------------------|-----------|
| | 2016 | 2015 | 2016 | 2015 |
| | (Dollars in thousands, except per share amounts) | | | |
| Basic earnings per share computation: | | | | |
| Net income attributable to Ferro Corporation common shareholders | \$ 18,969 | \$ 6,599 | \$ 9,003 | \$ 17,569 |
| Adjustment for loss from discontinued operations | 5,748 | 5,646 | 35,242 | 9,602 |
| Total | \$ 24,717 | \$ 12,245 | \$ 44,245 | \$ 27,171 |
| Weighted-average common shares outstanding | 83,209 | 87,264 | 83,260 | 87,189 |
| Basic earnings per share from continuing operations attributable to Ferro Corporation common shareholders | \$ 0.30 | \$ 0.14 | \$ 0.53 | \$ 0.31 |
| Diluted earnings per share computation: | | | | |
| Net income attributable to Ferro Corporation common shareholders | \$ 18,969 | \$ 6,599 | \$ 9,003 | \$ 17,569 |
| Adjustment for loss from discontinued operations | 5,748 | 5,646 | 35,242 | 9,602 |
| Total | \$ 24,717 | \$ 12,245 | \$ 44,245 | \$ 27,171 |
| Weighted-average common shares outstanding | 83,209 | 87,264 | 83,260 | 87,189 |
| Assumed exercise of stock options | 551 | 552 | 462 | 547 |
| Assumed exercise of deferred stock unit conditions | 80 | 108 | — | 87 |
| Assumed satisfaction of restricted stock unit conditions | 473 | 300 | 419 | 264 |
| Assumed satisfaction of performance stock unit conditions | 111 | 576 | 58 | 569 |
| Weighted-average diluted shares outstanding | 84,424 | 88,800 | 84,199 | 88,656 |
| Diluted earnings per share from continuing operations attributable to Ferro Corporation common shareholders | \$ 0.29 | \$ 0.14 | \$ 0.53 | \$ 0.31 |

The number of anti-dilutive or unearned shares was 2.5 million and 2.8 million for the three and six months ended June 30, 2016, respectively, and 2.0 million and 2.1 million for the three and six months ended June 30, 2015. These shares were excluded from the calculation of diluted earnings per share due to their anti-dilutive impact.

16. Share Repurchase Program

On July 29, 2015, the Company's Board of Directors approved a share repurchase program, under which the Company was authorized to repurchase up to \$25 million of the Company's outstanding shares of Common Stock on the open market, including through a Rule 10b5-1 plan, or in privately negotiated transactions. On February 18, 2016, and

October 16, 2015, the Company's Board of Directors approved follow-on share repurchase programs, authorizing the Company to repurchase an additional \$25 million of the Company's outstanding shares of common stock under each program.

The timing and amount of shares to be repurchased will be determined by the Company, based on evaluation of market and business conditions, share price, and other factors. The share repurchase programs do not obligate the Company to repurchase any dollar amount or number of common shares, and may be suspended or discontinued at any time.

For the six months ended June 30, 2016, the Company repurchased 1,175,437 shares of common stock at an average price of \$9.72 per share for a total cost of \$11.4 million. Under the total share repurchase programs, the Company repurchased 4,458,345 shares of common stock, at an average price of \$11.21 per share, for a total cost of \$50.0 million. As of June 30, 2016, \$25.0 million may still be purchased under the programs.

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17. Accumulated Other Comprehensive Income (Loss)

Changes in accumulated other comprehensive income (loss) by component, net of tax, were as follows:

| | Three Months Ended June 30, | | | Total |
|---|---|----------------------------|----------------------|-------------|
| | Postretirement Benefit Liability Adjustments (Dollars in thousands) | Translation Adjustments | Other Adjustments | |
| Balances at March 31, 2015 | \$ 904 | \$ (59,281) | \$ (70) | \$ (58,447) |
| Other comprehensive income (loss) before reclassifications | — | 9,408 | — | 9,408 |
| Amounts reclassified from accumulated other comprehensive (loss) income | (18) | — | — | (18) |
| Net current period other comprehensive (loss) income | (18) | 9,408 | — | 9,390 |
| Balances at June 30, 2015 | \$ 886 | \$ (49,873) | \$ (70) | \$ (49,057) |
| Balances at March 31, 2016 | 1,079 | (63,769) | (70) | (62,760) |
| Other comprehensive income (loss) before reclassifications | — | (3,117) | — | (3,117) |
| Amounts reclassified from accumulated other comprehensive income (loss) | 27 | — | — | 27 |
| Net current period other comprehensive income (loss) | 27 | (3,117) | — | (3,090) |
| Balances at June 30, 2016 | \$ 1,106 | \$ (66,886) | \$ (70) | \$ (65,850) |
| | Six Months Ended June 30, | | | |
| | Postretirement Benefit Liability Adjustments (Dollars in thousands) | Translation Adjustments | Other Adjustments | Total |
| Balances at December 31, 2014 | \$ 888 | \$ (22,623) | \$ (70) | \$ (21,805) |
| Other comprehensive income (loss) before reclassifications | — | (27,250) | — | (27,250) |
| Amounts reclassified from accumulated other comprehensive (loss) income | (2) | — | — | (2) |
| Net current period other comprehensive (loss) income | (2) | (27,250) | — | (27,252) |
| Balances at June 30, 2015 | 886 | (49,873) | (70) | (49,057) |

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| | | | | |
|---|----------|-------------|---------|-------------|
| Balances at December 31, 2015 | 811 | (62,059) | (70) | (61,318) |
| Other comprehensive income (loss) before reclassifications | — | (4,827) | — | (4,827) |
| Amounts reclassified from accumulated other comprehensive income (loss) | 295 | — | — | 295 |
| Net current period other comprehensive income (loss) | 295 | (4,827) | — | (4,532) |
| Balances at June 30, 2016 | \$ 1,106 | \$ (66,886) | \$ (70) | \$ (65,850) |

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18. Reporting for Segments

Net sales to external customers by segment are presented in the table below. Sales between segments were not material.

| | Three Months Ended | | Six Months Ended | |
|------------------------------|------------------------|------------|------------------|------------|
| | June 30, 2016 | 2015 | June 30, 2016 | 2015 |
| | (Dollars in thousands) | | | |
| Performance Coatings | \$ 140,589 | \$ 139,460 | \$ 268,713 | \$ 276,246 |
| Performance Colors and Glass | 95,933 | 98,729 | 184,103 | 198,193 |
| Pigments, Powders and Oxides | 61,455 | 30,025 | 122,612 | 56,547 |
| Total net sales | \$ 297,977 | \$ 268,214 | \$ 575,428 | \$ 530,986 |

Each segment's gross profit and reconciliations to income before income taxes are presented in the table below:

| | Three Months Ended | | Six Months Ended | |
|--|------------------------|-----------|------------------|-----------|
| | June 30, 2016 | 2015 | June 30, 2016 | 2015 |
| | (Dollars in thousands) | | | |
| Performance Coatings | \$ 39,234 | \$ 35,144 | \$ 71,349 | \$ 64,019 |
| Performance Colors and Glass | 36,705 | 33,389 | 68,543 | 67,878 |
| Pigments, Powders and Oxides | 22,404 | 9,292 | 42,690 | 17,146 |
| Other cost of sales | 30 | (185) | 20 | (768) |
| Total gross profit | 98,373 | 77,640 | 182,602 | 148,275 |
| Selling, general and administrative expenses | 57,871 | 52,695 | 110,517 | 102,151 |
| Restructuring and impairment charges | 787 | 1,116 | 1,668 | 1,625 |
| Other expense, net | 6,371 | 5,719 | 9,291 | 10,959 |
| Income before income taxes | \$ 33,344 | \$ 18,110 | \$ 61,126 | \$ 33,540 |

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Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Overview

Net sales for the three months ended June 30, 2016, increased by \$29.8 million, or 11.1%, compared with the prior-year same period. The increase in net sales was primarily driven by sales from Nubiola of \$30.8 million, which was acquired in the third quarter of 2015. During the three months ended June 30, 2016, gross profit increased \$20.7 million, or 26.7%, compared with the prior-year same period; and, as a percentage of net sales, it increased approximately 410 basis points to 33.0%. The increase was driven by higher gross profit attributable to Pigments, Powders and Oxides, Performance Coatings, and Performance Colors and Glass of \$13.1 million, \$4.1 million and \$3.3 million, respectively.

For the three months ended June 30, 2016, selling, general and administrative ("SG&A") expenses increased \$5.2 million, or 9.8%, compared with the prior-year same period. The increase was primarily driven by higher SG&A expenses related to Nubiola of \$2.9 million and an increase in pension and other postretirement benefits of \$1.8 million which is a result of the effect of a lower expected return on plan assets in the current year as a result of executing our terminated-vested buyout program in the fourth quarter of 2015.

For the three months ended June 30, 2016, net income was \$19.1 million, compared with net income of \$6.8 million for the prior-year same period, and net income attributable to common shareholders was \$19.0 million, compared with net income attributable to common shareholders of \$6.6 million for the prior-year same period. Income from continuing operations was \$24.9 million for the three months ended June 30, 2016, compared with income from continuing operations of \$12.4 million for the three months ended June 30, 2015. Our total gross profit for the second quarter of 2016 was \$98.4 million, compared with \$77.6 million for the three months ended June 30, 2015.

Outlook

The Company delivered strong performance in the second quarter of 2016, despite challenging economic conditions in Latin America and Asia. Sales increased 11% due to recent acquisitions. In addition, gross profit, as a percentage of net sales, increased to 33.0% from 28.9%. Partially offsetting the higher gross profit were increased SG&A costs, primarily driven by recent acquisitions and a reduction in pension and postretirement benefits income. Our effective tax rate for the second quarter of 2016 was 25.4%, compared with 31.4% in the second quarter of 2015. We continue to expect the full year 2016 tax rate to be in the range of 27% - 28%.

For the remainder of 2016, we anticipate benefitting from strategic actions taken to improve growth in our core businesses and will continue to benefit from recent acquisitions. We expect tile sales, particularly in Asia, the Middle East and North Africa, and Southern Europe will continue to stabilize and rebound, providing growth. Certain economies where we, or our customers, participate, however, are expected to remain weak, including Argentina and Brazil. The net impact is expected to result in increased sales growth over the remainder of the year, before consideration of foreign currency impacts. Gross profit as a percentage of net sales is expected to be greater than 2015 levels due to strong volumes and a richer product mix.

We remain focused on the integration of Vetriceramici, Nubiola, Al Salomi, Ferer, and Pinturas and continue to work toward achieving the identified synergies. We will continue to focus on opportunities to optimize our cost structure and make our business processes and systems more efficient, and to leverage tax planning opportunities. We continue to expect cash flow from operating activities to be positive for the year, providing additional liquidity.

Further, we are continuing efforts to divest our Europe-based Polymer Additives assets, including the Antwerp, Belgium dibenzoates manufacturing assets, and related Polymer Additives European headquarters and lab facilities. The assets associated with this facility are currently classified as held-for-sale on our condensed consolidated balance sheets.

Factors that could adversely affect our future performance include those described under the heading “Risk Factors” in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2015.

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Results of Operations - Consolidated

Comparison of the three months ended June 30, 2016 and 2015

For the three months ended June 30, 2016, income from continuing operations was \$24.9 million, compared with \$12.4 million income from continuing operations for the three months ended June 30, 2015. Net income was \$19.1 million, compared with net income of \$6.8 million for the three months ended June 30, 2015. For the three months ended June 30, 2016, net income attributable to common shareholders was \$19.0 million, or earnings per share of \$0.23, compared with net income attributable to common shareholders of \$6.6 million, or earnings per share of \$0.08, for the three months ended June 30, 2015.

Net Sales

| | Three Months Ended June 30, | | \$ Change | % Change |
|----------------------------------|--------------------------------|-----------|-----------|-------------|
| | 2016 | 2015 | | |
| | (Dollars in thousands) | | | |
| Net sales | 297,977 | 268,214 | 29,763 | 11.1 % |
| Cost of sales | 199,604 | 190,574 | 9,030 | 4.7 % |
| Gross profit | \$ 98,373 | \$ 77,640 | \$ 20,733 | 26.7 % |
| Gross profit as a % of net sales | 33.0 % | 28.9 % | | |

Net sales increased by \$29.8 million, or 11.1%, in the three months ended June 30, 2016, compared with the prior-year same period, driven by higher sales in Pigments, Powders and Oxides and Performance Coatings of \$31.4 million and \$1.1 million, respectively, partially offset by lower sales in Performance Colors and Glass of \$2.8 million.

The increase in net sales was primarily driven by the sales from Nubiola of \$30.8 million, which was acquired in the third quarter of 2015.

Gross Profit

Gross profit increased \$20.7 million, or 26.7%, in the three months ended June 30, 2016, compared to the prior-year same period, and as a percentage of net sales, it increased 410 basis points to 33.0%. The increase was driven by an increase in gross profit attributable to Pigments, Powders and Oxides, Performance Coatings, and Performance Colors and Glass of \$13.1 million, \$4.1 million and \$3.3 million, respectively. The increase in gross profit was primarily due to higher sales volumes and mix of \$12.6 million, lower raw material costs of \$7.9 million and lower manufacturing

costs of \$7.2 million, partially offset by unfavorable product pricing of \$5.5 million and unfavorable foreign currency impacts of \$1.7 million.

Geographic Revenues

The following table presents our sales on the basis of where sales originated.

| | Three Months Ended June 30, | | \$ Change | % Change |
|--|--------------------------------|------------|-----------|-------------|
| | 2016 | 2015 | | |
| (Dollars in thousands) | | | | |
| Geographic Revenues on a sales origination basis | | | | |
| Europe | \$ 138,888 | \$ 121,018 | \$ 17,870 | 14.8 % |
| United States | 76,853 | 72,875 | 3,978 | 5.5 % |
| Asia Pacific | 44,887 | 38,252 | 6,635 | 17.3 % |
| Latin America | 37,349 | 36,069 | 1,280 | 3.5 % |
| Net sales | \$ 297,977 | \$ 268,214 | \$ 29,763 | 11.1 % |

The increase in net sales of \$29.8 million, compared with the prior-year same period, was driven by an increase in sales across all regions. The increase in Europe was primarily attributable to sales from recent acquisitions, including Nubiola sales of \$12.1 million, Al Salomi sales of \$6.5 million, and Ferer sales of \$1.6 million, partially offset by a decrease in electronic products sales of \$4.3 million. The increase in sales in Asia Pacific was primarily attributable to Nubiola sales of \$4.3 million, which was acquired in the third quarter of 2015 and an increase in sales in Performance Coatings of \$1.8 million. The increase in sales in the United States was

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attributable to Nubiola sales of \$8.2 million, partially offset by lower sales in Performance Colors and Glass of \$5.5 million. The increase in sales in Latin America was attributable to Nubiola sales of \$6.1 million, partially offset by lower sales in Performance Coatings of \$4.3 million.

The following table presents our sales on the basis of where sold products were shipped.

| | Three Months Ended June 30, | | | |
|---|--------------------------------|------------|-----------|-------------|
| | 2016 | 2015 | \$ Change | % Change |
| (Dollars in thousands) | | | | |
| Geographic Revenues on a shipped-to basis | | | | |
| Europe | \$ 136,454 | \$ 119,032 | \$ 17,422 | 14.6 % |
| United States | 60,590 | 52,422 | 8,168 | 15.6 % |
| Asia Pacific | 60,152 | 55,274 | 4,878 | 8.8 % |
| Latin America | 40,781 | 41,486 | (705) | (1.7) % |
| Net sales | \$ 297,977 | \$ 268,214 | \$ 29,763 | 11.1 % |

Selling, General and Administrative Expenses

The following table includes significant components of SG&A and their respective changes between 2016 and 2015:

| | Three Months Ended June 30, | | | |
|---|--------------------------------|-----------|-----------|-----------|
| | 2016 | 2015 | \$ Change | % Change |
| (Dollars in thousands) | | | | |
| Personnel expenses | \$ 28,751 | \$ 27,832 | \$ 919 | 3.3 % |
| Incentive compensation | 3,161 | 72 | 3,089 | 4,290.3 % |
| Stock-based compensation | 2,211 | 5,866 | (3,655) | (62.3) % |
| Pension and other postretirement benefits | 104 | (1,705) | 1,809 | (106.1) % |
| Bad debt | 345 | 140 | 205 | 146.4 % |

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|--|-----------|-----------|----------|------|---|
| Business development | 3,855 | 3,021 | 834 | 27.6 | % |
| All other expenses | 19,444 | 17,469 | 1,975 | 11.3 | % |
| Selling, general and administrative expenses | \$ 57,871 | \$ 52,695 | \$ 5,176 | 9.8 | % |

SG&A expenses were \$5.2 million higher in the three months ended June 30, 2016, compared with the prior-year same period. Included in SG&A expenses were \$2.9 million and \$0.4 million of expenses attributable to Nubiola and Ferer, which were acquired in the third quarter of 2015 and the first quarter of 2016, respectively. The increase in incentive compensation expense of \$3.1 million is a result of the Company's performance relative to targets for certain awards compared with the prior year. The increase in pension and other postretirement benefits of \$1.8 million is a result of the effect of a lower expected return on plan assets in the current year as a result of executing our terminated-vested buyout program in the fourth quarter of 2015. These increases were partially mitigated by lower stock-based compensation expense of \$3.7 million.

The following table presents SG&A expenses attributable to sales, research and development and operations costs as strategic services and other SG&A costs as functional services.

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| | Three Months Ended June 30, | | | |
|--|--------------------------------|-----------|-----------|-----------|
| | 2016 | 2015 | \$ Change | % Change |
| | (Dollars in thousands) | | | |
| Strategic services | \$ 29,012 | \$ 26,261 | \$ 2,751 | 10.5 % |
| Functional services | 23,487 | 20,496 | 2,991 | 14.6 % |
| Incentive compensation | 3,161 | 72 | 3,089 | 4,290.3 % |
| Stock-based compensation | 2,211 | 5,866 | (3,655) | (62.3) % |
| Selling, general and administrative expenses | \$ 57,871 | \$ 52,695 | \$ 5,176 | 9.8 % |

SG&A expenses were \$5.2 million higher in the three months ended June 30, 2016, compared with the prior-year same period. The increase in strategic and functional services was driven by an increase in expenses from recently acquired acquisitions of \$2.5 million and \$1.1 million, respectively. The increase in functional services was also driven by the increase in pension and other postretirement benefits of \$1.8 million.

Restructuring and Impairment Charges

| | Three Months Ended June 30, | | | |
|--------------------------------------|-----------------------------------|----------|-----------|----------|
| | 2016 | 2015 | \$ Change | % Change |
| | (Dollars in thousands) | | | |
| Employee severance | \$ 609 | \$ 1,019 | \$ (410) | (40.2) % |
| Other restructuring costs | 178 | 97 | 81 | 83.5 % |
| Restructuring and impairment charges | \$ 787 | \$ 1,116 | \$ (329) | (29.5) % |

Restructuring and impairment charges decreased in the second quarter of 2016 compared with the prior-year same period. The decrease was primarily due to less costs associated with employee severance during the three months ended June 30, 2016, compared with the prior-year same period.

Interest Expense

| | Three Months Ended June 30, | | | |
|---------------------------|-----------------------------------|----------|--------------|-------------|
| | 2016 | 2015 | \$ Change | % Change |
| | (Dollars in thousands) | | | |
| Interest expense | \$ 5,118 | \$ 3,325 | \$ 1,793 | 53.9 % |
| Amortization of bank fees | 329 | 289 | 40 | 13.8 % |
| Interest capitalization | (19) | (504) | 485 | (96.2)% |
| Interest expense | \$ 5,428 | \$ 3,110 | \$ 2,318 | 74.5 % |

Interest expense increased the second quarter of 2016 compared with the prior-year same period. The increase in interest expense was due to an increase in the average long-term debt balance during the three months ended June 30, 2016, compared with the prior-year same period, as well as less interest capitalization associated with long-term capital projects.

Income Tax Expense

During the second quarter of 2016, income tax expense was \$8.5 million, or 25.4% of pre-tax income. In the second quarter of 2015, we recorded tax expense of \$5.7 million, or 31.4% of pre-tax income. The tax expense in the second quarter of 2016 and 2015, as a percentage of pre-tax income, is lower than the U.S. federal statutory income tax rate of 35% primarily as a result of foreign statutory rate differences. Second quarter 2015 tax expense was further lowered as a result of pre-tax losses in jurisdictions for which no tax benefit was recognized net against the benefit of pre-tax income in jurisdictions with no tax expense due to the utilization of fully valued tax attributes.

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Results of Operations - Segment Information

Comparison of the three months ended June 30, 2016 and 2015

Performance Coatings

| | Three Months Ended June 30, | | \$ Change | % Change | Change due to Volume / | | | |
|---|--------------------------------|------------|--------------|-------------|---------------------------|-----------|------------|-------|
| | 2016 | 2015 | | | Price | Mix | Currency | Other |
| | (Dollars in thousands) | | | | | | | |
| Segment net sales | \$ 140,589 | \$ 139,460 | \$ 1,129 | 0.8 % | \$ (4,941) | \$ 13,647 | \$ (7,577) | \$ — |
| Segment gross profit | 39,234 | 35,144 | 4,090 | 11.6 % | (4,941) | 3,932 | (1,621) | 6,720 |
| Gross profit as a % of segment net sales | 27.9 % | 25.2 % | | | | | | |

Net sales increased in Performance Coatings compared with the prior-year same period, driven by an increase in sales from Al Salomi of \$6.5 million, which was acquired in the fourth quarter of 2015, \$0.8 million in porcelain enamel, and \$0.2 million in other tile products, partially offset by decrease of \$4.0 million in frits and glazes, \$1.1 million in digital inks, \$0.7 million in color products, and \$0.6 million due to the sale of our interest in an operating affiliate in Venezuela (“Venezuela”) in the fourth quarter of 2015. The increase in net sales was driven by increased sales volume and mix of \$13.6 million, partially offset by unfavorable foreign currency impacts of \$7.6 million and lower product pricing of \$4.9 million. Gross profit increased \$4.1 million from the prior-year same period, primarily driven by higher sales volumes and mix of \$3.9 million, lower manufacturing costs of \$3.9 million, and lower raw materials of \$2.8 million, partially offset by unfavorable product pricing impacts of \$4.9 million and unfavorable foreign currency impacts of \$1.6 million.

| | Three Months Ended June 30, | | \$ Change | % Change |
|-----------------------------|--------------------------------|-----------|-----------|-------------|
| | 2016 | 2015 | | |
| | (Dollars in thousands) | | | |
| Segment net sales by Region | | | | |
| Europe | \$ 80,224 | \$ 76,395 | \$ 3,829 | 5.0 % |

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| | | | | |
|---------------|------------|------------|----------|---------|
| Latin America | 26,165 | 31,036 | (4,871) | (15.7)% |
| Asia Pacific | 22,502 | 20,751 | 1,751 | 8.4 % |
| United States | 11,698 | 11,278 | 420 | 3.7 % |
| Total | \$ 140,589 | \$ 139,460 | \$ 1,129 | 0.8 % |

The net sales increase of \$1.1 million was driven by increases in Europe, Asia Pacific and the United States, partially offset by a decrease in Latin America. The increase in sales in Europe was primary attributable to \$6.5 million in sales from Al Salomi, which was acquired in the fourth quarter of 2015, partially offset by a decrease in sales in other tile product lines and color products of \$1.3 million and \$1.1 million, respectively. The sales increase in Asia Pacific was driven by higher sales in digital inks and frits and glazes of \$1.0 million and \$1.0 million, respectively, and the increase in sales in the United States was driven by higher sales in porcelain enamel of \$0.4 million. The sales decrease in Latin America was primarily driven by lower sales in frits and glazes of \$6.5 million, partially mitigated by increased sales in other tile product lines of \$1.5 million.

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Performance Colors and Glass

| | Three Months Ended June 30, | | \$ Change | % Change | Change due to Volume / | | | |
|---|--------------------------------|-----------|------------|-------------|---------------------------|------------|----------|-------|
| | 2016 | 2015 | | | Price | Mix | Currency | Other |
| | (Dollars in thousands) | | | | | | | |
| Segment net sales | \$ 95,933 | \$ 98,729 | \$ (2,796) | (2.8) % | \$ (289) | \$ (1,922) | \$ (585) | \$ — |
| Segment gross profit | 36,705 | 33,389 | 3,316 | 9.9 % | (289) | (2,164) | (109) | 5,878 |
| Gross profit as a % of segment net sales | 38.3 % | 33.8 % | | | | | | |

Net sales decreased compared with the prior-year same period, primarily driven by lower sales of our electronics and decoration products of \$4.2 million and \$2.5 million, respectively, partially mitigated by higher sales of automotive products of \$2.1 million and \$1.2 million of sales attributable to Ferer, which was acquired in the first quarter of 2016. Net sales were impacted by unfavorable volume and mix of \$1.9 million, unfavorable foreign currency impacts of \$0.6 million, and lower product pricing of \$0.3 million. Gross profit increased from the prior-year same period, primarily due to lower raw material costs of \$3.6 million and favorable manufacturing costs of \$2.2 million, partially offset by lower sales volumes and mix of \$2.2 million, lower product pricing of \$0.3 million and unfavorable foreign currency impacts of \$0.1 million.

| | Three Months Ended June 30, | | \$ Change | % Change |
|-----------------------------|--------------------------------|-----------|------------|-------------|
| | 2016 | 2015 | | |
| | (Dollars in thousands) | | | |
| Segment net sales by Region | | | | |
| Europe | \$ 41,960 | \$ 40,070 | \$ 1,890 | 4.7 % |
| United States | 34,420 | 39,883 | (5,463) | (13.7) % |
| Asia Pacific | 14,750 | 14,123 | 627 | 4.4 % |
| Latin America | 4,803 | 4,653 | 150 | 3.2 % |
| Total | \$ 95,933 | \$ 98,729 | \$ (2,796) | (2.8) % |

The net sales decline of \$2.8 million was driven by lower sales in the United States, partially mitigated by increased sales in Europe, Asia Pacific and Latin America. The decrease in sales in the United States was attributable to lower

sales in electronics and decoration products of \$4.3 million and \$1.2 million, respectively. The increase in Europe was primarily attributable to \$1.2 million and \$0.6 million in sales from Ferer and Pinturas, which were acquired in the first quarter of 2016 and the second quarter of 2016, respectively. The increases in Asia Pacific and Latin America were primarily due to higher sales of automotive products of \$1.0 million and \$0.2 million, respectively.

Pigments, Powders and Oxides

| | Three Months Ended June 30, | | \$ Change | % Change | Change due to Volume / | | | |
|---|--------------------------------|-----------|-----------|-------------|---------------------------|-----------|----------|-------|
| | 2016 | 2015 | | | Price | Mix | Currency | Other |
| | (Dollars in thousands) | | | | | | | |
| Segment net sales | \$ 61,455 | \$ 30,025 | \$ 31,430 | 104.7 % | \$ (288) | \$ 31,762 | \$ (44) | \$ — |
| Segment gross profit | 22,404 | 9,292 | 13,112 | 141.1 % | (288) | 10,785 | (5) | 2,620 |
| Gross profit as a % of segment net sales | 36.5 % | 30.9 % | | | | | | |

Net sales increased compared with the prior-year same period, primarily due to sales from Nubiola of \$30.8 million, which was acquired in the third quarter of 2015. Net sales were positively impacted by higher volumes and mix, excluding the increase from Nubiola, of \$1.0 million, partially offset by lower product pricing of \$0.3 million. Gross profit increased from the prior-year same

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period, primarily due to favorable sales volumes and mix of \$10.8 million, favorable raw material costs of \$1.5 million, and lower manufacturing costs of \$1.1 million, partially offset by unfavorable product pricing of \$0.3 million.

| | Three Months Ended | | | |
|-----------------------------|--------------------|-----------|-----------|-----------|
| | June 30, | | | |
| | 2016 | 2015 | \$ Change | % Change |
| (Dollars in thousands) | | | | |
| Segment net sales by Region | | | | |
| United States | \$ 30,735 | \$ 21,714 | \$ 9,021 | 41.5 % |
| Europe | 16,704 | 4,553 | 12,151 | 266.9 % |
| Asia Pacific | 7,635 | 3,378 | 4,257 | 126.0 % |
| Latin America | 6,381 | 380 | 6,001 | 1,579.2 % |
| Total | \$ 61,455 | \$ 30,025 | \$ 31,430 | 104.7 % |

Net sales increased \$31.4 million, primarily driven by increased sales from Nubiola of \$30.8 million, which was acquired in the third quarter of 2015, and contributed to the increased sales in all regions.

Comparison of the six months ended June 30, 2016 and 2015

For the six months ended June 30, 2016, income from continuing operations was \$44.6 million, compared with \$25.4 million income from continuing operations for the six months ended June 30, 2015. Net income was \$9.4 million, which includes an impairment charge from discontinued operations of \$24.1 million, for the six months ended June 30, 2016, compared with net income of \$15.8 million for the six months ended June 30, 2015. For the six months ended months ended June 30, 2016, net income attributable to common shareholders was \$9.0 million, or earnings per share of \$0.11, compared with net income attributable to common shareholders of \$17.6 million, or earnings per share of \$0.20, for the six months ended June 30, 2015.

Net Sales

| | Six Months Ended | | \$ Change | % Change |
|--|------------------|------|-----------|----------|
| | June 30, | | | |
| | 2016 | 2015 | | |

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| | (Dollars in thousands) | | | |
|----------------------------------|------------------------|------------|-----------|--------|
| Net sales | 575,428 | 530,986 | 44,442 | 8.4 % |
| Cost of sales | 392,826 | 382,711 | 10,115 | 2.6 % |
| Gross profit | \$ 182,602 | \$ 148,275 | \$ 34,327 | 23.2 % |
| Gross profit as a % of net sales | 31.7 % | 27.9 % | | |

Net sales increased by \$44.4 million, or 8.4%, in the six months ended June 30, 2016, compared with the prior-year same period driven by higher sales in Pigments, Powders and Oxides of \$66.1 million, partially offset by lower sales in Performance Colors and Glass and Performance Coatings of \$14.1 million and \$7.5 million, respectively. The increase in net sales was primarily driven by the sales from Nubiola of \$64.2 million, which was acquired in the third quarter of 2015, partially offset by a decrease in electronic and decoration products of \$10.0 million and \$7.0 million, respectively.

Gross Profit

Gross profit increased \$34.3 million, or 23.2%, in the six months ended June 30, 2016, compared with the prior-year same period, and as a percentage of net sales, it increased 380 basis points to 31.7%. The increase in gross profit was driven by increases in Pigments, Powders and Oxides, Performance Coatings and Performance Colors and Glass of \$25.5 million, \$7.3 million and \$0.7 million, respectively. The increase was primarily due to higher sales volumes and mix of \$21.6 million, lower raw material costs of \$14.6 million and lower manufacturing costs of \$12.8 million, partially offset by unfavorable product pricing of \$10.7 million and unfavorable foreign currency impacts of \$4.9 million.

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Geographic Revenues

The following table presents our sales on the basis of where sales originated.

| | Six Months Ended June 30, | | | |
|--|------------------------------|------------|-----------|-------------|
| | 2016 | 2015 | \$ Change | % Change |
| | (Dollars in thousands) | | | |
| Geographic Revenues on a sales origination basis | | | | |
| Europe | \$ 267,591 | \$ 236,854 | \$ 30,737 | 13.0 % |
| United States | 147,023 | 141,686 | 5,337 | 3.8 % |
| Asia Pacific | 87,824 | 77,189 | 10,635 | 13.8 % |
| Latin America | 72,990 | 75,257 | (2,267) | (3.0) % |
| Net sales | \$ 575,428 | \$ 530,986 | \$ 44,442 | 8.4 % |

The increase in net sales of \$44.4 million, compared with the prior-year same period, was driven by increases in Europe, Asia Pacific and the United States of \$30.7 million, \$10.6 million and \$5.3 million, respectively, partially offset by a decrease in Latin America of \$2.3 million. The increases in Europe and Asia Pacific were primarily attributable to Nubiola sales of \$25.0 million and \$8.4 million, respectively, which was acquired in the third quarter of 2015. The increase in the United States was attributable to Nubiola sales of \$17.0 million, partially offset by lower sales in Performance Colors and Glass of \$12.4 million. The decrease in sales in Latin America was due to the sale of our interest in an operating affiliate in Venezuela in the fourth quarter of 2015, which accounted for \$5.0 million of the decrease, partially offset by higher sales in Pigments, Powders and Oxides.

The following table presents our sales on the basis of where sold products were shipped.

| Six Months Ended June 30, | | | |
|------------------------------|------|-----------|--|
| 2016 | 2015 | \$ Change | |

| | | | | % Change | |
|---|------------------------|------------|-----------|-------------|---|
| | (Dollars in thousands) | | | | |
| Geographic Revenues on a shipped-to basis | | | | | |
| Europe | \$ 264,790 | \$ 233,915 | \$ 30,875 | 13.2 | % |
| United States | 120,218 | 103,150 | 17,068 | 16.5 | % |
| Asia Pacific | 114,680 | 107,023 | 7,657 | 7.2 | % |
| Latin America | 75,740 | 86,898 | (11,158) | (12.8) | % |
| Net sales | \$ 575,428 | \$ 530,986 | \$ 44,442 | 8.4 | % |

Selling, General and Administrative Expenses

The following table includes SG&A components with significant changes between 2016 and 2015:

| | Six Months Ended June 30, | | | |
|--|------------------------------|------------|-----------|-----------|
| | 2016 | 2015 | \$ Change | % Change |
| | (Dollars in thousands) | | | |
| Personnel expenses | \$ 59,580 | \$ 56,865 | \$ 2,715 | 4.8 % |
| Incentive compensation | 5,146 | 1,724 | 3,422 | 198.5 % |
| Stock-based compensation | 3,837 | 7,980 | (4,143) | (51.9) % |
| Pension and other postretirement benefits | 142 | (3,394) | 3,536 | (104.2) % |
| Bad debt | 223 | (150) | 373 | (248.7) % |
| Business development | 4,955 | 4,639 | 316 | 6.8 % |
| All other expenses | 36,634 | 34,487 | 2,147 | 6.2 % |
| Selling, general and administrative expenses | \$ 110,517 | \$ 102,151 | \$ 8,366 | 8.2 % |

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SG&A expenses were \$8.4 million higher in the six months ended June 30, 2016, compared with the prior-year same period. Included in SG&A expenses were \$6.4 million and \$0.8 million of expenses attributable to Nubiola and Ferer, which were acquired in the third quarter of 2015 and the first quarter of 2016, respectively. The increase in incentive compensation expense of \$3.4 million was a result of the Company's performance relative to targets for certain awards compared with the prior year. The increase in pension and other postretirement benefits of \$3.5 million is a result of the effect of a lower expected return on plan assets in the current year as a result of executing our terminated-vested buyout program in the fourth quarter of 2015. These increases were offset by lower stock-based compensation expense of \$4.1 million.

The following table presents SG&A expenses attributable to sales, research and development and operations costs as strategic services and other SG&A costs as functional services.

| | Six Months Ended June 30, | | | | |
|--|------------------------------|------------|-----------|-------------|---|
| | 2016 | 2015 | \$ Change | % Change | |
| | (Dollars in thousands) | | | | |
| Strategic services | \$ 57,416 | \$ 51,982 | \$ 5,434 | 10.5 | % |
| Functional services | 44,118 | 40,465 | 3,653 | 9.0 | % |
| Incentive compensation | 5,146 | 1,724 | 3,422 | 198.5 | % |
| Stock-based compensation | 3,837 | 7,980 | (4,143) | (51.9) | % |
| Selling, general and administrative expenses | \$ 110,517 | \$ 102,151 | \$ 8,366 | 8.2 | % |

SG&A expenses were \$8.4 million higher in the six months ended June 30, 2016, compared with the prior-year same period. The increase in strategic and functional services was driven by an increase in expenses from recently acquired businesses of \$5.2 million and \$2.5 million, respectively.

Restructuring and Impairment Charges

Six Months Ended

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June 30,

| | 2016 | 2015 | \$ Change | % Change |
|--------------------------------------|----------|----------|--------------|-------------|
| (Dollars in thousands) | | | | |
| Employee severance | \$ 1,141 | \$ 1,290 | \$ (149) | (11.6)% |
| Other restructuring costs | 527 | 335 | 192 | 57.3 % |
| Restructuring and impairment charges | \$ 1,668 | \$ 1,625 | \$ 43 | 2.6 % |

Restructuring and impairment charges did not change significantly in the first six months of 2016 compared with the prior-year same period.

Interest Expense

Six Months Ended
June 30,

| | 2016 | 2015 | \$ Change | % Change |
|---------------------------|-----------|----------|--------------|-------------|
| (Dollars in thousands) | | | | |
| Interest expense | \$ 9,662 | \$ 6,603 | \$ 3,059 | 46.3 % |
| Amortization of bank fees | 644 | 586 | 58 | 9.9 % |
| Interest capitalization | (31) | (929) | 898 | (96.7)% |
| Interest expense | \$ 10,275 | \$ 6,260 | \$ 4,015 | 64.1 % |

Interest expense increased the first six months of 2016 due to an increase in the average long-term debt balance for the 2016 period, compared with the prior-year same period, as well as less interest capitalization associated with long-term capital projects.

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Income Tax Expense

During the first half of 2016, income tax expense was \$16.5 million, or 27.0% of pre-tax income. In the first half of 2015, income tax expense was \$8.1 million, or 24.3% of pre-tax income. The tax expense in the first half of 2016 and 2015, as a percentage of pre-tax income, is lower than the U.S. federal statutory income tax rate of 35% primarily as a result of foreign statutory rate differences. The first half of 2015 tax expense was further lowered as a result of the amount of pre-tax losses in jurisdictions for which no tax benefit is recognized in proportion to the amount of pre-tax income in jurisdictions with no tax expense due to the utilization of fully valued tax attributes. Additionally, the first half of 2015 tax expense was benefited by certain discrete items, which had a favorable impact on the rate of approximately 5%, taking it from approximately 29.0% to 24.3%.

Results of Operations - Segment Information

Comparison of the six months ended June 30, 2016 and 2015

Performance Coatings

| | Six Months Ended June 30, | | Change due to Volume / | | | | | |
|--|------------------------------|------------|---------------------------|-------------|-------------|-----------|-------------|--------|
| | 2016 | 2015 | \$ Change | % Change | Price | Mix | Currency | Other |
| | (Dollars in thousands) | | | | | | | |
| Segment net sales | \$ 268,713 | \$ 276,246 | \$ (7,533) | (2.7) % | \$ (11,406) | \$ 22,392 | \$ (18,519) | \$ — |
| Segment gross profit | 71,349 | 64,019 | 7,330 | 11.4 % | (11,406) | 8,877 | (3,732) | 13,591 |
| Gross profit as a % of segment net sales | 26.6 % | 23.2 % | | | | | | |

Net sales declined in Performance Coatings compared with the prior-year same period, primarily driven by a decrease in sales of \$11.5 million in frits and glazes, \$5.0 million due to the sale of Venezuela, which was sold in the fourth quarter of 2015, and \$2.5 million in porcelain enamel, partially mitigated by \$12.0 million in sales from Al Salomi, which was acquired in the fourth quarter of 2015. The decrease in net sales was driven by unfavorable foreign

currency impacts of \$18.5 million, lower product pricing of \$11.4 million and unfavorable mix of \$2.3 million, partially mitigated by increased sales volume of \$24.7 million. Gross profit increased \$7.3 million from the prior-year same period, primarily driven by lower manufacturing costs of \$9.0 million, higher sales volumes and mix of \$8.9 million, and lower raw materials costs of \$4.6 million, partially offset by unfavorable product pricing impacts of \$11.4 million and unfavorable foreign currency impacts of \$3.7 million.

| | Six Months Ended June 30, | | | |
|-----------------------------|------------------------------|------------|------------|-------------|
| | 2016 | 2015 | \$ Change | % Change |
| | (Dollars in thousands) | | | |
| Segment net sales by Region | | | | |
| Europe | \$ 152,251 | \$ 144,106 | \$ 8,145 | 5.7 % |
| Latin America | 49,410 | 64,710 | (15,300) | (23.6)% |
| Asia Pacific | 44,069 | 43,666 | 403 | 0.9 % |
| United States | 22,983 | 23,764 | (781) | (3.3) % |
| Total | \$ 268,713 | \$ 276,246 | \$ (7,533) | (2.7) % |

The net sales decrease of \$7.5 million was driven by declines in Latin America and the United States, partially mitigated by an increase in Europe and Asia Pacific. The sales decline in Latin America was primarily driven by lower sales from Venezuela of \$5.0 million, which was sold in the fourth quarter of 2015, and lower sales in frits and glazes of \$13.4 million, partially mitigated by increased sales in other tile products of \$2.8 million. The sales decline in the United States was fully attributable to lower sales in porcelain enamel of \$0.8 million. The increase in sales in Europe was primary attributable to \$12.0 million in sales from Al Salomi, which was acquired in the fourth quarter of 2015, partially offset by decreased sales in digital inks of \$3.0 million. The increase in

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Asia Pacific was primarily due to increased sales in digital inks and frits and glazes of \$1.8 million and \$0.5 million, partially offset by decreased sales in porcelain enamel of \$1.9 million.

Performance Colors and Glass

| | Six Months Ended June 30, | | \$ Change | % Change | Change due to Volume / | | | |
|---|------------------------------|------------|-------------|-------------|---------------------------|-------------|------------|-------|
| | 2016 | 2015 | | | Price | Mix | Currency | Other |
| | (Dollars in thousands) | | | | | | | |
| Segment net sales | \$ 184,103 | \$ 198,193 | \$ (14,090) | (7.1)% | \$ 636 | \$ (11,373) | \$ (3,353) | \$ — |
| Segment gross profit | 68,543 | 67,878 | 665 | 1.0 % | 636 | (8,654) | (1,043) | 9,726 |
| Gross profit as a % of segment net sales | 37.2 % | 34.2 % | | | | | | |

Net sales decreased compared with the prior-year same period, primarily driven by lower sales of our electronics, decoration and industrial products of \$10.0 million, \$7.0 million and \$1.7 million, respectively, partially mitigated by increased sales attributable to Ferret of \$2.8 million, which was acquired in the first quarter of 2016, and automobile products of \$1.8 million. Net sales were impacted by unfavorable volume and mix of \$11.4 million and unfavorable foreign currency impacts of \$3.4 million, partially mitigated by higher product pricing of \$0.6 million. Gross profit increased from the prior-year same period, primarily due to lower raw material costs of \$7.3 million, lower manufacturing costs of \$2.4 million and higher product pricing of \$0.6 million, partially offset by lower sales volumes and mix of \$8.7 million and unfavorable foreign currency impacts of \$1.0 million.

| | Six Months Ended June 30, | | \$ Change | % Change |
|-----------------------------|------------------------------|-----------|------------|-------------|
| | 2016 | 2015 | | |
| | (Dollars in thousands) | | | |
| Segment net sales by Region | | | | |
| Europe | \$ 81,057 | \$ 83,517 | \$ (2,460) | (2.9) % |
| United States | 64,909 | 77,331 | (12,422) | (16.1)% |

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| | | | | | |
|---------------|------------|------------|-------------|-------|---|
| Asia Pacific | 28,990 | 27,597 | 1,393 | 5.0 | % |
| Latin America | 9,147 | 9,748 | (601) | (6.2) | % |
| Total | \$ 184,103 | \$ 198,193 | \$ (14,090) | (7.1) | % |

The net sales decline of \$14.1 million was driven by lower sales in the United States, Europe, and Latin America, partially mitigated by increased sales in Asia Pacific. The decrease in sales in the United States was attributable to lower sales across all product lines, and the decline in sales in Europe and Latin America was primarily due to lower sales of decoration products of \$4.2 million and \$0.8 million, respectively. The decreased sales in Europe was partially mitigated by increased sales attributable to Ferer of \$2.8 million, which was acquired in the first quarter of 2016. The increase in sales in Asia Pacific was primarily due to higher sales of automotive products of \$1.9 million, partially offset by lower sales in industrial products of \$0.4 million.

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Pigments, Powders and Oxides

| | Six Months Ended June 30, | | Change due to Volume / | | | | | |
|---|------------------------------|-----------|---------------------------|-------------|--------|-----------|----------|-------|
| | 2016 | 2015 | \$ Change | % Change | Price | Mix | Currency | Other |
| | (Dollars in thousands) | | | | | | | |
| Segment net sales | \$ 122,612 | \$ 56,547 | \$ 66,065 | 116.8 % | \$ 101 | \$ 66,355 | \$ (391) | \$ — |
| Segment gross profit | 42,690 | 17,146 | 25,544 | 149.0 % | 101 | 21,406 | (107) | 4,144 |
| Gross profit as a % of segment net sales | 34.8 | % 30.3 | % | | | | | |

Net sales increased compared with the prior-year same period, primarily due to higher sales from Nubiola of \$64.2 million, which was acquired in the third quarter of 2015. Net sales were positively impacted by higher volumes and mix of \$66.4 million and favorable product pricing of \$0.1 million, partially offset by unfavorable foreign currency impacts of \$0.4 million. Gross profit increased from the prior-year same period, primarily due to higher sales volumes and mix of \$21.4 million, favorable raw material costs of \$2.7 million, lower manufacturing costs of \$1.4 million and favorable product pricing of \$0.1 million, partially offset by unfavorable foreign currency impacts of \$0.1 million.

| | Six Months Ended June 30, | | | |
|-----------------------------|------------------------------|-----------|-----------|-----------|
| | 2016 | 2015 | \$ Change | % Change |
| | (Dollars in thousands) | | | |
| Segment net sales by Region | | | | |
| United States | \$ 59,131 | \$ 40,591 | \$ 18,540 | 45.7 % |
| Europe | 34,283 | 9,231 | 25,052 | 271.4 % |
| Asia Pacific | 14,765 | 5,926 | 8,839 | 149.2 % |
| Latin America | 14,433 | 799 | 13,634 | 1,706.4 % |
| Total | \$ 122,612 | \$ 56,547 | \$ 66,065 | 116.8 % |

Net sales increased \$66.1 million, primarily driven by increased sales from Nubiola of \$64.2 million, which was acquired in the third quarter of 2015, and contributed to the increased sales in all regions.

Summary of Cash Flows for the six months ended June 2016 and 2015

| | Six Months Ended | | |
|--|------------------------|-----------|-------------|
| | June 30, | | |
| | 2016 | 2015 | \$ Change |
| | (Dollars in thousands) | | |
| Net cash (used in) provided by operating activities | \$ (1,975) | \$ 3,934 | \$ (5,909) |
| Net cash (used in) investing activities | (17,086) | (31,908) | 14,822 |
| Net cash provided by financing activities | 10,822 | 102,388 | (91,566) |
| Effect of exchange rate changes on cash and cash equivalents | (725) | (3,501) | 2,776 |
| (Decrease) increase in cash and cash equivalents | \$ (8,964) | \$ 70,913 | \$ (79,877) |

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Details of net cash provided by operating activities follows:

| | Six Months Ended | | |
|---|------------------------|-----------|------------|
| | June 30, | | \$ Change |
| | 2016 | 2015 | |
| | (Dollars in thousands) | | |
| Cash flows from operating activities: | | | |
| Net income | \$ 9,382 | \$ 15,800 | \$ (6,418) |
| (Gain) loss on sale of assets and business | (3,774) | 988 | (4,762) |
| Depreciation and amortization | 21,929 | 16,146 | 5,783 |
| Interest amortization | 644 | 586 | 58 |
| Restructuring and impairment | 23,651 | (32) | 23,683 |
| Devaluation of Venezuela | — | 3,343 | (3,343) |
| Accounts receivable | (41,687) | (17,757) | (23,930) |
| Inventories | (17,695) | 1,153 | (18,848) |
| Accounts payable | 3,226 | (1,511) | 4,737 |
| Other current assets and liabilities, net | 2,968 | (20,786) | 23,754 |
| Other adjustments, net | (619) | 6,004 | (6,623) |
| Net cash (used in) provided by operating activities | \$ (1,975) | \$ 3,934 | \$ (5,909) |

Cash flows from operating activities. Cash flows provided by operating activities decreased in the first six months of 2016 compared with the prior-year same period. The decrease was due to higher cash outflows for working capital of \$38.0 million, partially mitigated by lower cash outflows for other assets and liabilities and higher earnings after consideration of non-cash items.

Cash flows from investing activities. Cash flows used in investing activities decreased \$14.8 million in the first six months of 2016 compared with the prior-year same period. The decrease was primarily due to lower capital expenditures of \$12.5 million and was driven by lower spend for the Antwerp, Belgium facility, which was substantially completed in the fourth quarter of 2015.

Cash flows from financing activities. Cash flows provided by financing activities decreased \$91.6 million in the first six months of 2016 compared with the prior-year same period, driven by the \$50.0 million prepayment on the term loan facility that was made in January 2016, a net borrowing decrease on the revolving credit facility of \$34.2 million, and the purchase of treasury stock of \$11.4 million.

Capital Resources and Liquidity

Credit Facility

On July 31, 2014, the Company entered into a credit facility (the “Credit Facility”) with a group of lenders to refinance the majority of its then outstanding debt. The Credit Facility consisted of a \$200 million secured revolving line of credit with a term of five years and a \$300 million secured term loan facility with a term of seven years. On January 25, 2016, the Company amended the Credit Facility by entering into the Incremental Assumption Agreement (the “Incremental Agreement”) to increase the revolving line of credit commitment amount from \$200 million to \$300 million. The Company then used a portion of the increase in the revolving line of credit to repay \$50 million of the term loan facility. The Credit Facility was amended and a portion of the outstanding term loans were repaid to increase the amount of total liquidity available under the Credit Facility and reduce the total cost of borrowings.

Principal payments on the term loan facility of \$0.75 million quarterly, are payable commencing December 31, 2014, with the remaining balance due on the maturity date. At June 30, 2016, the Company had borrowed \$244.8 million under the term loan facility, taking into account all prior quarterly payments and the \$50 million prepayment that was made in January 2016, at an annual rate of 4.0%. There are no additional borrowings available under the term loan facility.

Subject to certain conditions, the Company can request up to \$100 million of additional commitments under the Credit Facility, though the lenders are not required to provide such additional commitments. In addition, up to \$100 million of the revolving line of credit will be available to certain of the Company’s subsidiaries in the form of revolving loans denominated in Euros.

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Certain of the Company's U.S. subsidiaries have guaranteed the Company's obligations under the Credit Facility and such obligations are secured by (a) substantially all of the personal property of the Company and the U.S. subsidiary guarantors and (b) a pledge of 100% of the stock of most of the Company's U.S. subsidiaries and 65% of most of the stock of the Company's first tier foreign subsidiaries.

Interest Rate – Term Loan: The interest rates applicable to the term loans will be, at the Company's option, equal to either a base rate or a London Interbank Offered Rate ("LIBOR") rate plus, in both cases, an applicable margin.

- The base rate will be the highest of (i) the federal funds rate plus 0.50%, (ii) syndication agent's prime rate or (iii) the daily LIBOR rate plus 1.00%.
- The applicable margin for base rate loans is 2.25%.
- The LIBOR rate will be set as quoted by Bloomberg and shall not be less than 0.75%.
- The applicable margin for LIBOR rate loans is 3.25%.
- For LIBOR rate loans, the Company may choose to set the duration on individual borrowings for periods of one, two, three or six months, with the interest rate based on the applicable LIBOR rate for the corresponding duration.

Interest Rate – Revolving Credit Line: The interest rates applicable to loans under the revolving credit line will be, at the Company's option, equal to either a base rate or a LIBOR rate plus an applicable variable margin. The variable margin will be based on the ratio of (a) the Company's total consolidated debt outstanding at such time to (b) the Company's consolidated EBITDA computed for the period of four consecutive fiscal quarters most recently ended.

- The base rate will be the highest of (i) the federal funds rate plus 0.50%, (ii) syndication agent's prime rate or (iii) the daily LIBOR rate plus 1.00%.
- The applicable margin for base rate loans will vary between 1.50% and 2.00%.
- The LIBOR rate will be set as quoted by Bloomberg for U.S. Dollars.
- The applicable margin for LIBOR Rate Loans will vary between 2.50% and 3.00%.
- For LIBOR rate loans, the Company may choose to set the duration on individual borrowings for periods of one, two, three or six months, with the interest rate based on the applicable LIBOR rate for the corresponding duration.

At June 30, 2016, the Company had borrowed \$240.8 million under the revolving credit facilities at an annual weighted average interest rate of 3.6%. The borrowing on the revolving credit facilities was used to fund the acquisitions, the share repurchase programs, and for other general business purposes. After reductions for outstanding letters of credit secured by these facilities, we had \$54.8 million of additional borrowings available under the revolving credit facilities at at June 30, 2016.

The Credit Facility contains customary restrictive covenants including, but not limited to, limitations on use of loan proceeds, limitations on the Company's ability to pay dividends and repurchase stock, limitations on acquisitions and dispositions and limitations on certain types of investments. The Credit Facility also contains standard provisions relating to conditions of borrowing and customary events of default, including the non-payment of obligations by the Company and the bankruptcy of the Company.

Specific to the revolving credit facility, the Company is subject to financial covenants regarding the Company's outstanding net indebtedness and interest coverage ratios.

If an event of default occurs, all amounts outstanding under the Credit Facility may be accelerated and become immediately due and payable. At June 30, 2016, we were in compliance with the covenants of the Credit Facility.

Off Balance Sheet Arrangements

Consignment and Customer Arrangements for Precious Metals. We use precious metals, primarily silver, in the production of some of our products. We obtain most precious metals from financial institutions under consignment

agreements (generally referred to as our precious metals consignment program). The financial institutions retain ownership of the precious metals and charge us fees based on the amounts we consign and the period of consignment. These fees were \$0.2 million for the three months ended June 30, 2016 and 2015, and were \$0.4 million for the six months ended June 30, 2016 and 2015. We had on hand precious metals owned by participants in our precious metals program of \$26.6 million at June 30, 2016, and \$20.5 million at December 31, 2015, measured at fair value based on market prices for identical assets and net of credits.

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The consignment agreements under our precious metals program involve short-term commitments that typically mature within 30 to 90 days of each transaction and are typically renewed on an ongoing basis. As a result, the Company relies on the continued willingness of financial institutions to participate in these arrangements to maintain this source of liquidity. On occasion, we have been required to deliver cash collateral. While no deposits were outstanding at June 30, 2016, or December 31, 2015, we may be required to furnish cash collateral in the future based on the quantity and market value of the precious metals under consignment and the amount of collateral-free lines provided by the financial institutions. The amount of cash collateral required is subject to review by the financial institutions and can be changed at any time at their discretion, based in part on their assessment of our creditworthiness.

Bank Guarantees and Standby Letters of Credit.

At June 30, 2016, the Company and its subsidiaries had bank guarantees and standby letters of credit issued by financial institutions that totaled \$6.2 million. These agreements primarily relate to Ferro's insurance programs, foreign energy purchase contracts and foreign tax payments.

Other Financing Arrangements

We maintain other lines of credit to provide global flexibility for Ferro's short-term liquidity requirements. These facilities are uncommitted lines for our international operations and totaled \$7.6 million and \$8.0 million at June 30, 2016 and December 31, 2015, respectively. We had \$6.1 million and \$7.3 million of additional borrowings available under these lines at June 30, 2016 and December 31, 2015, respectively.

Liquidity Requirements

Our primary sources of liquidity are available cash and cash equivalents, available lines of credit under the revolving credit facility, and cash flows from operating activities. As of June 30, 2016 we had \$49.4 million of cash and cash equivalents. Substantially all of our cash and cash equivalents were held by foreign subsidiaries. Cash generated in the U.S. is generally used to pay down amounts outstanding under our revolving credit facility and for general corporate purposes, including acquisitions. If needed, we could repatriate the majority of cash held by foreign subsidiaries without the need to accrue and pay U.S. income taxes. We do not anticipate a liquidity need requiring such repatriation of these funds to the U.S.

Our liquidity requirements primarily include debt service, purchase commitments, labor costs, working capital requirements, restructuring expenditures, capital investments, precious metals cash collateral requirements, and postretirement obligations. In disposing of our Europe-based Polymer Additives business, we could be expected to incur cash charges of \$10 million to \$15 million. We expect to meet these requirements in the long term through cash provided by operating activities and availability under existing credit facilities or other financing arrangements. Cash flows from operating activities are primarily driven by earnings before non-cash charges and changes in working capital needs. We had additional borrowing capacity of \$61.0 million at June 30, 2016, and \$32.9 million at December 31, 2015, available under our various credit facilities, primarily our revolving credit facility.

Our revolving credit facility subjects us to customary financial covenants, including a leverage ratio and an interest coverage ratio. These covenants under our credit facility restrict the amount of our borrowings, reducing our flexibility to fund ongoing operations and strategic initiatives.

The most critical of these ratios is the leverage ratio for the revolving credit facility. As of June 30, 2016, we were in compliance with our maximum leverage ratio covenant of 3.75x as our actual ratio was 2.93x, providing \$36.9 million of EBITDA cushion on the leverage ratio, as defined within the Credit Facility. To the extent that economic

conditions in key markets deteriorate or we are unable to meet our business projections and EBITDA falls below approximately \$130 million for rolling four quarters, based on reasonably consistent debt levels with those as of December 31, 2015, we could become unable to maintain compliance with our leverage ratio covenant. In such case, our lenders could demand immediate payment of outstanding amounts and we would need to seek alternate financing sources to pay off such debts and to fund our ongoing operations. Such financing may not be available on favorable terms, if at all.

Difficulties experienced in global capital markets could affect the ability or willingness of counterparties to perform under our various lines of credit, forward contracts, and precious metals program. These counterparties are major, reputable, multinational institutions, all having investment-grade credit ratings, except for one, which is not rated. Accordingly, we do not anticipate

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counterparty default. However, an interruption in access to external financing could adversely affect our business prospects and financial condition.

We assess on an ongoing basis our portfolio of businesses, as well as our financial and capital structure, to ensure that we have sufficient capital and liquidity to meet our strategic objectives. As part of this process, from time to time we evaluate the possible divestiture of businesses that are not critical to our core strategic objectives and, where appropriate, pursue the sale of such businesses and assets. We also evaluate and pursue acquisition opportunities that we believe will enhance our strategic position. Generally, we publicly announce divestiture and acquisition transactions only when we have closed on those transactions.

Critical Accounting Policies and Their Application

There were no material changes to our critical accounting policies described in “Critical Accounting Policies” within Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2015.

Impact of Newly Issued Accounting Pronouncements

Refer to Note 2 to the condensed consolidated financial statements under Item 1 of this Quarterly Report on Form 10-Q for a discussion of accounting standards we recently adopted or will be required to adopt.

Risk Factors

Certain statements contained here and in future filings with the SEC reflect the Company’s expectations with respect to future performance and constitute “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements are subject to a variety of uncertainties, unknown risks and other factors concerning the Company’s operations and business environment, which are difficult to predict and are beyond the control of the Company. Factors that could adversely affect our future financial performance include those described under the heading “Risk Factors” in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2015.

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Item 3. Quantitative and Qualitative Disclosures About Market Risk

The primary objective of the following information is to provide forward-looking quantitative and qualitative information about our exposure to instruments that are sensitive to fluctuations in interest rates, foreign currency exchange rates, and costs of raw materials and energy.

Our exposure to interest rate risk arises from our debt portfolio. We manage this risk by controlling the mix of fixed versus variable-rate debt after considering the interest rate environment and expected future cash flows. Our objective is to limit variability in earnings, cash flows and overall borrowing costs caused by changes in interest rates, while preserving operating flexibility.

We operate internationally and enter into transactions denominated in foreign currencies. These transactions expose us to gains and losses arising from exchange rate movements between the dates foreign currencies are recorded and the dates they are settled. We manage this risk by entering into forward currency contracts that substantially offset these gains and losses.

The notional amounts, carrying amounts of assets (liabilities), and fair values associated with our exposure to these market risks and sensitivity analysis about potential gains (losses) resulting from hypothetical changes in market rates are presented below:

| | June 30, 2016 | December 31, 2015 |
|--|------------------------|-------------------------|
| | (Dollars in thousands) | |
| Variable-rate debt: | | |
| Carrying amount | \$ 481,408 | \$ 461,717 |
| Fair value | 479,541 | 466,571 |
| Change in annual interest expense from 1% change in interest rates | 4,914 | 4,690 |
| Fixed-rate debt: | | |
| Carrying amount | 4,715 | 4,610 |
| Fair value | 4,046 | 3,956 |
| Change in fair value from 1% increase in interest rates | NM | NM |
| Change in fair value from 1% decrease in interest rates | NM | NM |
| Foreign currency forward contracts: | | |
| Notional amount | 278,015 | 338,418 |
| Carrying amount and fair value | 2,336 | (1,207) |
| Change in fair value from 10% appreciation of U.S. dollar | 11,313 | 19,814 |
| Change in fair value from 10% depreciation of U.S. dollar | (13,827) | (24,217) |

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Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Ferro is committed to maintaining disclosure controls and procedures that are designed to ensure that information required to be disclosed in its Exchange Act reports is recorded, processed, summarized, and reported within the time periods specified in the U.S. Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to its management, including its Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

As required by Rule 13a-15(b) of the Exchange Act, Ferro has carried out an evaluation, under the supervision and with the participation of its management, including its Chief Executive Officer and its Chief Financial Officer, of the effectiveness of the design and operation of its disclosure controls and procedures. The evaluation examined those disclosure controls and procedures as of June 30, 2016, the end of the period covered by this report. Based on that evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that the disclosure controls and procedures were effective as of June 30, 2016.

Changes in Internal Control over Financial Reporting

During the second quarter of 2016, there were no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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PART II — OTHER INFORMATION

Item 1. Legal Proceedings

There are various lawsuits and claims pending against the Company and its consolidated subsidiaries. We do not currently expect the resolution of such matters to materially affect the consolidated financial position, results of operations, or cash flows of the Company.

Item 1A. Risk Factors

There were no material changes to the risk factors disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2015.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Our ability to pay common stock dividends is limited by certain covenants in our Credit Facility other than dividends payable solely in Capital Securities, as defined in the agreement.

The following table summarizes purchases of our common stock by the Company and affiliated purchasers during the three months ended June 30, 2016:

| | Total Number of Shares Purchased (1) (Dollars in thousands, except for per share amounts) | Average Price Paid per Share | Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs | Maximum Dollar Amount that May Yet Be Purchased Under the Plans or Programs |
|---------------------------------|--|---------------------------------------|--|---|
| April 1, 2016 to April 30, 2016 | — | \$ — | — | \$ 25,000,000 |
| May 1, 2016 to May 31, 2016 | — | \$ — | — | \$ 25,000,000 |
| June 1, 2016 to June 30, 2016 | — | \$ — | — | \$ 25,000,000 |
| Total | — | — | — | — |

(1) On July 29, 2015, the Company's Board of Directors approved a stock repurchase program, authorizing the Company to repurchase up to \$25 million of the Company's outstanding shares of common stock on the open market, including through a Rule 10b5-1 plan, or in privately negotiated transactions. On October 16, 2015, the

Company's Board of Directors approved a follow-on share repurchase program for the repurchase of an additional \$25 million of the Company's outstanding shares of common stock on the open market, including through a Rule 10b5-1 plan, in privately negotiated transactions, or otherwise. On February 18, 2016, the Company's Board of Directors approved an additional follow-on share repurchase program for the repurchase of an additional \$25 million of the Company's outstanding shares of common stock on the open market, including through a Rule 10b5-1 plan, in privately negotiated transactions, or otherwise.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Not applicable.

Item 6. Exhibits

The exhibits listed in the attached Exhibit Index are the exhibits required by Item 601 of Regulation S-K.

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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.

FERRO CORPORATION

(Registrant)

Date: July 27, 2016

/s/ Peter T. Thomas

Peter T. Thomas

Chairman, President and Chief Executive Officer

(Principal Executive Officer)

Date: July 27, 2016

/s/ Jeffrey L. Rutherford

Jeffrey L. Rutherford

Vice President and Chief Financial Officer

(Principal Financial and Accounting Officer)

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EXHIBIT INDEX

The following exhibits are filed with this report or are incorporated here by reference to a prior filing in accordance with Rule 12b-32 under the Securities and Exchange Act of 1934.

Exhibit:

- 2 Plan of acquisition, reorganization, arrangement, liquidation or succession
- 2.1 Sale and Purchase Agreement, dated April 29, 2015, by and among Ferro Corporation, the sellers party thereto, Corporación Química Vhem, S.L. and Dibon USA, LLC. (incorporated by reference to Exhibit 2.1 to Ferro Corporation's Current Report on Form 8-K, filed July 9, 2015)**
- 2.2 Addendum to Sale and Purchase Agreement, dated July 7, 2015, by and among Ferro Corporation, Ferro Spain Management Company, S.L.U., the sellers party thereto, Corporación Química Vhem, S.L. and Dibon USA, LLC. (incorporated by reference to Exhibit 2.2 to Ferro Corporation's Current Report on Form 8-K, filed July 9, 2015)**
- 3 Articles of incorporation and by-laws:
 - 3.1 Eleventh Amended Articles of Incorporation of Ferro Corporation (incorporated by reference to Exhibit 4.1 to Ferro Corporation's Registration Statement on Form S 3, filed March 5, 2008).
 - 3.2 Certificate of Amendment to the Eleventh Amended Articles of Incorporation of Ferro Corporation filed December 29, 1994 (incorporated by reference to Exhibit 4.2 to Ferro Corporation's Registration Statement on Form S 3, filed March 5, 2008).
 - 3.3 Certificate of Amendment to the Eleventh Amended Articles of Incorporation of Ferro Corporation filed on June 23, 1998 (incorporated by reference to Exhibit 4.3 to Ferro Corporation's Registration Statement on Form S 3, filed March 5, 2008).
 - 3.4 Certificate of Amendment to the Eleventh Amended Articles of Incorporation of Ferro Corporation filed on October 14, 2011 (incorporated by reference to Exhibit 3.1 to Ferro Corporation's Current Report on Form 8-K, filed October 17, 2011).
 - 3.5 Certificate of Amendment to the Eleventh Amended Articles of Incorporation of Ferro Corporation filed on April 25, 2014 (incorporated by reference to Exhibit 3.5 to Ferro's Quarterly Report on Form 10-Q, for the quarter ended June 30, 2014).
 - 3.6 Ferro Corporation Amended and Restated Code of Regulations (incorporated by reference to Exhibit 3.1 to Ferro Corporation's current Report on Form 8-K filed April 28, 2015.)
- 4 Instruments defining rights of security holders, including indentures:
 - 4.1 Senior Indenture, dated as of March 5, 2008, by and between Ferro Corporation and U.S. Bank National Association (incorporated by reference to Exhibit 4.5 to Ferro Corporation's Registration Statement on Form S 3, filed March 5, 2008).
 - 4.2 First Supplemental Indenture, dated August 19, 2008, by and between Ferro Corporation and U.S. Bank National Association (with Form of 6.50% Convertible Senior Note due 2013) (incorporated by reference to Exhibit 4.2 to Ferro Corporation's Current Report on Form 8 K, filed August 19, 2008).
 - 4.3 Form of Indenture, by and between Ferro Corporation and Wilmington Trust FSB (incorporated by reference to Exhibit 4.1 to Ferro Corporation's Registration Statement on Form S 3ASR, filed July 27, 2010).
 - 4.4 First Supplemental Indenture, dated August 24, 2010, by and between Ferro Corporation and Wilmington Trust FSB (with Form of 7.875% Senior Notes due 2018) (incorporated by reference to Exhibit 4.1 to Ferro Corporation's Current Report on Form 8 K, filed August 24, 2010).
 - 4.5 Second Supplemental Indenture, dated July 31, 2014, by and between Ferro Corporation and Wilmington Trust, National Association (incorporated by reference to Exhibit 10.1 to Ferro Corporation's current Report on Form

8-K, filed August 5, 2014).

The Company agrees, upon request, to furnish to the U.S. Securities and Exchange Commission a copy of any instrument authorizing long-term debt that does not authorize debt in excess of 10% of the total assets of the Company and its subsidiaries on a consolidated basis.

31 Certifications:

31.1 Certification of Principal Executive Officer Pursuant to Rule 13a-14(a)/15d-14(a).

31.2 Certification of Principal Financial Officer Pursuant to Rule 13a-14(a)/15d-14(a).

32.1 Certification of Principal Executive Officer Pursuant to 18 U.S.C. 1350.

32.2 Certification of Principal Financial Officer Pursuant to 18 U.S.C. 1350.

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Exhibit:

| | |
|---------|-------------------------------------|
| 101 | XBRL Documents: |
| 101.INS | XBRL Instance Document |
| 101.SCH | XBRL Schema Document |
| 101.CAL | XBRL Calculation Linkbase Document |
| 101.LAB | XBRL Labels Linkbase Document |
| 101.PRE | XBRL Presentation Linkbase Document |
| 101.DEF | XBRL Definition Linkbase Document |

*Indicates management contract or compensatory plan, contract or arrangement in which one or more Directors and/or executives of Ferro Corporation may be participants.

** Certain exhibits and schedules have been omitted and the registrant agrees to furnish a copy of any omitted exhibits and schedules to the Securities and Exchange