FERRO CORP
Form 10-Q
May 01, 2018
Table of Contents

rti8Mag

Mag

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 March 31, 2018

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	(I.R.S. Employer Identification No.)
incorporation or organization)	
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, smaller reporting company or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

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

If an emerging growth company, indicate by checkmark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

At March 31, 2018, there were 84,395,966 shares of Ferro Common Stock, par value $1.00, outstanding.

Table of Contents

TABLE OF CONTENTS

	Page
PART I	
Item 1. Financial Statements (Unaudited)	3
Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations	24
Item 3. Quantitative and Qualitative Disclosures about Market Risk	35
Item 4. Controls and Procedures	36
PART II	
Item 1. Legal Proceedings	37
Item 1A. Risk Factors	37
Item 2. Unregistered Sales of Equity Securities and Use of Proceeds	37
Item 3. Defaults Upon Senior Securities	37
Item 4. Mine Safety Disclosures	37
Item 5. Other Information	37
Item 6. Exhibits	37

Exhibit 31.1
Exhibit 31.2
Exhibit 32.1
Exhibit 32.2

Table of Contents

PART I — FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited)

Ferro Corporation and Subsidiaries

Condensed Consolidated Statements of Operations

	Three Months Ended March 31,	
	2018	2017
	(Dollars in thousands, except per share amounts)	
Net sales	$ 405,532	$ 320,555
Cost of sales	286,846	221,761
Gross profit	118,686	98,794
Selling, general and administrative expenses	73,092	59,446
Restructuring and impairment charges	4,106	3,018
Other expense (income):		
Interest expense	7,962	6,224
Interest earned	(201)	(180)
Foreign currency loss (gain), net	1,840	(314)
Loss on extinguishment of debt	—	3,905
Miscellaneous expense (income), net	775	(2,564)
Income before income taxes	31,112	29,259
Income tax expense	7,514	7,138
Net income	23,598	22,121
Less: Net income attributable to noncontrolling interests	207	223
Net income attributable to Ferro Corporation common shareholders	$ 23,391	$ 21,898
Earnings per share attributable to Ferro Corporation common shareholders:		
Basic earnings per share	$ 0.28	$ 0.26
Diluted earnings per share	$ 0.27	$ 0.26

See accompanying notes to condensed consolidated financial statements.

Table of Contents

Ferro Corporation and Subsidiaries

Condensed Consolidated Statements of Comprehensive Income

	Three Months Ended March 31,	
	2018	2017
	(Dollars in thousands)	
Net income	$ 23,598	$ 22,121
Other comprehensive income, net of income tax:		
Foreign currency translation income	5,787	7,211
Cash flow hedging instruments, unrealized gain	1,314	—
Postretirement benefit liabilities gain (loss)	7	(4)
Other comprehensive income, net of income tax	7,108	7,207
Total comprehensive income	30,706	29,328
Less: Comprehensive income attributable to noncontrolling interests	335	263
Comprehensive income attributable to Ferro Corporation	$ 30,371	$ 29,065

See accompanying notes to condensed consolidated financial statements.

Table of Contents

Ferro Corporation and Subsidiaries

Condensed Consolidated Balance Sheets

	March 31, 2018	December 31, 2017
	(Dollars in thousands)	
ASSETS		
Current assets		
Cash and cash equivalents	$ 53,296	$ 63,551
Accounts receivable, net	393,236	354,416
Inventories	358,083	324,180
Other receivables	66,117	67,137
Other current assets	16,154	16,448
Total current assets	886,886	825,732
Other assets		
Property, plant and equipment, net	325,740	321,742
Goodwill	198,538	195,369
Intangible assets, net	187,693	187,616
Deferred income taxes	117,425	108,025
Other non-current assets	45,495	43,718
Total assets	$ 1,761,777	$ 1,682,202
LIABILITIES AND EQUITY		
Current liabilities		
Loans payable and current portion of long-term debt	$ 35,549	$ 25,136
Accounts payable	204,262	211,711
Accrued payrolls	38,975	48,201
Accrued expenses and other current liabilities	75,026	70,151
Total current liabilities	353,812	355,199
Other liabilities		
Long-term debt, less current portion	773,218	726,491
Postretirement and pension liabilities	167,672	166,680
Other non-current liabilities	75,764	77,152
Total liabilities	1,370,466	1,325,522
Equity		
Ferro Corporation shareholders’ equity:		
Common stock, par value $1 per share; 300.0 million shares authorized; 93.4 million shares issued; 84.4 million and 84.0 million shares outstanding at March 31, 2018, and December 31, 2017, respectively	93,436	93,436
Paid-in capital	295,961	302,158
Retained earnings	199,276	171,744
Accumulated other comprehensive loss	(68,488)	(75,468)

Common shares in treasury, at cost	(138,847)	(147,056)
Total Ferro Corporation shareholders’ equity	381,338	344,814
Noncontrolling interests	9,973	11,866
Total equity	391,311	356,680
Total liabilities and equity	$ 1,761,777	$ 1,682,202

See accompanying notes to condensed consolidated financial statements.

Table of Contents

Ferro Corporation and Subsidiaries

Condensed Consolidated Statements of Equity

	Ferro Corporation Shareholders Common Shares in Treasury							
	Shares	Amount	Common Stock	Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive (Loss)	Non-controlling Interests	Total Equity
	(In thousands)							
Balances at December 31, 2016	9,996	$ (160,936)	$ 93,436	$ 306,566	$ 114,690	$ (106,643)	$ 7,919	$ 255,032
Net income	—	—	—	—	21,898	—	223	22,121
Other comprehensive income	—	—	—	—	—	7,167	40	7,207
Stock-based compensation transactions	(195)	5,229	—	(3,262)	—	—	—	1,967
Balances at March 31, 2017	9,801	(155,707)	93,436	303,304	136,588	(99,476)	8,182	286,327
Balances at December 31, 2017	9,386	(147,056)	93,436	302,158	171,744	(75,468)	11,866	356,680
Net income	—	—	—	—	23,391	—	207	23,598
Other comprehensive income	—	—	—	—	—	6,980	128	7,108
Stock-based compensation transactions	(349)	8,209	—	(6,986)	—	—	—	1,223
Change in ownership interest	—	—	—	789	—	—	(2,228)	(1,439)
Adjustment for accounting standards update 2016-16	—	—	—	—	4,141	—	—	4,141
Balances at March 31, 2018	9,037	$ (138,847)	$ 93,436	$ 295,961	$ 199,276	$ (68,488)	$ 9,973	$ 391,311

See accompanying notes to condensed consolidated financial statements.

Table of Contents

Ferro Corporation and Subsidiaries

Condensed Consolidated Statements of Cash Flows

	Three Months Ended March 31,	
	2018	2017
	(Dollars in thousands)	
Cash flows from operating activities		
Net cash (used in) provided by operating activities	$ (34,285)	$ 1,630
Cash flows from investing activities		
Capital expenditures for property, plant and equipment and other long lived assets	(20,682)	(6,766)
Business acquisitions, net of cash acquired	(2,352)	—
Other investing	22	2
Net cash used in investing activities	(23,012)	(6,764)
Cash flows from financing activities		
Net borrowings (repayments) under loans payable	9,742	(3,985)
Proceeds from revolving credit facility, maturing 2019	—	15,628
Principal payments on revolving credit facility, maturing 2019	—	(327,183)
Proceeds from term loan facility, maturing 2024	—	623,827
Principal payments on term loan facility, maturing 2021	—	(243,250)
Principal payments on term loan facility, maturing 2024	(1,664)	—
Proceeds from revolving credit facility, maturing 2022	119,550	—
Principal payments on revolving credit facility, maturing 2022	(79,367)	—
Payment of debt issuance costs	—	(12,712)
Acquisition related contingent consideration payment	(348)	—
Other financing activities	(2,133)	(390)
Net cash provided by financing activities	45,780	51,935
Effect of exchange rate changes on cash and cash equivalents	1,262	446
(Decrease) increase in cash and cash equivalents	(10,255)	47,247
Cash and cash equivalents at beginning of period	63,551	45,582
Cash and cash equivalents at end of period	$ 53,296	$ 92,829
Cash paid during the period for:		
Interest	$ 7,314	$ 6,535
Income taxes	$ 4,575	$ 4,097

See accompanying notes to condensed consolidated financial statements.

7

Table of Contents

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, 2017.

We produce our products primarily in the Europe-Middle East ("EMEA") region, the United States, the Asia Pacific region, and Latin America.

Operating results for the three months ended March 31, 2018, are not necessarily indicative of the results expected in subsequent quarters or for the full year ending December 31, 2018.

2. Recent Accounting Pronouncements

Recently Adopted Accounting Standards

On January 1, 2018, we adopted Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") 2017-09, Compensation – Stock Compensation: (Topic 718): Scope of Modification Accounting. ASU 2017-09 provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. This new guidance would only impact our consolidated financial statements if, in the future, we modified the terms of any of our share-based awards. We will apply the guidance of this ASU to applicable transactions after the adoption date. The adoption of ASU 2017-09 did not have a material impact on the Company's condensed consolidated financial statements as of, and for the quarter ended, March 31, 2018.

On January 1, 2018, we adopted FASB ASU 2017-07, Compensation – Retirement Benefits: (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Costs. ASU 2017-07 requires that an employer report the service cost component in the same line item as other compensation costs arising from services rendered during the period. The other components of net benefit costs are to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations. This ASU also allows only the service cost component of net benefit costs to be eligible for capitalization. We adopted this new

standard using the retrospective approach for the presentation of the service cost component and the other components of the net periodic pension (credit) cost and net periodic postretirement benefit cost in the income statement. This resulted in the reclassification of income of $0.5 million from Selling, general and administrative expenses to Other income, expense, net in our condensed consolidated statement of operations for the three months ended March 31, 2017. The Company used a practical expedient where the amount disclosed in our Retirement Benefits footnote for the prior year comparative period was the basis for the estimation for applying the retrospective presentation requirements. Other than this reclassification, the adoption of ASU 2017-07 did not have an impact on the Company's condensed consolidated financial statements as of and for the quarter ended March 31, 2018.

On January 1, 2018, we adopted FASB ASU 2017-01, Business Combinations: (Topic 805): Clarifying the Definition of a Business. ASU 2017-01 is intended to clarify the definition of a business with the objective of adding guidance to assist entities in evaluating whether transactions should be accounted for as acquisitions (or dispositions) of assets or businesses. We will apply the guidance of this

Table of Contents

ASU to applicable transactions after the adoption date. The adoption of ASU 2017-01 did not have a material impact on the Company's condensed consolidated financial statements as of, and for the quarter ended, March 31, 2018.

On January 1, 2018, we adopted FASB ASU 2016-16, Income Taxes: (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory. ASU 2016-16 is intended to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory and requires the recognition of the income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. We adopted this new standard using the modified retrospective method. The impact of adopting this guidance on the Company's condensed consolidated financial statements resulted in an increase to Retained earnings of $4.1 million and Deferred income taxes of $4.7 million and a decrease to Other receivables of $0.6 million.

On January 1, 2018, we adopted FASB ASU 2016-15, Statement of Cash Flow: (Topic 230): Classification of Certain Cash Receipts and Cash Payments. ASU 2016-15 is intended to address eight specific cash flow issues with the objective of reducing the existing diversity in practice. Adoption of ASU 20161-15 did not have a material effect on our condensed consolidated financial statements.

On January 1, 2018, we adopted FASB ASU 2014-09, Revenue from Contracts with Customers: (Topic 606) ("ASC 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 require significant judgment. We have completed our assessment and review of specific contracts and have adopted this new standard using the modified retrospective method with no impact to the opening retained earnings balance. We expect the impact of the adoption of this new standard will not have a material effect on our consolidated financial statements on an ongoing basis.

New Accounting Standards

In February 2018, the FASB issued ASU 2018-03, Technical Corrections and Improvements to Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. ASU 2018-03 provides targeted improvements to address certain aspects of recognition measurement presentation, and disclosure of financial instruments. This pronouncement is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years beginning after June 15, 2018. Early adoption is permitted, including adoption in any interim period. The Company is in the process of assessing the impact that the adoption of this ASU will have on our consolidated financial statements.

In February 2018, the FASB issued ASU 2018-02, Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income. ASU 2018-02 allows a reclassification from Accumulated Other Comprehensive (Loss) Income to Retained Earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act and requires certain disclosures about stranded tax effects. This pronouncement is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted, including adoption in any interim period. The Company is in the process of assessing the impact that the adoption of this ASU will have on our consolidated financial statements.

In August 2017, the FASB issued ASU 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities. ASU 2017-12 provides guidance to better align an entity's risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. This pronouncement is effective

for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company is in the process of assessing the impact that the adoption of this ASU will have on our consolidated financial statements.

In January 2017, the FASB issued ASU 2017-04, Intangibles – Goodwill and Other: (Topic 350): Simplifying the Test for Goodwill Impairment. ASU 2017-04 is intended to simplify the subsequent measurement of goodwill by eliminating Step 2 from the current goodwill impairment test. This pronouncement is effective for the annual or any interim goodwill impairment tests conducted in fiscal years beginning after December 15, 2019. The Company is in the process of assessing the impact that the adoption of this ASU will have on our consolidated financial statements.

Table of Contents

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. The Company is in the process of assessing the impact the adoption of this ASU will have on our consolidated financial statements.

No other new accounting pronouncements issued had, or are expected to have, a material impact on the Company's consolidated financial statements.

3. Revenue

Revenue Recognition

Under ASC 606, revenues are recognized when control of the promised goods is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods. In order to achieve that core principle, the Company applies the following five-step approach: 1) identify the contract with a customer, 2) identify the performance obligations, 3) determine the transaction price, 4) allocate the transaction price to the performance obligations in the contract, and 5) recognize revenue when a performance obligation is satisfied.

The Company considers confirmed customer purchase orders, which in some cases are governed by master sales agreements, to be the contracts, from an accounting perspective, with customers. Under our standard contracts, the only performance obligation is the delivery of manufactured goods and the performance obligation is satisfied at a point in time, when the Company transfers control of the manufactured goods. The Company may receive orders for products to be delivered over multiple dates that may extend across several reporting periods. The Company invoices for each order and recognizes revenues for each distinct product upon shipment, once transfer of control has occurred. Payment terms are standard for the industry and jurisdiction in which we operate. In determining the transaction price, the Company evaluates whether the price is subject to refund or adjustment to determine the net consideration to which the Company expects to be entitled. Discounts or rebates are specifically stated in customer contracts or invoices, and are recorded as a reduction of revenue in the period the related revenue is recognized. The product price as specified on the customer confirmed orders is considered the standalone selling price. The Company allocates the transaction price to each distinct product based on its relative standalone selling price. Revenue is recognized when control of the product is transferred to the customer (i.e., when the Company's performance obligation is satisfied), which generally occurs at shipment. We review all material contracts to determine transfer of control based upon the business practices and legal requirements of each country.

The amount of shipping and handling fees invoiced to our customers at the time our product is shipped is included in net sales as we are the principle in those activities. Sales, valued-added and other taxes collected from our customers

and remitted to governmental authorities are excluded from net sales.

There were no changes in amounts previously reported in the Company’s condensed consolidated financial statements due to adoption of ASC 606.

Table of Contents

Revenues disaggregated by geography and reportable segment for the three months ending March 31, 2018, follow:

	EMEA	United States	Asia Pacific	Latin America	Total
	(Dollars in thousands)				
Performance Coatings	$ 119,116	$ 12,819	$ 25,947	$ 26,766	$ 184,648
Performance Colors and Glass	61,344	37,091	16,515	5,555	120,505
Color Solutions	40,483	41,626	9,938	8,332	100,379
Total net sales	$ 220,943	$ 91,536	$ 52,400	$ 40,653	$ 405,532

Revenues disaggregated by geography and reportable segment for the three months ending March 31, 2017, follow:

	EMEA	United States	Asia Pacific	Latin America	Total
	(Dollars in thousands)				
Performance Coatings	$ 69,160	$ 10,758	$ 21,317	$ 25,330	$ 126,565
Performance Colors and Glass	44,586	39,104	14,633	5,195	103,518
Color Solutions	35,177	38,518	8,258	8,519	90,472
Total net sales	$ 148,923	$ 88,380	$ 44,208	$ 39,044	$ 320,555

Practical Expedients and Exemptions

All material contracts have an original duration of one year or less and, as such, the Company uses the practical expedient applicable to such contracts, and has not disclosed the transaction price for the remaining performance obligations as of the end of each reporting period, or when the Company expects to recognize this revenue.

When the period of time between the transfer of control of the goods and the time the customer pays for the goods is one year or less, the Company uses the practical expedient allowed by ASC 606 that provides relief from adjusting the amount of promised consideration for the effects of a financing component.

We generally expense sales commissions when incurred because the amortization period is one year or less. These costs are recorded within SG&A expenses.

4. Acquisitions

Endeka Group

On November 1, 2017, the Company acquired 100% of the equity interests of Endeka Group (“Endeka”), a global producer of high-value coatings and key raw materials for the ceramic tile market, for €72.8 million (approximately $84.8 million), including the assumption of debt of €13.1 million (approximately $15.3 million). The Company incurred acquisition costs for the three months ended March 31, 2018, of $0.5 million, which is included in Selling, general and administrative expenses in our condensed consolidated statements of operations. The acquired business contributed net sales of $30.7 million for the three months ended March 31, 2018, and net income attributable to Ferro Corporation of $4.0 million for the three months ended March 31, 2018.

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. During the first quarter of 2018, the Company adjusted the net working capital on the opening balance sheet and as such, the carrying amount of the personal and real property decreased $6.0 million. As of March 31, 2018, the purchase price allocation is subject to further adjustment until all information is fully evaluated by the Company. The Company preliminarily recorded $46.0 million of net working

Table of Contents

capital, $24.1 million of deferred tax assets, $15.8 million of personal and real property and $1.1 million of noncontrolling interest on the condensed consolidated balance sheet.

Gardenia Quimica S.A.

On August 3, 2017, the Company acquired a majority interest in Gardenia Quimica S.A. (“Gardenia”) for $3.0 million. The Company previously owned 46% of Gardenia and recorded it as an equity method investment. Following this transaction, the Company owned 83.5% and fully consolidates Gardenia. Due to the change of control that occurred, the Company recorded a gain on purchase of $2.6 million related to the difference between the Company’s carrying value and fair value of the previously held equity method investment during the third quarter of 2017. On March 1, 2018, the Company acquired the remaining equity interest in Gardenia for $1.4 million.

Dip Tech Ltd.

On August 2, 2017, the Company acquired 100% of the equity interests of Dip Tech Ltd. (“Dip-Tech”), a leading provider of digital printing solutions for glass coatings, for $77.0 million. Dip-Tech is headquartered in Kfar Saba, Israel. The purchase price consideration consisted of cash paid at closing of $60.1 million, net of the net working capital adjustment, and contingent consideration of $16.9 million. The Company incurred acquisition costs for the three months ended March 31, 2018, of $0.1 million, which is included in Selling, general and administrative expenses in our condensed consolidated statements of operations. The acquired business contributed net sales of $3.9 million for the three months ended March 31, 2018, and net loss attributable to Ferro Corporation of $2.4 million for the three months ended March 31, 2018. The net loss attributable to Ferro Corporation was driven by the amortization of acquired intangible asset amortization costs of $1.0 million for the three months ended March 31, 2018. Dip-Tech incurred research and development costs of $1.5 million for the three months ended March 31, 2018.

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 March 31, 2018, the purchase price allocation is subject to further adjustment until all information is fully evaluated by the Company. The Company preliminarily recorded $41.2 million of amortizable intangible assets, $33.5 million of goodwill, $7.2 million of a deferred tax liability, $5.1 million of indefinite-lived intangible assets, $3.2 million of personal and real property and $1.2 million of net working capital on the condensed consolidated balance sheet.

Smalti per Ceramiche, s.r.l

On April 24, 2017, the Company acquired 100% of the equity interests of S.P.C. Group s.r.l., and 100% of the equity interests of Smalti per Ceramiche, s.r.l. (“SPC”), for €18.7 million (approximately $20.3 million), including the assumption of debt of €5.7 million (approximately $6.2 million). SPC is a high-end tile coatings manufacturer based in Italy focused on fast-growing specialty products. SPC’s products, strong technology, design capabilities, and customer-centric business model are complementary to our Performance Coatings segment, and position us for continued growth in the high-end tile markets.

The information included herein has been prepared based on the allocation of the purchase price using 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. The Company recorded $6.1 million of personal and real property, $6.0 million of amortizable intangible assets, $5.2 million of goodwill, $5.0 million of net working capital and $2.0 million of a deferred tax liability on the condensed consolidated balance sheet.

Table of Contents

5. Inventories

	March 31, 2018	December 31, 2017
	(Dollars in thousands)	
Raw materials	$ 121,840	$ 112,300
Work in process	54,626	39,454
Finished goods	181,617	172,426
Total inventories	$ 358,083	$ 324,180

In the production of some of our products, we use precious metals, 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 $0.4 million and $0.2 million for the three months ended March 31, 2018 and 2017, respectively. We had on-hand precious metals owned by participants in our precious metals consignment program of $39.6 million at March 31, 2018, and $37.7 million at December 31, 2017, measured at fair value based on market prices for identical assets.

6. Property, Plant and Equipment

Property, plant and equipment is reported net of accumulated depreciation of $522.0 million at March 31, 2018, and $502.9 million at December 31, 2017. Unpaid capital expenditure liabilities, which are non-cash investing activities, were $4.8 million at March 31, 2018, and $2.5 million at March 31, 2017.

7. Goodwill and Other Intangible Assets

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

	Performance Coatings	Color Solutions	Performance Colors and Glass		Total
	(Dollars in thousands)				
Goodwill, net at December 31, 2017	$ 38,236	$ 42,535	$ 114,598		$ 195,369
Acquisitions	—	—	1,291	(1)	1,291
Foreign currency adjustments	803	309	766		1,878
Goodwill, net at March 31, 2018	$ 39,039	$ 42,844	$ 116,655		$ 198,538

(1) During the first quarter of 2018, the Company recorded a purchase price adjustment within the measurement period for goodwill related to the Dip-Tech acquisition.

	March 31, 2018	December 31, 2017
	(Dollars in thousands)	
Goodwill, gross	$ 257,005	$ 253,836
Accumulated impairment	(58,467)	(58,467)
Goodwill, net	$ 198,538	$ 195,369

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 March 31, 2018, the Company is not aware of any events or circumstances that occurred which would require a goodwill impairment test.

Table of Contents

Amortizable intangible assets consisted of the following:

	March 31, 2018	December 31, 2017
	(Dollars in thousands)	
Gross amortizable intangible assets:		
Patents	$ 5,610	$ 5,279
Land rights	5,061	4,947
Technology/know-how and other	129,984	131,070
Customer relationships	95,972	93,500
Total gross amortizable intangible assets	236,627	234,796
Accumulated amortization:		
Patents	(5,566)	(5,226)
Land rights	(2,957)	(2,883)
Technology/know-how and other	(45,048)	(45,214)
Customer relationships	(12,873)	(11,114)
Total accumulated amortization	(66,444)	(64,437)
Amortizable intangible assets, net	$ 170,183	$ 170,359

Indefinite-lived intangible assets consisted of the following:

	March 31, 2018	December 31, 2017
	(Dollars in thousands)	
Indefinite-lived intangibles assets:		
Trade names and trademarks	$ 17,510	$ 17,257

8. Debt

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

	March 31, 2018	December 31, 2017
	(Dollars in thousands)	
Loans payable	$ 27,022	$ 16,360
Current portion of long-term debt	8,527	8,776
Loans payable and current portion of long-term debt	$ 35,549	$ 25,136

Long-term debt consisted of the following:

	March 31, 2018	December 31, 2017
	(Dollars in thousands)	
Term loan facility, net of unamortized issuance costs, maturing 2024(1)	$ 651,780	$ 645,242
Revolving credit facility, maturing 2022	118,183	78,000
Capital lease obligations	4,776	4,913
Other notes	7,006	7,112
Total long-term debt	781,745	735,267
Current portion of long-term debt	(8,527)	(8,776)
Long-term debt, less current portion	$ 773,218	$ 726,491

(1) The carrying value of the term loan facility, maturing 2024, is net of unamortized debt issuance costs of $7.2 million at March 31, 2018, and $7.5 million at December 31, 2017.

Table of Contents

2017 Credit Facility

On February 14, 2017, the Company entered into a new credit facility (the "Credit Facility") with a group of lenders to refinance its then outstanding credit facility debt and to provide liquidity for ongoing working capital requirements and general corporate purposes.

The Credit Facility consists of a $400 million secured revolving line of credit with a term of five years, a $357.5 million secured term loan facility with a term of seven years and a €250 million secured Euro term loan facility with a term of seven years. The term loans are payable in equal quarterly installments in an amount equal to 0.25% of the original principal amount of the term loans, with the remaining balance due on the maturity date thereof. In addition, the Company is required, on an annual basis, to make a prepayment of term loans until they are fully paid and then to the revolving loans in an amount equal to a portion of the Company's excess cash flow, as calculated pursuant to the Credit Facility.

Subject to the satisfaction of certain conditions, the Company can request additional commitments under the revolving line of credit or term loans in the aggregate principal amount of up to $250 million to the extent that existing or new lenders agree to provide such additional commitments and/or term loans. The Company can also raise certain additional debt or credit facilities subject to satisfaction of certain covenant levels.

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 certain of the Company's U.S. subsidiaries and 65% of the stock of certain of the Company's direct foreign subsidiaries.

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

- The base rate for U.S. term loans 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 1.50%.
- The LIBOR rate for U.S. term loans shall not be less than 0.75% and the applicable margin for LIBOR rate U.S. term loans is 2.50%.
- The EURIBOR rate for Euro term loans shall not be less than 0% and the applicable margin for EURIBOR rate loans is 2.75%.
- For LIBOR rate term loans and EURIBOR rate term 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 or EURIBOR rate, as applicable, for the corresponding duration.

At March 31, 2018, the Company had borrowed $353.9 million under the secured term loan facility at an interest rate of 4.38% and €247.5 million (approximately $305.1 million) under the secured Euro term loan facility at an interest rate of 2.75%. At March 31, 2018, there were no additional borrowings available under the term loan facilities. We entered into interest rate swap agreements in the second quarter of 2017. These swaps converted $150 million and €90 million of our term loans from variable interest rates to fixed interest rates. At March 31, 2018, the effective interest rate for the term loan facilities after adjusting for the interest rate swap was 4.27% for the secured term loan facility and 3.00% for the Euro term loan facility.

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, in both cases, an applicable variable margin. The variable margin will be based on the ratio of (a) the Company's total consolidated net 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 for revolving loans 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 0.75% and 1.75%.
- The LIBOR rate for revolving loans shall not be less than 0% and the applicable margin for LIBOR rate revolving loans will vary between 1.75% and 2.75%.

Table of Contents

· For LIBOR rate revolving 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 March 31, 2018, there were $118.2 million borrowings under the revolving credit line at an interest rate of 4.04%. After reductions for outstanding letters of credit secured by these facilities, we had $277.2 million of additional borrowings available under the revolving credit facilities at March 31, 2018.

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 a financial covenant regarding the Company's maximum leverage ratio. If an event of default occurs, all amounts outstanding under the Credit Facility may be accelerated and become immediately due and payable. At March 31, 2018, we were in compliance with the covenants of the Credit Facility.

2014 Credit Facility

In 2014, the Company entered into a credit facility that was amended on January 25, 2016, and August 29, 2016, resulting in a $400 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 from the original issuance date (the "Previous Credit Facility") with a group of lenders that was replaced on February 14, 2017, by the Credit Facility (as defined above). For discussion of the Company's Previous Credit Facility, refer to Note 8 in the Company's Annual Report on Form 10-K for the year ended December 31, 2017.

In conjunction with the refinancing of the Previous Credit Facility, we recorded a charge of $3.9 million in connection with the write-off of unamortized issuance costs, which is recorded within Loss on extinguishment of debt in our condensed consolidated statement of operations for the three months ended March 31, 2017.

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 $45.6 million and $64.5 million at March 31, 2018, and December 31, 2017, respectively. The unused portions of these lines provided additional liquidity of $13.1 million at March 31, 2018, and $39.4 million at December 31, 2017.

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:

	March 31, 2018				
	Carrying	Fair Value			
	Amount	Total	Level 1	Level 2	Level 3
	(Dollars in thousands)				
Cash and cash equivalents	$ 53,296	$ 53,296	$ 53,296	$ —	$ —
Loans payable	(27,022)	(27,022)	—	(27,022)	—
Term loan facility, maturing 2024(1)	(651,780)	(653,410)	—	(653,410)	—
Revolving credit facility, maturing 2022	(118,183)	(119,312)	—	(119,312)	—
Other long-term notes payable	(7,006)	(4,526)	—	(4,526)	—
Interest rate swaps - asset	3,392	3,392	—	3,392	—
Interest rate swaps - liability	(191)	(191)	—	(191)	—
Foreign currency forward contracts, net	460	460	—	460	—

Table of Contents

	December 31, 2017				
	Carrying	Fair Value			
	Amount	Total	Level 1	Level 2	Level 3
	(Dollars in thousands)				
Cash and cash equivalents	$ 63,551	$ 63,551	$ 63,551	$ —	$ —
Loans payable	(16,360)	(16,360)	—	(16,360)	—
Term loan facility, maturing 2024(1)	(645,242)	(646,979)	—	(646,979)	—
Revolving credit facility, maturing 2022	(78,000)	(79,295)	—	(79,295)	—
Other long-term notes payable	(7,112)	(3,973)	—	(3,973)	—
Interest rate swaps - asset	1,616	1,616	—	1,616	—
Interest rate swaps - liability	(124)	(124)	—	(124)	—
Foreign currency forward contracts, net	(469)	(469)	—	(469)	—

(1) The carrying values of the term loan facility are net of unamortized debt issuance costs of $7.2 million and $7.5 million for the period ended March 31, 2018, and December 31, 2017, respectively.

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 value of the term loan facility is based on market price information and is measured using the last available bid price of the instrument on a secondary market. 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 performance risk. The fair values of our interest rate swaps are determined based on inputs that are readily available in public markets or can be derived from information available in publicly quoted markets. The fair values of the foreign currency forward contracts are based on market prices for comparable contracts.

Derivative Instruments

The Company may use derivative instruments to partially offset its business exposure to foreign currency and interest rate risk on expected future cash flows, on net investment in certain foreign subsidiaries and on certain existing assets and liabilities. However, the Company may choose not to hedge in countries where it is not economically feasible to enter into hedging arrangements or where hedging inefficiencies exist, such as timing of transactions.

Derivatives Designated as Hedging Instruments

Interest rate swaps. To reduce our exposure to interest rate changes on our variable-rate debt, we entered into interest rate swap agreements in the second quarter of 2017. These swaps converted $150 million and €90 million of our term loans from variable interest rates to fixed interest rates. These swaps qualify and were designated as cash flow

hedges. The effective portions of cash flow hedges are recorded in accumulated other comprehensive loss ("AOCL") and are reclassified into earnings in the same period the underlying hedged items impact earnings. The ineffective portions of cash flow hedges is recognized immediately into earnings. The Company did not have any ineffectiveness related to the interest rate swaps during the three months ended March 31, 2018.

The amount of gain recognized in AOCL and the amount of loss reclassified into earnings for the three months ended March 31, 2018, follow:

	Amount of Gain Recognized in AOCL - Effective Portion	Amount of Loss Reclassified from AOCL into Income - Effective Portion
	2018	2018
	(Dollars in thousands)	
Interest rate swap	$ 1,709	$ (136)

Net investment hedge. To help protect the value of the Company's net investment in European operations against adverse changes in exchange rates, the Company uses non-derivative financial instruments, such as its foreign currency denominated debt, as economic

17

Table of Contents

hedges of its net investments in certain foreign subsidiaries. Net investment hedges that use foreign currency denominated debt to hedge net investments are not impacted by ASC Topic 820, Fair Value Measurements, as the debt used as a hedging instrument is marked to a value with respect to changes in spot foreign currency exchange rates and not with respect to other factors that may impact fair value. The effective portions of net investment hedges are recorded in AOCL as a part of the cumulative translation adjustment. The ineffective portions of net investment hedges are recognized immediately into earnings.

Effective May 1, 2017, the Company designated a portion of its Euro denominated debt as a net investment hedge for accounting purposes. The fair value of the net investment hedge is €19.6 million at March 31, 2018. The Company did not have any ineffectiveness related to net investment hedges during the three months ended March 31, 2018.

The amount of loss recognized in AOCL and the amount of loss reclassified into earnings for the three months ended March 31, 2018, follow:

	Amount of Loss Recognized in AOCL - Effective Portion	Amount of Loss Reclassified from AOCL into Income - Effective Portion
	2018	2018
	(Dollars in thousands)	
Net investment hedge	$ (860)	$ —

Derivatives Not Designated as Hedging Instruments

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 loss (gain), net in the condensed consolidated statements of operations. We recognized net gains of $0.4 million in the three months ended March 31, 2018, and net gains of $0.2 million in the three months ended March 31, 2017, arising from the change in fair value of our financial instruments, which partially offset the related net gains and losses on international trade transactions. The notional amount of foreign currency forward contracts was $302.3 million at March 31, 2018, and $238.5 million at December 31, 2017.

The following table presents the effect on our condensed consolidated statements of operations for the three months ended March 31, 2018 and 2017, respectively, of our foreign currency forward contracts:

Amount of
Gain

	Recognized in Earnings Three Months Ended March 31,		
	2018	2017	Location of Gain in Earnings
	(Dollars in thousands)		
Foreign currency forward contracts	$ 391	$ 243	Foreign currency loss (gain), net

18

Table of Contents

Location and Fair Value Amount of Derivative Instruments

The following table presents the fair values on our condensed consolidated balance sheets of derivative instruments:

	March 31, 2018	December 31, 2017	Balance Sheet Location
	(Dollars in thousands)		
Asset derivatives:			
Interest rate swaps	$ 3,392	$ 1,616	Other non-current assets
Foreign currency forward contracts	804	661	Other current assets
Liability derivatives:			
Interest rate swaps	(191)	(124)	Accrued expenses and other current liabilities
Foreign currency forward contracts	$ (344)	$ (1,130)	Accrued expenses and other current liabilities

10. Income Taxes

During the first quarter of 2018, income tax expense was $7.5 million, or 24.2% of pre-tax income. In the first quarter of 2017, we recorded tax expense of $7.1 million, or 24.4% of pre-tax income. The tax expense in the first quarter of 2018, as a percentage of pre-tax income, was higher than the U.S. federal statutory income tax rate of 21% primarily as a result of foreign statutory rate differences. The tax expense for the first quarter of 2017, as a percentage of pre-tax income, was lower than the U.S. federal statutory income tax rate of 35% primarily as a result of foreign statutory rate differences.

We recognized the provisional tax impacts on our financial statements for the period ended December 31, 2017, related to the Tax Cut and Jobs Act (the "Tax Act") under the guidance of the SEC Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act ("SAB 118"). The ultimate impact may differ from these provisional amounts due to additional analysis, changes in interpretations and assumptions, additional regulatory guidance that may be issued, and actions we may take as a result of the Tax Act. The Company's preliminary determinations related to the estimable impacts of the Tax Act have not changed in the current quarter.

The Company continues to review the anticipated impacts of the global intangible low taxed income ("GILTI") and the foreign-derived intangible income ("FDII") on the Company for 2018. For the current quarter, the Company made reasonable estimates of GILTI and FDII, as well as the impact of changes to valuation allowances related to certain positions. The combined projected net impact of these items are not anticipated to be material to the tax rate in 2018. The Company has not recorded any potential deferred tax effects related to GILTI in the financial statements and has not made a policy decision regarding whether to record deferred taxes on GILTI or use the period cost method.

11. Contingent Liabilities

We have recorded environmental liabilities of $6.4 million at March 31, 2018, and $6.7 million at December 31, 2017, for costs associated with the remediation of certain of our properties that have been contaminated. The liability at March 31, 2018, and December 31, 2017, was primarily comprised of liabilities 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.

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.

Table of Contents

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 March 31, 2018 and 2017, respectively, follow:

	U.S. Pension Plans		Non-U.S. Pension Plans		Other Benefit Plans	
	Three Months Ended March 31,					
	2018	2017	2018	2017	2018	2017
	(Dollars in thousands)					
Service cost	$ 3	$ 4	$ 461	$ 404	$ 1	$ —
Interest cost	2,788	3,666	689	573	183	211
Expected return on plan assets	(3,995)	(4,740)	(233)	(210)	—	—
Amortization of prior service cost	—	2	11	10	—	—
Net periodic benefit (credit) cost	$ (1,204)	$ (1,068)	$ 928	$ 777	$ 184	$ 211

Interest cost, expected return on plan assets and amortization of prior service cost are recorded in Miscellaneous expense (income), net on the condensed consolidated statement of operations.

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 quarter of 2018, our Board of Directors granted 0.2 million stock options, 0.1 million performance share units and 0.1 million restricted stock units under the Plan.

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 three months ended March 31, 2018:

	Stock Options
Weighted-average grant-date fair value	$ 8.91
Expected life, in years	5.4
Risk-free interest rate	2.7 %
Expected volatility	39.7 %

The weighted average grant date fair value of our performance share units granted in the three months ended March 31, 2018, was $22.92. 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 respective attainment rates against the performance criteria.

We measure the fair value of restricted share units based on the closing market price of our common stock on the date of the grant. The restricted share units vest over three years. The weighted-average grant date fair value per unit for grants made during the three months ended March 31, 2018, was $22.27.

Table of Contents

We recognized stock-based compensation expense of $2.4 million for the three months ended March 31, 2018, and $2.7 million for the three months ended March 31, 2017. At March 31, 2018, unearned compensation cost related to the unvested portion of all stock-based compensation awards was approximately $11.6 million and is expected to be recognized over the remaining vesting period of the respective grants, through the first quarter of 2021.

14. Restructuring and Optimization Programs

Total restructuring and impairment charges were $4.1 million and $3.0 million for the three months ended March 31, 2018, and March 31, 2017, respectively. The charges primarily relate to costs associated with integration of our recent acquisitions and optimization programs, and are further summarized below.

	Employee Severance	Other Costs	Total
	(Dollars in thousands)		
Balances at December 31, 2017	$ 2,286	$ 1,234	$ 3,520
Restructuring charges	657	3,449	4,106
Cash payments	(1,616)	(62)	(1,678)
Non-cash items	65	(2,646)	(2,581)
Balances at March 31, 2018	$ 1,392	$ 1,975	$ 3,367

We expect to make cash payments to settle the remaining liability for employee severance benefits and other costs primarily over the next twelve months where applicable, except where legal or contractual obligations would require it to extend beyond that period.

15. Earnings Per Share

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

	Three Months Ended March 31,	
	2018	2017
	(Dollars in thousands, except per share amounts)	
Basic earnings per share computation:		
Net income attributable to Ferro Corporation common shareholders	$ 23,391	$ 21,898
Weighted-average common shares outstanding	84,228	83,530
Basic earnings per share attributable to Ferro Corporation common shareholders	$ 0.28	$ 0.26
Diluted earnings per share computation:		
Net income attributable to Ferro Corporation common shareholders	$ 23,391	$ 21,898
Weighted-average common shares outstanding	84,228	83,530
Assumed exercise of stock options	839	516
Assumed satisfaction of restricted stock unit conditions	279	574
Assumed satisfaction of performance stock unit conditions	164	268
Weighted-average diluted shares outstanding	85,510	84,888
Diluted earnings per share attributable to Ferro Corporation common shareholders	$ 0.27	$ 0.26

The number of anti-dilutive or unearned shares was 1.7 million for the three months ended March 31, 2018, and 2.1 million for the three months ended March 31, 2017. These shares were excluded from the calculation of diluted earnings per share due to their anti-dilutive impact.

Table of Contents

16. Accumulated Other Comprehensive Loss

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

	Three Months Ended March 31,			
	Postretirement Benefit Liability Adjustments	Translation Adjustments	Net Gain on Cash Flow Hedges	Total
	(Dollars in thousands)			
Balances at December 31, 2016	$ 1,141	$ (107,784)	$ —	$ (106,643)
Other comprehensive income before reclassifications, before tax	—	7,171	—	7,171
Reclassification to earnings:				
Postretirement benefit liabilities loss, before tax	(9)	—	—	(9)
Current period other comprehensive (loss) income, before tax	(9)	7,171	—	7,162
Tax effect	5	—	—	5
Current period other comprehensive (loss) income, net of tax	(4)	7,171	—	7,167
Balances at March 31, 2017	$ 1,137	$ (100,613)	$ —	$ (99,476)
Balances at December 31, 2017	$ 1,165	$ (77,578)	$ 945	$ (75,468)
Other comprehensive income before reclassifications, before tax	—	5,461	1,845	7,306
Reclassification to earnings:				
Postretirement benefit liabilities income, before tax	16	—	—	16
Cash flow hedge loss, before tax	—	—	(136)	(136)
Current period other comprehensive income (loss), before tax	16	5,461	1,709	7,186
Tax effect	9	(198)	395	206
Current period other comprehensive income (loss), net of tax	7	5,659	1,314	6,980
Balances at March 31, 2018	$ 1,172	$ (71,919)	$ 2,259	$ (68,488)

17. 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 March 31,	
	2018	2017
	(Dollars in thousands)	
Performance Coatings	$ 184,648	$ 126,565
Performance Colors and Glass	120,505	103,518
Color Solutions	100,379	90,472
Total net sales	$ 405,532	$ 320,555

Table of Contents

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

	Three Months Ended March 31,	
	2018	2017
	(Dollars in thousands)	
Performance Coatings	$ 43,765	$ 33,489
Performance Colors and Glass	43,328	37,418
Color Solutions	32,149	28,182
Other cost of sales	(556)	(295)
Total gross profit	118,686	98,794
Selling, general and administrative expenses	73,092	59,446
Restructuring and impairment charges	4,106	3,018
Other expense, net	10,376	7,071
Income before income taxes	$ 31,112	$ 29,259

18. Subsequent Event

On April 25, 2018 the Company entered into an amendment (the “Amended Credit Facility”) to its Credit Facility. The Amended Credit Facility consists of a $500 million secured revolving line of credit with a maturity of February 2023, a $355 million secured term loan facility with a maturity of February 2024, a $235 million secured term loan facility with a maturity of February 2024, and a $230 million secured term loan facility with a maturity of February 2024.

Table of Contents

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

Overview

Net sales for the three months ended March 31, 2018, increased by $85.0 million, or 26.5%, compared with the prior-year same period. The increase in net sales was driven by higher sales in Performance Coatings, Performance Colors and Glass and Color Solutions of $58.1 million, $17.0 million and $9.9 million, respectively. During the three months ended March 31, 2018, gross profit increased $19.9 million, or 20.1%, compared with the prior-year same period; as a percentage of net sales, it decreased approximately 150 basis points to 29.3%. The increase in gross profit was attributable to higher gross profit across all of our segments, with increases in Performance Coatings, Performance Colors and Glass and Color Solutions of $10.3 million, $5.9 million and $4.0 million, respectively.

For the three months ended March 31, 2018, selling, general and administrative ("SG&A") expenses increased $13.6 million, or 23.0%, compared with the prior-year same period. The higher SG&A expenses compared to the prior-year same period are primarily driven by expenses associated with businesses acquired within the last year.

For the three months ended March 31, 2018, net income was $23.6 million, compared with net income of $22.1 million for the prior-year same period, and net income attributable to common shareholders was $23.4 million, compared with net income attributable to common shareholders of $21.9 million for the prior-year same period. Our total gross profit for the first quarter of 2018 was $118.7 million, compared with $98.8 million for the three months ended March 31, 2017.

Outlook

For 2018, we will continue to execute our dynamic innovation and optimization phase, which includes organic and inorganic growth, and optimization. We expect organic growth through new products and repositioning of our portfolio to continue transitioning to the higher end of our target markets. We expect to invest at levels of approximately $100 million to $150 million per year in strategic acquisitions. We are implementing optimization programs to improve efficiency and upgrade operations throughout our business.

We still expect continued raw material headwinds through the near term. Over the long term, we are confident in our ability to mitigate raw material inflation due to our pricing initiatives, technological advances in reformulating compounds, and optimization initiatives. Foreign currency rates may continue to be volatile in 2018 and changes in interest rates could adversely impact reported results.

We remain focused on the integration of recent acquisitions and continue to work toward achieving the identified synergies. We are concurrently focusing on opportunities to optimize our cost structure and on making our business processes and systems more efficient. We continue to expect strong cash flow from operating activities to be positive for 2018, providing additional liquidity.

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, 2017.

Table of Contents

Results of Operations - Consolidated

Comparison of the three months ended March 31, 2018 and 2017

For the three months ended March 31, 2018, net income was $23.6 million, compared with net income of $22.1 million for the three months ended March 31, 2017. For the three months ended March 31, 2018, net income attributable to common shareholders was $23.4 million, or earnings per share of $0.28, compared with net income attributable to common shareholders of $21.9 million, or earnings per share of $0.26, for the three months ended March 31, 2017.

Net Sales

	Three Months Ended March 31,			
	2018	2017	$ Change	% Change
	(Dollars in thousands)			
Net sales	$ 405,532	$ 320,555	$ 84,977	26.5 %
Cost of sales	286,846	221,761	65,085	29.3 %
Gross profit	$ 118,686	$ 98,794	$ 19,892	20.1 %
Gross profit as a % of net sales	29.3 %	30.8 %		

Net sales increased by $85.0 million, or 26.5%, for the three months ended March 31, 2018, compared with the prior-year same period, driven by higher sales in Performance Coatings, Performance Colors and Glass and Color Solutions of $58.1 million, $17.0 million and $9.9 million, respectively. The increase in net sales was driven in part by acquisitions, including Endeka, which contributed sales of $30.7 million, and SPC, which contributed sales of $10.1 million, each of which was acquired after the first quarter of 2017. The increase in net sales was also driven by organic growth, with Performance Coatings growing $18.0 million, Performance Colors and Glass growing $10.8 million and Color Solutions growing $9.9 million.

Gross Profit

Gross profit increased $19.9 million, or 20.1%, for the three months ended March 31, 2018, compared with the prior-year same period, and as a percentage of net sales, it decreased 150 basis points to 29.3%. The increase in gross profit was attributable to increases across all of our segments, with increases in Performance Coatings, Performance Colors and Glass and Color Solutions of $10.3 million, $5.9 million and $4.0 million, respectively. The increase in

gross profit was driven by acquisitions of $12.7 million, favorable product pricing of $11.1 million, favorable foreign currency impacts of $7.4 million, higher sales volumes and mix of $3.9 million and lower manufacturing costs of $2.0 million, partially offset by higher raw material costs of $16.9 million.

Geographic Revenues

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

	Three Months Ended March 31,			
	2018	2017	$ Change	% Change
	(Dollars in thousands)			
Geographic Revenues on a sales origination basis				
EMEA	$ 220,943	$ 148,923	$ 72,020	48.4 %
United States	91,536	88,380	3,156	3.6 %
Asia Pacific	52,400	44,208	8,192	18.5 %
Latin America	40,653	39,044	1,609	4.1 %
Net sales	$ 405,532	$ 320,555	$ 84,977	26.5 %

The increase in net sales of $85.0 million, compared with the prior-year same period, was driven by an increase in sales from all regions. The increase in sales from EMEA was attributable to higher sales in Performance Coatings, Performance Colors and Glass and Color Solutions of $50.0 million, $16.8 million and $5.3 million, respectively. The increase in sales from Asia Pacific was attributable to higher sales in Performance Coatings, Performance Colors and Glass and Color Solutions of $4.6 million, $1.9 million

Table of Contents

and $1.7 million, respectively. The increase in sales from the United States was attributable to higher sales in Color Solutions and Performance Coatings of $3.1 million and $2.1 million, respectively, partially offset by a decrease in sales in Performance Colors and Glass of $2.0 million. The increase in sales from Latin America was primarily attributable to higher sales in Performance Coatings.

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

	Three Months Ended March 31,			
	2018	2017	$ Change	% Change
	(Dollars in thousands)			
Geographic Revenues on a shipped-to basis				
EMEA	$ 210,331	$ 140,539	$ 69,792	49.7 %
Asia Pacific	76,260	70,121	6,139	8.8 %
United States	71,365	66,918	4,447	6.6 %
Latin America	47,576	42,977	4,599	10.7 %
Net sales	$ 405,532	$ 320,555	$ 84,977	26.5 %

Selling, General and Administrative Expenses

The following table includes SG&A components with significant changes between 2018 and 2017.

	Three Months Ended March 31,			
	2018	2017	$ Change	% Change
	(Dollars in thousands)			
Personnel expenses	$ 41,119	$ 32,904	$ 8,215	25.0 %
Incentive compensation	2,966	1,830	1,136	62.1 %
Stock-based compensation	2,430	2,723	(293)	(10.8) %
Pension and other postretirement benefits	342	408	(66)	(16.2) %

Bad debt	105	(241)	346	(143.6)%
Business development	2,423	2,361	62	2.6 %
Research and development expenses	10,841	8,669	2,172	25.1 %
Intangible asset amortization	2,073	2,051	22	1.1 %
All other expenses	10,793	8,741	2,052	23.5 %
Selling, general and administrative expenses	$ 73,092	$ 59,446	$ 13,646	23.0 %

SG&A expenses were $13.6 million higher in the three months ended March 31, 2018, compared with the prior-year same period. The higher SG&A expenses compared with the prior-year same period were primarily driven by expenses associated with businesses acquired within the last year. The acquisitions were the primary driver of the increase in personnel expenses and research and development expenses. The increase in incentive compensation of $1.1 million was driven by the Company’s performance relative to targets established for performance awards compared with the prior-year same period.

Table of Contents

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.

	Three Months Ended March 31,			
	2018	2017	$ Change	% Change
	(Dollars in thousands)			
Strategic services	$ 41,178	$ 31,693	$ 9,485	29.9 %
Functional services	26,518	23,200	3,318	14.3 %
Incentive compensation	2,966	1,830	1,136	62.1 %
Stock-based compensation	2,430	2,723	(293)	(10.8) %
Selling, general and administrative expenses	$ 73,092	$ 59,446	$ 13,646	23.0 %

Restructuring and Impairment Charges

	Three Months Ended March 31,			
	2018	2017	$ Change	% Change
	(Dollars in thousands)			
Employee severance	$ 657	$ 980	$ (323)	(33.0) %
Asset impairment	—	1,176	(1,176)	NM
Other restructuring costs	3,449	862	2,587	300.1 %
Restructuring and impairment charges	$ 4,106	$ 3,018	$ 1,088	36.1 %

Restructuring and impairment charges increased in the first quarter of 2018 compared with the prior-year same period. The increase primarily relates to costs associated with integration of our recent acquisitions and optimization programs.

Interest Expense

	Three Months Ended March 31,			
	2018	2017	$ Change	% Change
	(Dollars in thousands)			
Interest expense	$ 7,251	$ 5,748	$ 1,503	26.1 %
Amortization of bank fees	870	479	391	81.6 %
Interest capitalization	(159)	(3)	(156)	NM %
Interest expense	$ 7,962	$ 6,224	$ 1,738	27.9 %

Interest expense increased in the first quarter of 2018 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 March 31, 2018, compared with the prior-year same period and an increase of the amortization of debt issuance costs associated with the 2017 Credit Facility.

Income Tax Expense

During the first quarter of 2018, income tax expense was $7.5 million, or 24.2% of pre-tax income. In the first quarter of 2017, we recorded tax expense of $7.1 million, or 24.4% of pre-tax income. The tax expense in the first quarter of 2018, as a percentage of pre-tax income, was higher than the U.S. federal statutory income tax rate of 21% primarily as a result of foreign statutory rate differences. The tax expense for the first quarter of 2017, as a percentage of pre-tax income, was lower than the U.S. federal statutory income tax rate of 35% primarily as a result of foreign statutory rate differences.

We recognized the provisional tax impacts on our financial statements for the period ended December 31, 2017, related to the Tax Cut and Jobs Act (the “Tax Act”) under the guidance of the SEC Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (“SAB 118”). The ultimate impact may differ from these provisional amounts due to additional analysis, changes in interpretations and assumptions, additional regulatory guidance that may be issued, and actions we may

Table of Contents

take as a result of the Tax Act. The Company's preliminary determinations related to the estimable impacts of the Tax Act have not changed in the current quarter.

The Company continues to review the anticipated impacts of the global intangible low taxed income ("GILTI") and the foreign-derived intangible income ("FDII") on the Company for 2018. For the current quarter, the Company made reasonable estimates of GILTI and FDII, as well as the impact of changes to valuation allowances related to certain positions. The combined projected net impact of these items are not anticipated to be material to the tax rate in 2018. The Company has not recorded any potential deferred tax effects related to GILTI in the financial statements and has not made a policy decision regarding whether to record deferred taxes on GILTI or use the period cost method.

Results of Operations - Segment Information

Comparison of the three months ended March 31, 2018 and 2017

Performance Coatings

	Three Months Ended March 31,				Change due to				
	2018	2017	$ Change	% Change	Price	Volume / Mix	Currency	Acquisitions	Other
	(Dollars in thousands)								
Segment net sales	$ 184,648	$ 126,565	$ 58,083	45.9 %	$ 7,100	$ 1,218	$ 9,723	$ 40,042	$ —
Segment gross profit	43,765	33,489	10,276	30.7 %	7,100	832	3,053	11,648	(12,357)
Gross profit as a % of segment net sales	23.7 %	26.5 %							

Net sales increased in Performance Coatings compared with the prior-year same period, primarily driven by sales from Endeka of $28.5 million and SPC of $10.1 million, each of which was acquired after the first quarter of 2017,

and increases in sales of porcelain enamel, frits and glazes and digital inks of $6.8 million $5.4 million and $3.5 million, respectively. The increase in net sales was driven by sales from acquisitions of $40.0 million, favorable foreign currency impacts of $9.7 million, higher product pricing of $7.1 million and favorable volume and mix of $1.2 million. Gross profit increased $10.3 million from the prior-year same period, primarily driven by gross profit from acquisitions of $11.6 million, favorable product pricing impacts of $7.1 million, favorable foreign currency impacts of $3.1 million and higher sales volumes and mix of $0.8 million, partially offset by higher raw material costs of $11.4 million and higher manufacturing costs of $1.0 million.

	Three Months Ended March 31,			
	2018	2017	$ Change	% Change
	(Dollars in thousands)			
Segment net sales by Region				
EMEA	$ 119,116	$ 69,160	$ 49,956	72.2 %
Latin America	26,766	25,330	1,436	5.7 %
Asia Pacific	25,947	21,317	4,630	21.7 %
United States	12,819	10,758	2,061	19.2 %
Total	$ 184,648	$ 126,565	$ 58,083	45.9 %

The net sales increase of $58.1 million was driven by increases in sales from all regions. The increase in sales from EMEA was primarily attributable to Endeka and SPC, each of which was acquired after the first quarter of 2017, which contributed $27.5 million and $10.1 million, respectively, and higher sales of all product lines. The increase in sales from Asia Pacific was driven by higher sales of frits and glazes and porcelain enamel of $2.0 million and $1.3 million, respectively, and sales from Endeka, which contributed $1.0 million. The increase in sales from Latin America was driven by sales of frits and glazes and digital inks of $1.0 million and $0.7

Table of Contents

million, respectively, partially offset by lower sales of porcelain enamel. The increase in sales from the United States was fully attributable to higher sales of porcelain enamel.

Performance Colors and Glass

	Three Months Ended March 31,				Change due to				
	2018	2017	$ Change	% Change	Price	Volume / Mix	Currency	Acquisitions	Other
	(Dollars in thousands)								
Segment net sales	$ 120,505	$ 103,518	$ 16,987	16.4 %	$ 836	$ 2,334	$ 7,588	$ 6,229	$ —
Segment gross profit	43,328	37,418	5,910	15.8 %	836	1,339	2,714	1,034	(13)
Gross profit as a % of segment net sales	36.0 %	36.1 %							

Net sales increased compared with the prior-year same period, primarily driven by $3.9 million in sales from Dip-Tech, which was acquired in the third quarter of 2017, and $2.2 million in sales from Endeka, which was acquired in the fourth quarter of 2017. The increase in net sales was driven by favorable foreign currency impacts of $7.6 million, sales from acquisitions of $6.2 million, favorable volume and mix of $2.3 million and higher product pricing of $0.8 million. Gross profit increased from the prior-year same period, primarily due to favorable foreign currency impacts of $2.7 million, favorable manufacturing costs of $1.9 million, higher sales volumes and mix of $1.3 million, gross profit from acquisitions of $1.0 million, and higher product pricing of $0.8 million, partially offset by higher raw material costs of $1.9 million.

	Three Months Ended March 31,			
	2018	2017	$ Change	% Change
	(Dollars in thousands)			
Segment net sales by Region				
EMEA	$ 61,344	$ 44,586	$ 16,758	37.6 %

United States	37,091	39,104	(2,013)	(5.1) %
Asia Pacific	16,515	14,633	1,882	12.9 %
Latin America	5,555	5,195	360	6.9 %
Total	$ 120,505	$ 103,518	$ 16,987	16.4 %

The net sales increase of $17.0 million was driven by higher sales from EMEA, Asia Pacific and Latin America, partially offset by a decrease in sales from the United States. The increase in sales from EMEA was primarily attributable to $5.0 million in sales from acquisitions and higher sales of decoration products and electronic products of $4.4 million and $3.9 million, respectively. The increase from Asia Pacific was primarily due to an increase in sales of automobile products. Sales from Latin America remained relatively flat. The decrease in sales from the United States was primarily attributable to lower sales of automobile products, partially mitigated by an increase in sales from Dip-Tech of $0.8 million.

Color Solutions

	Three Months Ended March 31,				Change due to				
	2018	2017	$ Change	% Change	Price	Volume / Mix	Currency	Acquisitions	Other
	(Dollars in thousands)								
Segment net sales	$ 100,379	$ 90,472	$ 9,907	11.0 %	$ 3,185	$ 1,089	$ 5,634	$ —	$ —
Segment gross profit	32,149	28,182	3,967	14.1 %	3,185	1,724	1,584	—	(2,527)
Gross profit as a % of segment net sales	32.0 %	31.1 %							

Net sales increased compared with the prior-year same period, primarily due to higher sales of pigments and surface technology products of $7.0 million and $3.1 million, respectively. The increase in net sales was driven by favorable foreign currency impacts of $5.6 million, higher product pricing of $3.2 million and higher volumes and mix of $1.1 million. Gross profit increased from the prior-year same period, primarily due to higher product pricing of $3.2 million, favorable sales volumes and mix of $1.7 million, favorable

Table of Contents

foreign currency impacts of $1.6 million and lower manufacturing costs of $1.1 million, partially offset by higher raw material costs of $3.6 million.

	Three Months Ended March 31,			
	2018	2017	$ Change	% Change
	(Dollars in thousands)			
Segment net sales by Region				
United States	$ 41,626	$ 38,518	$ 3,108	8.1 %
EMEA	40,483	35,177	5,306	15.1 %
Asia Pacific	9,938	8,258	1,680	20.3 %
Latin America	8,332	8,519	(187)	(2.2) %
Total	$ 100,379	$ 90,472	$ 9,907	11.0 %

The net sales increase of $9.9 million was driven by higher sales from EMEA, United States, and Asia Pacific. The higher sales from EMEA and Asia Pacific were driven by sales of pigment products. The increase in sales from the United States was primarily driven by sales of $3.2 million of surface technology products.

Summary of Cash Flows for the three months ended March 2018 and 2017

	Three Months Ended March 31,		
	2018	2017	$ Change
	(Dollars in thousands)		
Net cash (used in) provided by operating activities	$ (34,285)	$ 1,630	$ (35,915)
Net cash used in investing activities	(23,012)	(6,764)	(16,248)
Net cash provided by financing activities	45,780	51,935	(6,155)
Effect of exchange rate changes on cash and cash equivalents	1,262	446	816
(Decrease) increase in cash and cash equivalents	$ (10,255)	$ 47,247	$ (57,502)

The following table includes details of net cash (used in) provided by operating activities.

	Three Months Ended March 31,		
	2018	2017	$ Change
	(Dollars in thousands)		
Cash flows from operating activities:			
Net income	$ 23,598	$ 22,121	$ 1,477
Gain on sale of assets and business	229	419	(190)
Depreciation and amortization	13,392	11,375	2,017
Interest amortization	870	479	391
Restructuring and impairment	2,429	2,828	(399)
Loss on extinguishment of debt	—	3,905	(3,905)
Accounts receivable	(32,657)	(26,619)	(6,038)
Inventories	(28,820)	(17,114)	(11,706)
Accounts payable	(7,139)	8,188	(15,327)
Other current assets and liabilities, net	(6,735)	(3,265)	(3,470)
Other adjustments, net	548	(687)	1,235
Net cash (used in) provided by operating activities	$ (34,285)	$ 1,630	$ (35,915)

Cash flows from operating activities. Cash flows provided by operating activities decreased $35.9 million in the first three months of 2018 compared with the prior-year same period. The decrease was primarily due to higher cash outflows for net working capital of $33.1 million and other current assets and liabilities of $3.5 million.

Table of Contents

Cash flows from investing activities. Cash flows used in investing activities increased $16.2 million in the first three months of 2018 compared with the prior-year same period. The increase was primarily due to higher cash outflows for capital expenditures of $13.9 million, and higher cash outflows for business acquisitions, net of cash acquired of $2.4 million.

Cash flows from financing activities. Cash flows provided by financing activities decreased $6.2 million in the first three months of 2018 compared with the prior-year same period. As further discussed in Note 8, during the three months ended March 31, 2017, we paid off our Previous Credit Facility and entered into our Credit Facility, consisting of a $400 million secured revolving line of credit, a $357.5 million secured term loan facility and a €250 million secured euro term loan facility. Further, compared to the prior-year same period, net borrowings under loans payable was $13.7 million higher, partially offset by payment of debt issuance costs related to the Credit Facility, during the three months ended March 31, 2017.

Capital Resources and Liquidity

2017 Credit Facility

On February 14, 2017, the Company entered into a new credit facility (the “Credit Facility”) with a group of lenders to refinance its then outstanding credit facility debt and to provide liquidity for ongoing working capital requirements and general corporate purposes.

The Credit Facility consists of a $400 million secured revolving line of credit with a term of five years, a $357.5 million secured term loan facility with a term of seven years and a €250 million secured Euro term loan facility with a term of seven years. The term loans are payable in equal quarterly installments in an amount equal to 0.25% of the original principal amount of the term loans, with the remaining balance due on the maturity date thereof. In addition, the Company is required, on an annual basis, to make a prepayment of term loans until they are fully paid and then to the revolving loans in an amount equal to a portion of the Company’s excess cash flow, as calculated pursuant to the Credit Facility.

Subject to the satisfaction of certain conditions, the Company can request additional commitments under the revolving line of credit or term loans in the aggregate principal amount of up to $250 million to the extent that existing or new lenders agree to provide such additional commitments and/or term loans. The Company can also raise certain additional debt or credit facilities subject to satisfaction of certain covenant levels.

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 certain of the Company’s U.S. subsidiaries and 65% of the stock of certain of the Company’s direct foreign subsidiaries.

Interest Rate – Term Loans: The interest rates applicable to the U.S. term loans will be, at the Company’s option, equal to either a base rate or a LIBOR rate plus, in both cases, an applicable margin. The interest rates applicable to the Euro term loans will be a Euro Interbank Offered Rate (“EURIBOR”) rate plus an applicable margin.

- The base rate for U.S. term loans 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 1.50%.
- The LIBOR rate for U.S. term loans shall not be less than 0.75% and the applicable margin for LIBOR rate U.S. term loans is 2.50%.
- The EURIBOR rate for Euro term loans shall not be less than 0% and the applicable margin for EURIBOR rate loans is 2.75%.
- For LIBOR rate term loans and EURIBOR rate term 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 or EURIBOR rate, as applicable, for the corresponding duration.

At March 31, 2018, the Company had borrowed $353.9 million under the secured term loan facility at an interest rate of 4.38% and €247.5 million (approximately $305.1 million) under the secured Euro term loan facility at an interest rate of 2.75%. At March 31, 2018, there were no additional borrowings available under the term loan facilities. We entered into interest rate swap agreements in the second

31

Table of Contents

quarter of 2017. These swaps converted $150 million and €90 million of our term loans from variable interest rates to fixed interest rates. At March 31, 2018, the effective interest rate for the term loan facilities after adjusting for the interest rate swap was 4.27% for the secured term loan facility and 3.00% for the Euro term loan facility.

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, in both cases, an applicable variable margin. The variable margin will be based on the ratio of (a) the Company's total consolidated net 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 for revolving loans 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 0.75% and 1.75%.
  - The LIBOR rate for revolving loans shall not be less than 0% and the applicable margin for LIBOR rate revolving loans will vary between 1.75% and 2.75%.
- For LIBOR rate revolving 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 March 31, 2018, there were $118.2 million borrowings under the revolving credit line at an interest rate of 4.04%. After reductions for outstanding letters of credit secured by these facilities, we had $277.2 million of additional borrowings available under the revolving credit facilities at March 31, 2018.

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 a financial covenant regarding the Company's maximum leverage ratio. If an event of default occurs, all amounts outstanding under the Credit Facility may be accelerated and become immediately due and payable. At March 31, 2018, 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 precious metals from financial institutions under consignment agreements. 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 $0.4 million and $0.2 million for the three months ended March 31, 2018 and 2017, respectively. We had on hand precious metals owned by participants in our precious metals program of $39.6 million at March 31, 2018, and $37.7 million at December 31, 2017, measured at fair value based on market prices for identical assets.

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 March 31, 2018, or December 31, 2017, 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 March 31, 2018, the Company and its subsidiaries had bank guarantees and standby letters of credit issued by financial institutions that totaled $8.5 million. These agreements primarily relate to Ferro's insurance programs, foreign energy purchase contracts and foreign tax payments.

Table of Contents

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 $45.6 million and $64.5 million at March 31, 2018, and December 31, 2017, respectively. We had $13.1 million and $39.4 million of additional borrowings available under these lines at March 31, 2018, and December 31, 2017, 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 March 31, 2018, we had $53.3 million of cash and cash equivalents. 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 and uses primarily include debt service, purchase commitments, labor costs, working capital requirements, restructuring expenditures, acquisition costs, capital investments, precious metals cash collateral requirements, and postretirement obligations. 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 (used in) provided by operating activities are primarily driven by earnings before non-cash charges and changes in working capital needs. We had additional borrowing capacity of $290.3 million at March 31, 2018, and $356.7 million at December 31, 2017, available under our various credit facilities, primarily our revolving credit facility.

Our revolving credit facility subjects us to a customary financial covenant regarding the Company's maximum leverage ratio. This covenant under our Credit Facility restricts the amount of our borrowings, reducing our flexibility to fund ongoing operations and strategic initiatives.

As of March 31, 2018, we were in compliance with our maximum leverage ratio covenant of 4.25x as our actual ratio was 2.79x, providing $94.2 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 $180 million for rolling four quarters, based on reasonably consistent net debt levels with those as of March 31, 2018, 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. Accordingly, we do not anticipate 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 entered into a material definitive agreement or 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, 2017.

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.

Table of Contents

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, 2017.

Table of Contents

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 and foreign currency exchange rates.

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. To reduce our exposure to interest rate changes on variable rate debt, we entered into interest rate swap agreements. These swaps effectively convert a portion of our variable rate debt to a fixed rate. 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 in the table below.

	March 31, 2018	December 31, 2017
	(Dollars in thousands)	
Variable-rate debt:		
Carrying amount	$ 796,985	$ 739,602
Fair value	799,744	742,634
Increase in annual interest expense from 1% increase in interest rates	5,370	4,890
Decrease in annual interest expense from 1% decrease in interest rates	(3,421)	(2,992)
Fixed-rate debt:		
Carrying amount	7,006	7,112
Fair value	4,526	3,973
Change in fair value from 1% increase in interest rates	NM	NM
Change in fair value from 1% decrease in interest rates	NM	NM
Interest rate swaps:		
Notional amount	260,916	258,045
Carrying amount and fair value	3,201	1,492
Change in fair value from 1% increase in interest rates	10,550	9,157
Change in fair value from 1% decrease in interest rates	(1,779)	(3,678)
Foreign currency forward contracts:		

Notional amount	302,350	238,457
Carrying amount and fair value	460	(469)
Change in fair value from 10% appreciation of U.S. dollar	3,815	3,541
Change in fair value from 10% depreciation of U.S. dollar	(4,671)	(4,328)

35

Table of Contents

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 March 31, 2018, 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 March 31, 2018.

Changes in Internal Control over Financial Reporting

During the first quarter of 2018, 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.

Table of Contents

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

The Company and its consolidated subsidiaries are subject from time to time to various claims, lawsuits, investigations, and proceedings related to products, services, contracts, environmental, health and safety, employment, intellectual property, and other matters, including with respect to divested businesses. The outcome of such matters is unpredictable, our assessment of them may change, and resolution of them could have a material adverse effect on the Company's consolidated financial position, results of operations, or cash flows. 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, 2017.

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 March 31, 2018:

	Total Number of Shares Purchased	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
	(Dollars in thousands, except for per share amounts)			
January 1, 2018 to January 31, 2018	—	$ —	—	$ 50,000,000
February 1, 2018 to February 28, 2018	—	$ —	—	$ 50,000,000
March 1, 2018 to March 31, 2018	—	$ —	—	$ 50,000,000
Total	—		—	

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.

Table of Contents

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: May 1, 2018

/s/ Peter T. Thomas
Peter T. Thomas
Chairman, President and Chief Executive Officer

(Principal Executive Officer)

Date: May 1, 2018

/s/ Benjamin J. Schlater
Benjamin J. Schlater
Vice President and Chief Financial Officer

(Principal Financial Officer)

Table of Contents

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:

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 17, 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 December 12, 2016.)

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.

10.1 Credit Agreement, dated as of February 14, 2017, among Ferro Corporation, the lenders party thereto, PNC Bank, National Association, as the administrative agent, collateral agent and a letter of credit issuer, Deutsche Bank AG New York Branch, as the syndication agent and as a letter of credit issuer, and the various financial institutions and other persons from time to time party thereto (incorporated by reference to Exhibit 10.1 to Ferro Corporation's current Report on Form 8-K, filed February 17, 2017).

10.2 Second Incremental Assumption Agreement, dated August 29, 2016, by and among Ferro Corporation, PNC Bank, National Association, as the administrative agent, the collateral agent and as an issuer, JPMorgan Chase Bank, N.A., as an issuer, and various financial institutions as lenders. (incorporated by reference to Exhibit 10.1 to Ferro Corporation's current Report on Form 8K, filed August 30, 2016).

10.4 Separation Agreement and Release, dated January 3, 2017, by and between Jeffrey L. Rutherford and Ferro Corporation. (incorporated by reference to Exhibit 10.4 to Ferro Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017).*

10.5 Change in Control Agreement, dated September 1, 2016, by and between Benjamin Schlater and Ferro Corporation. (incorporated by reference to Exhibit 10.5 to Ferro Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017).*

39

Table of Contents

Exhibit:

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.
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 Commission