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, 2019

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 1-5828

CARPENTER TECHNOLOGY CORPORATION
(Exact name of Registrant as specified in its Charter)

Delaware	**23-0458500**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1735 Market Street, 15th Floor **Philadelphia, Pennsylvania**	**19103**
(Address of principal executive offices)	(Zip Code)

610-208-2000
(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 every Interactive Data File required to be submitted 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 such files. Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a 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 check mark 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 Exchange Act). Yes ☐ No ☒

The number of shares outstanding of the issuer's common stock as of April 23, 2019 was 47,386,301.

CARPENTER TECHNOLOGY CORPORATION
FORM 10-Q
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PART I - FINANCIAL INFORMATION
Item 1. Financial Statements

CARPENTER TECHNOLOGY CORPORATION
CONSOLIDATED BALANCE SHEETS
(Unaudited)
($ in millions, except share data)

	March 31, 2019	June 30, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 18.9	$ 56.2
Accounts receivable, net	390.1	378.5
Inventories	861.0	689.2
Other current assets	39.2	54.9
Total current assets	1,309.2	1,178.8
Property, plant and equipment, net	1,350.8	1,313.4
Goodwill	327.9	268.7
Other intangibles, net	69.4	63.3
Deferred income taxes	4.6	4.3
Other assets	178.3	178.5
Total assets	$ 3,240.2	$ 3,007.0
LIABILITIES		
Current liabilities:		
Short-term credit agreement borrowings	$ 127.0	$ —
Accounts payable	252.0	214.7
Accrued liabilities	138.4	148.6
Total current liabilities	517.4	363.3
Long-term debt	549.0	545.7
Accrued pension liabilities	280.1	288.8
Accrued postretirement benefits	109.7	108.2
Deferred income taxes	159.8	161.6
Other liabilities	66.6	53.5
Total liabilities	1,682.6	1,521.1
Contingencies and commitments (see Note 10)		
STOCKHOLDERS' EQUITY		
Common stock — authorized 100,000,000 shares; issued 55,800,343 shares at March 31, 2019 and 55,712,229 shares at June 30, 2018; outstanding 47,385,326 shares at March 31, 2019 and 47,191,744 shares at June 30, 2018	279.0	278.6
Capital in excess of par value	319.6	310.0
Reinvested earnings	1,566.1	1,475.9
Common stock in treasury (8,415,017 shares and 8,520,485 shares at March 31, 2019 and June 30, 2018, respectively), at cost	(335.6)	(338.8)
Accumulated other comprehensive loss	(271.5)	(239.8)
Total stockholders' equity	1,557.6	1,485.9
Total liabilities and stockholders' equity	$ 3,240.2	$ 3,007.0

See accompanying notes to consolidated financial statements.

CARPENTER TECHNOLOGY CORPORATION
CONSOLIDATED STATEMENTS OF INCOME
(Unaudited)
(in millions, except per share data)

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2019	**2018**	**2019**	**2018**
Net sales	$ 609.9	$ 572.2	$ 1,738.8	$ 1,539.7
Cost of sales	486.7	476.2	1,416.9	1,272.3
Gross profit	123.2	96.0	321.9	267.4
Selling, general and administrative expenses	50.0	50.3	148.3	138.1
Operating income	73.2	45.7	173.6	129.3
Interest expense	(7.1)	(7.5)	(20.3)	(22.0)
Other income (expense), net	1.9	(0.5)	0.1	(0.7)
Income before income taxes	68.0	37.7	153.4	106.6
Income tax expense (benefit)	16.9	7.5	35.3	(39.1)
Net income	$ 51.1	$ 30.2	$ 118.1	$ 145.7
EARNINGS PER COMMON SHARE:				
Basic	$ 1.06	$ 0.63	$ 2.45	$ 3.06
Diluted	$ 1.05	$ 0.63	$ 2.43	$ 3.04
WEIGHTED AVERAGE COMMON SHARES OUTSTANDING:				
Basic	47.7	47.2	47.7	47.2
Diluted	48.1	47.7	48.1	47.5
Cash dividends per common share	$ 0.20	$ 0.18	$ 0.60	$ 0.54

See accompanying notes to consolidated financial statements.

CARPENTER TECHNOLOGY CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited)
($ in millions)

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2019	2018	2019	2018
Net income	$ 51.1	$ 30.2	$ 118.1	$ 145.7
Other comprehensive income (loss), net of tax				
Cumulative adjustment upon adoption of ASU 2017-12 reclassified to reinvested earnings	—	—	(1.0)	—
Pension and postretirement benefits, net of tax of $(0.5), $(1.2), $(1.5), and $(3.2), respectively	1.7	2.1	5.1	6.7
Net gain (loss) on derivative instruments, net of tax of $(1.0), $(2.7), $12.5, and $(13.2), respectively	3.2	1.3	(35.2)	24.4
Marketable securities gain, net of tax of $0.0, $0.0, $0.0, $0.0, respectively	—	—	0.3	—
Foreign currency translation	1.1	3.7	(0.9)	4.0
Other comprehensive income (loss)	6.0	7.1	(31.7)	35.1
Comprehensive income	$ 57.1	$ 37.3	$ 86.4	$ 180.8

See accompanying notes to consolidated financial statements.

CARPENTER TECHNOLOGY CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
($ in millions)

	Nine Months Ended March 31,	
	2019	**2018**
OPERATING ACTIVITIES		
Net income	$ 118.1	$ 145.7
Adjustments to reconcile net income to net cash provided from operating activities:		
Depreciation and amortization	90.9	87.2
Deferred income taxes	7.0	(68.9)
Net pension expense	8.7	10.6
Share-based compensation expense	12.7	12.8
Net loss on disposals of property and equipment and assets held for sale	0.7	2.0
Gain on insurance recovery	(11.4)	—
Changes in working capital and other:		
Accounts receivable	(12.1)	(54.4)
Inventories	(168.3)	(41.1)
Other current assets	7.6	(15.6)
Accounts payable	36.6	16.9
Accrued liabilities	(25.2)	5.5
Pension plan contributions	(4.3)	(5.7)
Other postretirement plan contributions	(2.5)	(2.5)
Other, net	(1.3)	(1.8)
Net cash provided from operating activities	57.2	90.7
INVESTING ACTIVITIES		
Purchases of property, plant, equipment and software	(130.7)	(80.9)
Proceeds from disposals of property, plant and equipment and assets held for sale	0.3	2.0
Proceeds from insurance recovery	11.4	—
Acquisition of businesses, net of cash acquired	(79.0)	(13.3)
Proceeds from sales of marketable securities	2.9	—
Proceeds from note receivable from the sale of equity method investment	—	6.3
Net cash used for investing activities	(195.1)	(85.9)
FINANCING ACTIVITIES		
Credit agreement borrowings	163.9	—
Credit agreement repayments	(63.9)	—
Net change in short-term credit agreement borrowings	27.0	—
Dividends paid	(28.9)	(25.8)
Proceeds from stock options exercised	3.7	4.5
Withholding tax payments on share-based compensation awards	(4.4)	(0.9)
Net cash provided from (used for) financing activities	97.4	(22.2)
Effect of exchange rate changes on cash and cash equivalents	3.2	(2.1)
DECREASE IN CASH AND CASH EQUIVALENTS	(37.3)	(19.5)
Cash and cash equivalents at beginning of period	56.2	66.3
Cash and cash equivalents at end of period	$ 18.9	$ 46.8
SUPPLEMENTAL CASH FLOW INFORMATION:		
Non-cash investing activities:		
Acquisition of property, plant, equipment and software	$ 12.8	$ 12.9

See accompanying notes to consolidated financial statements.

CARPENTER TECHNOLOGY CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
FOR THE NINE MONTHS ENDED MARCH 31, 2019 AND 2018
(Unaudited)
($ in millions, except per share data)

	Common Stock					
	Par Value of $5	Capital in Excess of Par Value	Reinvested Earnings	Common Stock in Treasury	Accumulated Other Comprehensive (Loss) Income	Total Equity
Balances at June 30, 2018	**$ 278.6**	**$ 310.0**	**$ 1,475.9**	**$ (338.8)**	**$ (239.8)**	**$ 1,485.9**
Cumulative adjustment upon adoption of ASU 2017-12			1.0		(1.0)	—
Net income			118.1			118.1
Pension and postretirement benefits gain, net of tax					5.1	5.1
Marketable securities gain, net of tax					0.3	0.3
Net loss on derivative instruments, net of tax					(35.2)	(35.2)
Foreign currency translation					(0.9)	(0.9)
Cash Dividends:						
Common @ $0.60 per share			(28.9)			(28.9)
Share-based compensation plans		6.3		3.2		9.5
Stock options exercised	0.4	3.3				3.7
Balances at March 31, 2019	**$ 279.0**	**$ 319.6**	**$ 1,566.1**	**$ (335.6)**	**$ (271.5)**	**$ 1,557.6**

	Common Stock					
	Par Value of $5	Capital in Excess of Par Value	Reinvested Earnings	Common Stock in Treasury	Accumulated Other Comprehensive (Loss) Income	Total Equity
Balances at June 30, 2017	**$ 276.7**	**$ 284.8**	**$ 1,321.8**	**$ (341.6)**	**$ (343.1)**	**$ 1,198.6**
Net income			145.7			145.7
Pension and postretirement benefits gain, net of tax					6.7	6.7
Net gain on derivative instruments, net of tax					24.4	24.4
Foreign currency translation					4.0	4.0
Cash Dividends:						
Common @ $0.54 per share			(25.8)			(25.8)
Share-based compensation plans		11.2		1.8		13.0
Stock options exercised	0.7	3.8				4.5
Balances at March 31, 2018	**$ 277.4**	**$ 299.8**	**$ 1,441.7**	**$ (339.8)**	**$ (308.0)**	**$ 1,371.1**

See accompanying notes to consolidated financial statements.

CARPENTER TECHNOLOGY CORPORATION
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Basis of Presentation

The accompanying unaudited consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America for interim financial information and the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for complete financial statements. In the opinion of management, all adjustments, consisting of normal and recurring adjustments, considered necessary for a fair statement of the results are reflected in the interim periods presented. The June 30, 2018 consolidated balance sheet data was derived from audited financial statements, but does not include all of the disclosures required by accounting principles generally accepted in the United States of America. These unaudited consolidated financial statements should be read in conjunction with the consolidated financial statements and footnotes thereto included in Carpenter's Annual Report on Form 10-K for the fiscal year ended June 30, 2018 (the "2018 Form 10-K"). Operating results for the three and nine months ended March 31, 2019 are not necessarily indicative of the operating results for any future period.

As used throughout this report, unless the context requires otherwise, the terms "Carpenter", the "Company", "Registrant", "Issuer", "we" and "our" refer to Carpenter Technology Corporation.

During the nine months ended March 31, 2019 the Company changed the presentation of net periodic pension cost and net periodic postretirement benefit cost in connection with the adoption of ASU 2017-07, Compensation - Retirement Benefits (Topic 715) - Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost. Prior year amounts have been reclassified to conform to the three and nine months ended March 31, 2019 presentation.

2. Recent Accounting Pronouncements

Recently Issued Accounting Pronouncements - Adopted in current period

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers (Topic 606) which outlines a single comprehensive framework for all entities in all industries to apply in the determination of when to recognize revenue, and, therefore, supersedes virtually all existing revenue recognition requirements and guidance. This framework resulted in less complex guidance in application while providing a consistent and comparable methodology for revenue recognition. The standard provides a five-step model to be applied to all contracts with customers, with an underlying principle that an entity will recognize revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services.

The Company adopted ASU 2014-09 for all open contracts as of July 1, 2018 using the modified retrospective transition method. The adoption of the new standard did not have a material impact on the financial position of the Company, the results of its operations or its cash flows as of and for the three and nine months ended March 31, 2019. There was no cumulative effect of adopting the standard at the date of initial application in reinvested earnings. The Company's revenue recognition accounting policy has been updated for the new guidance and the Company has expanded disclosure of revenues from contracts with customers as included in Note 3. Revenue.

In October 2016, the FASB issued ASU 2016-16, Income Taxes (Topic 740) - Intra-Entity Transfers of Assets Other Than Inventory, which outlines updates to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. ASU 2016-16 is effective for public business entities for annual periods, including interim periods within those annual periods, beginning after December 15, 2017, with early adoption permitted. The Company adopted the provisions of ASU 2016-16 in the first quarter of fiscal year 2019. The adoption of ASU 2016-16 did not materially impact the Company's consolidated financial statements.

In March 2017, the FASB issued ASU 2017-07, Compensation - Retirement Benefits (Topic 715) - Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost. The guidance changes how employers that sponsor defined benefit pension and other post-retirement benefit plans disaggregate the service cost components from other components of net periodic benefit costs in the income statement. This amendment requires that the service cost component be reported in net income as “cost of sales” or “selling, general and administrative expenses” in a manner consistent with the classification of direct labor and personnel costs of the eligible employees. Other components of net periodic benefit costs including interest costs, expected return on plan assets, amortization of net loss, amortization of prior service cost (benefits) (“pension earnings, interest and deferrals”) are classified as non-operating expense in “other income (expense), net” on the consolidated statements of income. The update specifies that only the service cost component is eligible for capitalization, which is consistent with the Company’s current practice. The Company adopted the provisions of ASU 2017-07 effective July 1, 2018 on a retrospective basis. For the three months ended March 31, 2018, $0.5 million has been reclassified from selling, general and administrative expenses to other income (expense), net on the consolidated statements of income. For the nine months ended March 31, 2018, $0.1 million and $1.5 million have been reclassified from cost of goods sold and selling, general and administrative expenses, respectively, to other income (expense), net on the consolidated statements of income.

In August 2017, the FASB issued ASU No. 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedge Activities, which amended and simplified the requirements of hedge accounting. ASU 2017-12 enables companies to more accurately present the economic effects of risk management activities in the financial statements. The guidance requires the presentation of all items that affect earnings to be recorded in the same income statement line as the hedged item and is effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years with early adoption permitted. The Company adopted the provisions of ASU 2017-12 on July 1, 2018. Upon adoption, the Company reclassified $1.0 million of previously recorded hedge ineffectiveness from Reinvested Earnings to Accumulated Other Comprehensive Loss within the equity section of the consolidated balance sheets and provided expanded disclosures of derivative activity.

Recently Issued Accounting Pronouncements - Pending Adoption

In February 2016, the FASB issued ASU 2016-02 Leases (Topic 842) which improves transparency and comparability among companies by recognizing lease assets and lease liabilities on the balance sheet and by disclosing key information about leasing arrangements. ASU 2016-02 is effective for public business entities for annual periods, including interim periods within those annual periods, beginning after December 15, 2018, with early adoption permitted. The Company completed the accumulation of current lease information into the accounting software and validated the data for accuracy. The Company expects to elect the package of practical expedients not to reassess prior conclusions related to contracts containing leases, lease classification and initial direct costs. The Company will make a policy election to not recognize right-of-use assets and lease liabilities for short-term leases for substantially all asset classes. Upon adoption of the new lease guidance, the Company expects to record a right-of-use asset and lease liability on the consolidated balance sheets for several types of operating leases, including buildings, equipment, vehicles, and computer equipment. Based on the current lease information, the amount of the respective asset and liability is estimated to be less than 5 percent of both total assets and total liabilities, as reported on the consolidated balance sheets as of March 31, 2019.

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, which allows a reclassification from accumulated other comprehensive income (loss) to reinvested earnings for standard tax effects resulting from the Act to Provide for Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018. ASU 2018-02 is effective for public business entities for annual periods, including interim periods within those annual periods, beginning after December 15, 2018, with early adoption permitted. The Company does not expect the adoption of ASU 2018-02 on July 1, 2019 will have a material impact on the consolidated financial statements.

3. Revenue

The Company recognizes revenue in accordance with Topic 606, Revenue from Contracts. The Company applies the five-step model in the FASB's guidance, which requires the Company to: (i) identify the contract with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when, or as, the Company satisfies a performance obligation.

The Company recognizes revenue when performance obligations under the terms of a customer purchase order or contract are satisfied. This occurs when control of the goods and services has transferred to the customer, which is generally determined when title, ownership, and risk of loss pass to the customer, all of which occurs upon shipment or delivery of the product or the service is performed. Consignment transactions are arrangements where the Company transfers product to a customer location but retains ownership and control of such product until it is used by the customer. Revenue for consignment arrangements is recognized upon usage by the customer. Service revenue is recognized as the services are performed.

The customer purchase order or contract for goods transferred has a single performance obligation for which revenue is recognized at a point in time. The standard terms and conditions of a customer purchase order include general rights of return and product warranty provisions related to nonconforming product. Depending on the circumstances, the product is either replaced or a quality adjustment is issued. Such warranties do not represent a separate performance obligation.

Each customer purchase order or contract sets forth the transaction price for the products and services purchased under that arrangement. Some customer arrangements include variable consideration, such as volume rebates, which generally depend upon the Company's customers meeting specified performance criteria, such as a purchasing level over a period of time. The Company exercises judgment to estimate the most likely amount of variable consideration at each reporting date.

Revenue is measured as the amount of consideration the Company expects to receive in exchange for its product. The normal payment terms are 30 days. The Company has elected to use the practical expedient that permits a Company to not adjust for the effects of a significant financing component if it expects that at the contract inception, the period between when the Company transfers a promised good or service to a customer and when the customer pays for that good or service will be one year or less.

Amounts billed to customers for shipping and handling activities to fulfill the Company's promise to transfer the goods are included in revenues and costs incurred by the Company for the delivery of goods are classified as cost of sales in the consolidated statements of income. Shipping terms may vary for products shipped outside the United States depending on the mode of transportation, the country where the material is shipped and any agreements made with the customers.

Contract liabilities are recognized when the Company has received consideration from a customer to transfer goods or services at a future point in time when the Company performs under the purchase order or contract. Contract liabilities were $12.3 million and $10.4 million at March 31, 2019 and June 30, 2018, respectively, and are included in accrued liabilities on the consolidated balance sheets.

The Company has elected to use the practical expedient that permits the omission of disclosure for remaining performance obligations which are expected to be satisfied in one year or less.

Disaggregation of Revenue

The Company operates in two business segments, Specialty Alloys Operations ("SAO") and Performance Engineered Products ("PEP"). Revenue is disaggregated within these two business segments by diversified end-use markets and by geographical location. Comparative information of the Company's overall revenues by end-use markets and geography for the three months and nine months ended March 31, 2019 and 2018 were as follows:

End-Use Market Data	Three Months Ended March 31,		Nine Months Ended March 31,	
($ in millions)	2019	2018	2019	2018
Aerospace and defense	$ 342.1	$ 323.7	$ 951.9	$ 847.2
Medical	55.1	45.1	147.6	126.1
Energy	49.0	36.5	136.1	100.3
Transportation	39.9	41.6	118.0	114.0
Industrial and consumer	87.4	90.1	280.9	257.6
Distribution	36.4	35.2	104.3	94.5
Consolidated net sales	$ 609.9	$ 572.2	$ 1,738.8	$ 1,539.7

Geographic Data	Three Months Ended March 31,		Nine Months Ended March 31,	
($ in millions)	2019	2018	2019	2018
United States	$ 414.1	$ 374.7	$ 1,183.3	$ 1,021.6
Europe	97.7	108.4	270.9	277.8
Asia Pacific	47.1	45.3	139.4	123.9
Mexico	22.7	17.3	65.4	40.6
Canada	17.5	17.3	50.2	47.4
Other	10.8	9.2	29.6	28.4
Consolidated net sales	$ 609.9	$ 572.2	$ 1,738.8	$ 1,539.7

4. Acquisitions

On October 22, 2018, the Company acquired all the outstanding shares of LPW Technology Ltd. ("LPW"), for a cash purchase price of $79.0 million, net of cash acquired. The acquisition combines LPW's metal powder lifecycle management technology and processes with the Company's technical expertise in producing highly engineered metal powders and additively manufactured components. The preliminary purchase price allocation was as follows: $2.1 million of accounts receivable, $4.5 million of inventory, $0.5 million of other current assets, $11.9 million of property and equipment, $11.4 million of identifiable intangible assets, $59.0 million of goodwill, $4.4 million of accounts payable, $2.5 million of current liabilities and $3.5 million of other liabilities. The preliminary purchase price allocation was estimated due to the timing of the acquisition. The final purchase price allocation may change in future reporting periods upon finalization of the valuation analysis, which the Company expects to complete in the fourth quarter of fiscal year 2019.

On February 21, 2018, the Company acquired all of the outstanding membership interests of MB CalRAM LLC ("CalRAM"), for a cash purchase price of $13.3 million. The acquisition provided the Company with immediate entry into the rapidly expanding part production segment of the additive manufacturing value chain. The purchase price allocation was completed in the fourth quarter of fiscal year 2018 and resulted in the purchase price being allocated to $0.2 million of working capital, $2.6 million of property and equipment, $5.2 million of identifiable intangible assets and $5.3 million of goodwill.

CARPENTER TECHNOLOGY CORPORATION
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

5. Earnings per Common Share

The Company calculates basic and diluted earnings per share using the two class method. Under the two class method, earnings are allocated to common stock and participating securities (non-vested restricted shares and units that receive non-forfeitable dividends) according to their participation rights in dividends and undistributed earnings. The earnings available to each class of stock are divided by the weighted average number of outstanding shares for the period in each class. Diluted earnings per share assumes the issuance of common stock for all potentially dilutive share equivalents outstanding.

The calculations of basic and diluted earnings per common share for the three and nine months ended March 31, 2019 and 2018 were as follows:

	Three Months Ended March 31,		Nine Months Ended March 31,	
(in millions, except per share data)	**2019**	**2018**	**2019**	**2018**
Net income	$ 51.1	$ 30.2	$ 118.1	$ 145.7
Less: earnings and dividends allocated to participating securities	(0.6)	(0.3)	(1.4)	(1.3)
Earnings available for common stockholders used in calculation of basic earnings per common share	$ 50.5	$ 29.9	$ 116.7	$ 144.4
Weighted average number of common shares outstanding, basic	47.7	47.2	47.7	47.2
Basic earnings per common share	$ 1.06	$ 0.63	$ 2.45	$ 3.06
Net income	$ 51.1	$ 30.2	$ 118.1	$ 145.7
Less: earnings and dividends allocated to participating securities	(0.6)	(0.3)	(1.4)	(1.3)
Earnings available for common stockholders used in calculation of diluted earnings per common share	$ 50.5	$ 29.9	$ 116.7	$ 144.4
Weighted average number of common shares outstanding, basic	47.7	47.2	47.7	47.2
Effect of shares issuable under share-based compensation plans	0.4	0.5	0.4	0.3
Weighted average number of common shares outstanding, diluted	48.1	47.7	48.1	47.5
Diluted earnings per common share	$ 1.05	$ 0.63	$ 2.43	$ 3.04

The following awards issued under share-based compensation plans were excluded from the above calculations of diluted earnings per share because their effects were anti-dilutive:

	Three Months Ended March 31,		Nine Months Ended March 31,	
(in millions)	**2019**	**2018**	**2019**	**2018**
Stock options	0.8	0.7	0.7	0.9

CARPENTER TECHNOLOGY CORPORATION
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

6. Inventories

Inventories consisted of the following components as of March 31, 2019 and June 30, 2018:

($ in millions)	March 31, 2019	June 30, 2018
Raw materials and supplies	$ 200.3	$ 157.5
Work in process	466.9	372.5
Finished and purchased products	193.8	159.2
Total inventory	$ 861.0	$ 689.2

Inventories are valued at the lower of cost or market. Cost for inventories is principally determined using the last-in, first-out ("LIFO") inventory costing method. The Company also uses the first-in, first-out ("FIFO") and average cost methods. As of March 31, 2019 and June 30, 2018, $182.8 million and $138.6 million of inventory, respectively, was accounted for using a method other than the LIFO inventory costing method.

7. Accrued Liabilities

Accrued liabilities consisted of the following as of March 31, 2019 and June 30, 2018:

($ in millions)	March 31, 2019	June 30, 2018
Accrued compensation and benefits	$ 56.3	$ 83.3
Derivative financial instruments	17.3	—
Accrued postretirement benefits	15.4	15.4
Deferred revenue	12.3	10.4
Accrued income taxes	4.3	1.4
Accrued interest expense	3.9	10.4
Accrued pension liabilities	3.3	3.3
Other	25.6	24.4
Total accrued liabilities	$ 138.4	$ 148.6

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8. Pension and Other Postretirement Benefits

The components of the net periodic benefit cost related to the Company's pension and other postretirement benefits for the three and nine months ended March 31, 2019 and 2018 were as follows:

Three months ended March 31,	Pension Plans		Other Postretirement Plans	
($ in millions)	2019	2018	2019	2018
Service cost	$ 2.3	$ 2.4	$ 0.6	$ 0.7
Interest cost	13.2	13.0	2.5	2.4
Expected return on plan assets	(16.2)	(16.5)	(1.7)	(1.7)
Amortization of net loss	2.6	3.4	0.4	0.7
Amortization of prior service cost (benefit)	0.5	0.5	(1.3)	(1.3)
Net periodic benefit costs	$ 2.4	$ 2.8	$ 0.5	$ 0.8

Nine months ended March 31,	Pension Plans		Other Postretirement Plans	
($ in millions)	2019	2018	2019	2018
Service cost	$ 6.9	$ 7.1	$ 1.8	$ 2.0
Interest cost	39.6	39.1	7.6	7.2
Expected return on plan assets	(48.6)	(49.5)	(5.2)	(5.2)
Amortization of net loss	7.8	10.2	1.2	2.2
Amortization of prior service cost (benefit)	1.5	1.5	(3.9)	(4.0)
Net periodic benefit costs	$ 7.2	$ 8.4	$ 1.5	$ 2.2

During the nine months ended March 31, 2019 and 2018, the Company made $4.3 million and $5.7 million, respectively, of contributions to its qualified defined benefit pension plans. The Company currently expects to contribute $1.2 million to its qualified defined benefit pension plans during the remainder of fiscal year 2019.

9. Debt

The Company maintains a $400.0 million unsecured revolving credit facility ("Credit Agreement") that extends to March 2022. Interest on the borrowings under the Credit Agreement accrue at variable rates, based upon LIBOR or a defined "Base Rate". Both are determined based upon the rating of the Company's senior unsecured long-term debt (the "Debt Rating"). The applicable margin to be added to LIBOR ranges from 1.00% to 1.75% (1.25% as of March 31, 2019), and for Base Rate-determined loans, from 0.00% to 0.75% (0.25% as of March 31, 2019). The Company also pays a quarterly commitment fee ranging from 0.125% to 0.400% (0.20% as of March 31, 2019), determined based upon the Debt Rating, of the unused portion of the $400.0 million commitment under the Credit Agreement. In addition, the Company must pay certain letter of credit fees, ranging from 1.00% to 1.75% (1.25% as of March 31, 2019), with respect to letters of credit issued under the Credit Agreement. The Company has the right to voluntarily prepay and re-borrow loans and to terminate or reduce the commitments under the facility. As of March 31, 2019, the Company had $6.0 million of issued letters of credit and $127.0 million of short-term borrowings under the Credit Agreement with the balance of $267.0 million available to the Company.

The Company is subject to certain financial and restrictive covenants under the Credit Agreement, which, among other things, require the maintenance of a minimum interest coverage ratio of 3.50 to 1.00. The interest coverage ratio is defined in the Credit Agreement as, for any period, the ratio of consolidated earnings before interest, taxes, depreciation and amortization and non-cash net pension expense ("EBITDA") to consolidated interest expense for such period. The Credit Agreement also requires the Company to maintain a debt to capital ratio of less than 55 percent. The debt to capital ratio is defined in the Credit Agreement as the ratio of consolidated indebtedness, as defined therein, to consolidated capitalization, as defined therein. As of March 31, 2019 and June 30, 2018, the Company was in compliance with all of the covenants of the Credit Agreement.

Long-term debt outstanding as of March 31, 2019 and June 30, 2018 consisted of the following:

($ in millions)	March 31, 2019	June 30, 2018
Senior unsecured notes, 5.20% due July 2021 (face value of $250.0 million at March 31, 2019 and June 30, 2018)	$ 249.7	$ 246.6
Senior unsecured notes, 4.45% due March 2023 (face value of $300.0 million at March 31, 2019 and June 30, 2018)	299.3	299.1
Total	549.0	545.7
Less: amounts due within one year	—	—
Long-term debt	$ 549.0	$ 545.7

For the three months ended March 31, 2019 and 2018, interest costs totaled $8.4 million and $8.2 million, respectively, of which $1.3 million and $0.7 million, respectively, were capitalized as part of the cost of property, plant, equipment and software. For the nine months ended March 31, 2019 and 2018, interest costs totaled $23.5 million and $23.8 million, respectively, of which $3.2 million and $1.8 million, respectively, were capitalized as part of the cost of property, equipment and software.

10. Contingencies and Commitments

Environmental

The Company is subject to various federal, state, local and international environmental laws and regulations relating to pollution, protection of public health and the environment, natural resource damages and occupational safety and health. Although compliance with these laws and regulations may affect the costs of the Company’s operations, compliance costs to date have not been material. The Company has environmental remediation liabilities at some of its owned operating facilities and has been designated as a potentially responsible party (“PRP”) with respect to certain third party Superfund waste-disposal sites and other third party-owned sites. The Company accrues amounts for environmental remediation costs that represent management’s best estimate of the probable and reasonably estimable future costs related to environmental remediation. During the nine months ended March 31, 2019, the Company decreased the liability for a Company-owned former operating site by $0.1 million. The liabilities recorded for environmental remediation costs at Superfund sites, other third party-owned sites and Carpenter-owned current or former operating facilities remaining at March 31, 2019 and June 30, 2018 were $16.0 million and $16.1 million, respectively. Additionally, the Company has been notified that it may be a PRP with respect to other Superfund sites as to which no proceedings have been instituted against the Company. Neither the exact amount of remediation costs nor the final method of their allocation among all designated PRPs at these Superfund sites have been determined. Accordingly, at this time, the Company cannot reasonably estimate expected costs for such matters. The liability for future environmental remediation costs that can be reasonably estimated is evaluated by management on a quarterly basis.

Estimates of the amount and timing of future costs of environmental remediation requirements are inherently imprecise because of the continuing evolution of environmental laws and regulatory requirements, the availability and application of technology, the identification of currently unknown remediation sites and the allocation of costs among the PRPs. Based upon information currently available, such future costs are not expected to have a material effect on the Company's financial position, results of operations or cash flows over the long-term. However, such costs could be material to the Company's financial position, results of operations or cash flows in a particular future quarter or year.

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Other

The Company is defending various routine claims and legal actions that are incidental to its business and common to its operations, including those pertaining to product claims, commercial disputes, patent infringement, employment actions, employee benefits, compliance with domestic and foreign laws, personal injury claims and tax issues. Like many other manufacturing companies in recent years, the Company, from time to time, has been named as a defendant in lawsuits alleging personal injury as a result of exposure to chemicals and substances in the workplace such as asbestos. The Company provides for costs relating to these matters when a loss is probable and the amount of the loss is reasonably estimable. The effect of the outcome of these matters on the Company's future results of operations and liquidity cannot be predicted because any such effect depends on future results of operations and the amount and timing (both as to recording future charges to operations and cash expenditures) of the resolution of such matters. While it is not feasible to determine the outcome of these matters, management believes that the total liability from these matters will not have a material effect on the Company's financial position, results of operations or cash flows over the long-term. However, there can be no assurance that an increase in the scope of pending matters or that any future lawsuits, claims, proceedings or investigations will not be material to the Company's financial position, results of operations or cash flows in a particular future quarter or year.

11. Fair Value Measurements

The fair value hierarchy has three levels based on the inputs used to determine fair value. Level 1 refers to quoted prices in active markets for identical assets or liabilities. Level 2 refers to observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data. Level 3 refers to unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs. Currently, the Company does not use Level 1 and 3 inputs.

The following tables present the Company's assets and liabilities that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy:

March 31, 2019	**Fair Value Measurements Using Input Type**
($ in millions)	**Level 2**
Assets:	
Derivative financial instruments	$ 15.4
Liabilities:	
Derivative financial instruments	$ 30.1

June 30, 2018	**Fair Value Measurements Using Input Type**
($ in millions)	**Level 2**
Assets:	
Marketable securities:	
Municipal auction rate securities	$ 2.9
Derivative financial instruments	35.2
Total assets	$ 38.1
Liabilities:	
Derivative financial instruments	$ 3.4

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The Company's derivative financial instruments consist of commodity forward contracts, foreign currency forward contracts and interest rate swaps. These instruments are measured at fair value using the market method valuation technique. The inputs to this technique utilize information related to commodity prices, foreign exchange rates and interest rates published by third party leading financial news and data providers. This is observable data; however, the valuation of these instruments is not based on actual transactions for the same instruments and, as such, they are classified as Level 2. The Company's use of derivatives and hedging policies are more fully discussed in Note 12.

The Company has currently chosen not to elect the fair value option for any items that are not already required to be measured at fair value in accordance with accounting principles generally accepted in the United States of America.

The carrying amounts of other financial instruments not listed in the table below approximate fair value due to the short-term nature of these items. The carrying amounts and estimated fair values of the Company's financial instruments not recorded at fair value in the financial statements were as follows:

	March 31, 2019		June 30, 2018	
($ in millions)	Carrying Value	Fair Value	Carrying Value	Fair Value
Long-term debt	$ 549.0	$ 562.0	$ 545.7	$ 558.3
Company-owned life insurance	$ 16.8	$ 16.8	$ 16.4	$ 16.4

The carrying amount of Company-owned life insurance reflects cash surrender values based upon the market values of underlying securities, using Level 2 inputs, net of any outstanding policy loans. The carrying value associated with the cash surrender value of these policies is recorded in other assets in the accompanying consolidated balance sheets.

The fair values of long-term debt as of March 31, 2019 and June 30, 2018 were determined by using current interest rates for debt with terms and maturities similar to the Company's existing debt arrangements and accordingly would be classified as Level 2 inputs in the fair value hierarchy.

12. Derivatives and Hedging Activities

The Company uses commodity forwards, interest rate swaps, forward interest rate swaps and foreign currency forwards to manage risks generally associated with commodity price, interest rate and foreign currency rate fluctuations. The following explains the various types of derivatives and includes a summary of the impact the derivative instruments had on the Company's financial position, results of operations and cash flows.

Cash Flow Hedging — Commodity forward contracts: The Company enters into commodity forward contracts to fix the price of a portion of anticipated future purchases of certain critical raw materials and energy to manage the risk of cash flow variability associated with volatile commodity prices. The commodity forward contracts have been designated as cash flow hedges. The qualifying hedge contracts are marked-to-market at each reporting date and any unrealized gains or losses are included in accumulated other comprehensive (loss) income ("AOCI") and reclassified to cost of sales in the period during which the hedged transaction affects earnings or it becomes probable that the forecasted transaction will not occur. As of March 31, 2019, the Company had forward contracts to purchase 20.1 million pounds of certain raw materials with settlement dates through December 2023.

Cash Flow Hedging — Forward interest rate swaps: Historically, the Company has entered into forward interest rate swap contracts to manage the risk of cash flow variability associated with fixed interest debt expected to be issued. The forward interest rate swaps were designated as cash flow hedges. The qualifying hedge contracts were marked-to-market at each reporting date and any unrealized gains or losses were included in AOCI and reclassified to interest expense in the period during which the hedged transaction affected earnings or it became probable that the forecasted transaction would not occur. Upon the issuance of the fixed rate debt, the forward interest rate swap contracts were terminated. The realized gains at the time the interest rate swap contracts were terminated are being amortized over the term of the underlying debt. For the three months ended March 31, 2019 and 2018, net gains of $0.1 million and $0.1 million, respectively, related to the previously terminated contracts, were recorded as a reduction to interest expense. For the nine months ended March 31, 2019 and 2018, net gains of $0.3 million and $0.3 million, respectively, related to the previously terminated contracts were recorded as a reduction to interest expense.

Cash Flow Hedging — Foreign currency forward contracts: The Company uses foreign currency forward contracts to hedge a portion of anticipated future sales denominated in foreign currencies, principally the Euro and Pound Sterling, in order to offset the effect of changes in exchange rates. The qualifying hedge contracts are marked-to-market at each reporting date and any unrealized gains or losses are included in AOCI and reclassified to net sales in the period during which the transaction affects earnings or it becomes probable that the forecasted transaction will not occur.

The Company also uses foreign currency forward contracts to protect certain short-term asset positions denominated in foreign currencies against the effect of changes in exchange rates. These positions do not qualify for hedge accounting and accordingly are marked-to-market at each reporting date through charges to other income and expense. As of March 31, 2019 and June 30, 2018, the fair value of the outstanding foreign currency forwards not designated as hedging instruments and the charges to income for changes in fair value for these contracts were not material.

Fair Value Hedging - Interest rate swaps: The Company uses interest rate swaps to achieve a level of floating rate debt relative to fixed rate debt where appropriate. The Company has designated fixed to floating interest rate swaps as fair value hedges. Accordingly, the changes in the fair value of these instruments are immediately recorded in earnings. The mark-to-market values of both the fair value hedging instruments and the underlying debt obligations are recorded as equal and offsetting gains and losses in interest expense in the consolidated statements of income. As of March 31, 2019 and June 30, 2018, the total notional amount of floating interest rate contracts was $150.0 million for both periods. For the three months ended March 31, 2019 and 2018, net losses of $0.2 million and $0.1 million, respectively, were recorded as an increase to interest expense, respectively. For the nine months ended March 31, 2019 and 2018, net losses of $0.5 million were recorded as an increase to interest expense and net gains of $0.4 million were recorded as a reduction to interest expense, respectively.

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The fair value and location of outstanding derivative contracts recorded in the accompanying consolidated balance sheets were as follows as of March 31, 2019 and June 30, 2018:

March 31, 2019 **($ in millions)**	**Interest Rate Swaps**	**Foreign Currency Contracts**	**Commodity Contracts**	**Total Derivatives**
Asset Derivatives:				
Derivatives designated as hedging instruments:				
Other current assets	$ —	$ 1.3	$ 6.0	$ 7.3
Other assets	0.3	—	7.8	8.1
Total asset derivatives	$ 0.3	$ 1.3	$ 13.8	$ 15.4
Liability Derivatives:				
Derivatives designated as hedging instruments:				
Accrued liabilities	$ —	$ —	$ 17.3	$ 17.3
Other liabilities	0.2	0.8	11.8	12.8
Total liability derivatives	$ 0.2	$ 0.8	$ 29.1	$ 30.1

June 30, 2018 **($ in millions)**	**Interest Rate Swaps**	**Foreign Currency Contracts**	**Commodity Contracts**	**Total Derivatives**
Asset Derivatives:				
Derivatives designated as hedging instruments:				
Other current assets	$ 0.1	$ 0.4	$ 15.3	$ 15.8
Other assets	—	—	19.4	19.4
Total asset derivatives	$ 0.1	$ 0.4	$ 34.7	$ 35.2
Liability Derivatives:				
Derivatives designated as hedging instruments:				
Accrued liabilities	$ —	$ 0.1	$ —	$ 0.1
Other liabilities	2.9	—	0.4	3.3
Total liability derivatives	$ 2.9	$ 0.1	$ 0.4	$ 3.4

Substantially all of the derivative contracts are subject to master netting arrangements, or similar agreements with each counterparty, which provide for the option to settle contracts on a net basis when they settle on the same day and in the same currency. In addition, these arrangements provide for a net settlement of all contracts with a given counterparty in the event that the arrangement is terminated due to the occurrence of default or a termination event. The Company presents the outstanding derivative contracts on a net basis by counterparty in the consolidated balance sheets. If the Company had chosen to present the derivative contracts on a gross basis, the total asset derivatives would have been $17.7 million and total liability derivatives would have been $32.4 million as of March 31, 2019.

According to the provisions of the Company's derivative arrangements, in the event that the fair value of outstanding derivative positions with certain counterparties exceeds certain thresholds, the Company may be required to issue cash collateral to the counterparties. As of March 31, 2019 and June 30, 2018, the Company had no cash collateral held by counterparties.

The Company is exposed to credit loss in the event of nonperformance by counterparties on its derivative instruments as well as credit or performance risk with respect to its customer commitments to perform. Although nonperformance is possible, the Company does not anticipate nonperformance by any of the parties. In addition, various master netting arrangements are in place with counterparties to facilitate settlements of gains and losses on these contracts.

Cash Flow and Fair Value Hedges

For derivative instruments that are designated and qualify as cash flow hedges, the gain or loss on the derivative is reported as a component of AOCI and reclassified into earnings in the same period or periods during which the hedged transactions affect earnings or it becomes probable the forecasted transactions will not occur. The following is a summary of the gains (losses) related to cash flow hedges recognized during the three and nine months ended March 31, 2019 and 2018:

	Amount of Gain (Loss) Recognized in AOCI on Derivatives			
	Three Months Ended March 31,		Nine Months Ended March 31,	
($ in millions)	2019	2018	2019	2018
Derivatives in Cash Flow Hedging Relationship:				
Commodity contracts	$ 6.4	$ 6.8	$ (47.2)	$ 37.1
Foreign exchange contracts	0.2	(0.6)	0.8	(1.3)
Total	$ 6.6	$ 6.2	$ (46.4)	$ 35.8

		Amount of Gain (Loss) Reclassified from AOCI into Income	
		Three Months Ended March 31,	
($ in millions)	Location of Gain (Loss) Reclassified from AOCI into Income	2019	2018
Derivatives in Cash Flow Hedging Relationship:			
Commodity contracts	Cost of sales	$ 2.1	$ 2.5
Foreign exchange contracts	Net sales	0.2	(0.5)
Forward interest rate swaps	Interest expense	0.1	0.1
Total		$ 2.4	$ 2.1

		Amount of Gain (Loss) Reclassified from AOCI into Income	
		Nine Months Ended March 31,	
($ in millions)	Location of Gain (Loss) Reclassified from AOCI into Income	2019	2018
Derivatives in Cash Flow Hedging Relationship:			
Commodity contracts	Cost of sales	$ 0.3	$ (0.3)
Foreign exchange contracts	Net sales	0.8	(1.0)
Forward interest rate swaps	Interest expense	0.3	0.3
Total		$ 1.4	$ (1.0)

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The following is a summary of total amounts presented in the consolidated statements of income in which the effects of cash flow and fair value hedges are recorded during the three and nine months ended March 31, 2019 and 2018:

	Three Months Ended March 31, 2019			Three Months Ended March 31, 2018		
($ in millions)	**Net Sales**	**Cost of Sales**	**Interest Expense**	**Net Sales**	**Cost of Sales**	**Interest Expense**
Total amounts presented in the consolidated statements of income in which the effects of cash flow and fair value hedges are recorded	$ 609.9	$ 486.7	$ 7.1	$ 572.2	$ 476.2	$ 7.5
Gain (loss) on Derivatives in Cash Flow Hedging Relationship:						
Commodity contracts						
Amount of gain reclassified from AOCI to income	$ —	$ 2.1	$ —	$ —	$ 2.5	$ —
Foreign currency forward contracts						
Amount of gain (loss) reclassified from AOCI to income	0.2	—	—	(0.5)	—	—
Interest rate swap agreements						
Amount of gain reclassified from AOCI to income	—	—	0.1	—	—	0.1
Loss on Derivatives in Fair Value Hedging Relationship:						
Interest rate swap agreements						
Hedged Item	—	—	0.2	—	—	0.1
Derivatives designated as hedging instruments	—	—	(0.2)	—	—	(0.1)
Total gain (loss)	$ 0.2	$ 2.1	$ 0.1	$ (0.5)	$ 2.5	$ 0.1

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	Nine Months Ended March 31, 2019			Nine Months Ended March 31, 2018		
($ in millions)	Net Sales	Cost of Sales	Interest Expense	Net Sales	Cost of Sales	Interest Expense
Total amounts presented in the consolidated statements of income in which the effects of cash flow and fair value hedges are recorded	$ 1,738.8	$ 1,416.9	$ 20.3	$ 1,539.7	$ 1,272.3	$ 22.0
Gain (loss) on Derivatives in Cash Flow Hedging Relationship:						
Commodity contracts						
Amount of gain (loss) reclassified from AOCI to income	$ —	$ 0.3	$ —	$ —	$ (0.3)	$ —
Foreign currency forward contracts						
Amount of gain (loss) reclassified from AOCI to income	0.8	—	—	(1.0)	—	—
Interest rate swap agreements						
Amount of gain reclassified from AOCI to income	—	—	0.3	—	—	0.3
(Loss) Gain on Derivatives in Fair Value Hedging Relationship:						
Interest rate swap agreements						
Hedged Item	—	—	0.5	—	—	(0.4)
Derivatives designated as hedging instruments	—	—	(0.5)	—	—	0.4
Total gain (loss)	$ 0.8	$ 0.3	$ 0.3	$ (1.0)	$ (0.3)	$ 0.3

The Company estimates that $7.1 million of net derivative losses included in AOCI as of March 31, 2019 will be reclassified into income within the next 12 months. No significant cash flow hedges were discontinued during the three and nine months ended March 31, 2019.

As of March 31, 2019, and June 30, 2018, the following amounts were recorded on the consolidated balance sheets related to cumulative basis adjustments for fair value hedges of interest rate risk:

	Carrying amount of the hedged liabilities		Cumulative amount of fair value loss (gain) in the carrying amount of the hedged liabilities	
($ in millions)	March 31, 2019	June 30, 2018	March 31, 2019	June 30, 2018
Line item in the consolidated balance sheets in which the hedged item is included:				
Long-Term Debt	$ 150.1	$ 147.1	$ 0.1	$ (2.9)

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13. Other Income (Expense), Net

Other income (expense), net consisted of the following:

	Three Months Ended March 31,		Nine Months Ended March 31,	
($ in millions)	2019	2018	2019	2018
Unrealized gains (losses) on company-owned life insurance contracts and investments held in rabbi trusts	$ 2.0	$ (0.4)	$ 0.2	$ 1.1
Foreign exchange (loss) gain	(0.2)	0.2	(0.1)	(0.5)
Pension earnings, interest and deferrals	—	(0.5)	(0.1)	(1.6)
Other	0.1	0.2	0.1	0.3
Total other income (expense), net	$ 1.9	$ (0.5)	$ 0.1	$ (0.7)

14. Income Taxes

The effective tax rate used for interim periods is the estimated annual effective consolidated tax rate, based on the current estimate of full year results, except that taxes related to specific events, if any, are recorded in the interim period in which they occur. The annual effective tax rate is based upon a number of significant estimates and judgments, including the estimated annual pre-tax income of the Company in each tax jurisdiction in which it operates, and the development of tax planning strategies during the year. In addition, the Company's tax expense can be impacted by changes in tax rates or laws, the finalization of tax audits, and other factors that cannot be predicted with certainty. As such there can be significant volatility in interim tax provisions.

Income tax expense for the three months ended March 31, 2019 was $16.9 million, or 24.9 percent of pre-tax income as compared with $7.5 million, or 19.9 percent of pre-tax income for the three months ended March 31, 2018. Income tax expense in the nine months ended March 31, 2019 was $35.3 million, or 23.0 percent of pre-tax income as compared with a benefit of $39.1 million, or negative 36.7 percent of pre-tax income in the nine months ended March 31, 2018.

An Act to Provide for Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018 (the "Act") was enacted on December 22, 2017. The Act included provisions that reduced the federal corporate income tax rate, created a territorial tax system with a one-time mandatory tax on previously deferred foreign earnings (i.e. transition tax), and changed certain business deductions including allowing for immediate expensing of certain qualified capital expenditures and limitations on deductions of interest expense. The permanent reduction to the U.S. federal corporate income tax rate from 35 percent to 21 percent was effective January 1, 2018. Based on the Company's interpretation of the Act, during fiscal year 2018, the Company recorded a provisional tax charge of $5.0 million for the transition tax and a provisional tax benefit of $74.6 million for the re-measurement of deferred tax assets and liabilities. The accounting for the income tax effects of the Act was completed by December 31, 2018. A discrete tax benefit of $0.2 million was recorded for the transition tax offset by a discrete tax charge of $0.2 million for the re-measurement of deferred tax assets and liabilities in the three months ended December 31, 2018. Under the Act, the transition tax will be paid over an eight year period beginning in fiscal year 2019.

The Act also established new tax provisions that became effective in fiscal year 2019, including but not limited to eliminating the corporate alternative minimum tax, creating the base erosion anti-abuse tax ("BEAT"), establishing new limitations on deductible interest expense and certain executive compensation, creating a new provision designed to tax global intangible low-tax income ("GILTI") and generally eliminating U.S. Federal income taxes on dividends from foreign subsidiaries. The Company does not anticipate being subject to the BEAT provision due to the revenue thresholds. An accounting policy election must be made to either treat taxes due on future GILTI inclusions in U.S. taxable income as a current period expense when incurred or reflect such portion of the future GILTI inclusions in U.S. taxable income that relate to existing basis differences in the Company's current measurement of deferred taxes. The Company will treat future GILTI inclusions in U.S. taxable income as a current period expense when incurred.

Income tax expense in the nine months ended March 31, 2019 includes tax benefits of $1.8 million as a result of changes in the Company's prior year tax positions.

Income tax expense in the three months ended March 31, 2018 included discrete income tax net benefits of $1.6 million. Included in this benefit are a $0.9 million tax benefit to reflect adjustments to the provisional amount previously recorded for the impact of the re-measurement of deferred tax assets and liabilities at the reduced federal tax rate, a $0.2 million expense for adjustments to the provisional amount previously recorded for the transition tax and an income tax benefit of $0.9 million for reductions in certain state valuation allowances for deferred tax assets resulting from the impact of the Act.

Income tax expense in the nine months ended March 31, 2018 included a net tax benefit of $67.6 million which reflects a $74.2 million tax benefit related to the re-measurement of deferred tax assets and liabilities at the reduced federal tax rate, and a charge of $5.3 million for the transition tax. Tax expense in the prior period also included a charge of $1.3 million associated with a state law change that will limit our ability to utilize certain state net operating loss carryforwards.

As of June 30, 2018 the Company had $100.6 million of indefinitely reinvested foreign earnings on which it recognized $4.7 million of U.S. income tax due to the one-time repatriation tax. If these earnings were to be repatriated, no significant non-U.S. Federal tax would be incurred.

15. Business Segments

The Company has two reportable segments, SAO and PEP.

The SAO segment is comprised of the Company's major premium alloy and stainless steel manufacturing operations. This includes operations performed at mills primarily in Reading and Latrobe, Pennsylvania and surrounding areas as well as South Carolina and Alabama. The combined assets of the SAO operations are being managed in an integrated manner to optimize efficiency and profitability across the total system.

The PEP segment is comprised of the Company's differentiated operations. This segment includes the Dynamet titanium business, the Carpenter Powder Products business, the Amega West business, the CalRAM business, the LPW business and the Latrobe and Mexico distribution businesses. The businesses in the PEP segment are managed with an entrepreneurial structure to promote flexibility and agility to quickly respond to market dynamics.

The Company's executive management evaluates the performance of these operating segments based on sales, operating income and cash flow generation. Segment operating profit excludes general corporate costs, which is comprised of executive and director compensation and other corporate facilities and administrative expenses not allocated to the segments.

On a consolidated basis, one customer, Arconic Inc., accounted for approximately 11 percent of net sales for the three months ended March 31, 2019. On a consolidated basis, no single customer accounted for 10 percent or more of net sales for the three months ended March 31, 2018. On a consolidated basis, one customer, Arconic Inc., accounted for approximately 11 percent and 10 percent of net sales for each of the nine months ended March 31, 2019 and 2018, respectively. Approximately 13 percent of the accounts receivable outstanding at March 31, 2019 is due from one customer, Arconic Inc. No single customer accounted for 10 percent or more of the accounts receivable outstanding at June 30, 2018.

	Three Months Ended March 31,		Nine Months Ended March 31,	
($ in millions)	2019	2018	2019	2018
Net Sales:				
Specialty Alloys Operations	$ 498.3	$ 482.4	$ 1,435.4	$ 1,285.6
Performance Engineered Products	128.7	107.9	353.4	313.4
Intersegment	(17.1)	(18.1)	(50.0)	(59.3)
Consolidated net sales	$ 609.9	$ 572.2	$ 1,738.8	$ 1,539.7

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($ in millions)	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018	Nine Months Ended March 31, 2019	Nine Months Ended March 31, 2018
Operating Income:				
Specialty Alloys Operations	$ 73.6	$ 58.0	$ 195.3	$ 158.3
Performance Engineered Products	16.6	5.4	28.3	18.1
Corporate	(17.3)	(18.0)	(51.5)	(44.9)
Intersegment	0.3	0.3	1.5	(2.2)
Consolidated operating income	$ 73.2	$ 45.7	$ 173.6	$ 129.3

($ in millions)	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018	Nine Months Ended March 31, 2019	Nine Months Ended March 31, 2018
Depreciation and Amortization:				
Specialty Alloys Operations	$ 23.8	$ 23.3	$ 71.3	$ 69.9
Performance Engineered Products	6.0	5.0	16.5	15.1
Corporate	1.2	1.0	3.6	2.8
Intersegment	(0.2)	(0.1)	(0.5)	(0.6)
Consolidated depreciation and amortization	$ 30.8	$ 29.2	$ 90.9	$ 87.2

($ in millions)	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018	Nine Months Ended March 31, 2019	Nine Months Ended March 31, 2018
Capital Expenditures:				
Specialty Alloys Operations	$ 24.6	$ 12.1	$ 66.0	$ 40.6
Performance Engineered Products	15.3	5.9	42.2	17.0
Corporate	9.4	7.6	23.6	24.2
Intersegment	(0.3)	(0.4)	(1.1)	(0.9)
Consolidated capital expenditures	$ 49.0	$ 25.2	$ 130.7	$ 80.9

($ in millions)	March 31, 2019	June 30, 2018
Total Assets:		
Specialty Alloys Operations	$ 2,405.3	$ 2,312.1
Performance Engineered Products	673.0	513.6
Corporate	176.6	193.2
Intersegment	(14.7)	(11.9)
Consolidated total assets	$ 3,240.2	$ 3,007.0

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16. Reclassifications from Accumulated Other Comprehensive (Loss) Income (AOCI)

The changes in AOCI by component, net of tax, for the three months ended March 31, 2019 and 2018 were as follows:

Three Months Ended March 31, 2019 ($ in millions) (a)	Cash flow hedging items	Pension and other postretirement benefit plan items	Unrealized (losses) gains on available-for-sale securities	Foreign currency items	Total
Balance at December 31, 2018	$ (15.6)	$ (217.0)	$ —	$ (44.9)	$ (277.5)
Other comprehensive income before reclassifications	5.0	—	—	1.1	6.1
Amounts reclassified from AOCI (b)	(1.8)	1.7	—	—	(0.1)
Net other comprehensive income	3.2	1.7	—	1.1	6.0
Balance at March 31, 2019	$ (12.4)	$ (215.3)	$ —	$ (43.8)	$ (271.5)

Three Months Ended March 31, 2018 ($ in millions) (a)	Cash flow hedging items	Pension and other postretirement benefit plan items	Unrealized losses on available-for-sale securities	Foreign currency items	Total
Balance at December 31, 2017	$ 20.8	$ (294.4)	$ (0.3)	$ (41.2)	$ (315.1)
Other comprehensive income before reclassifications	2.6	—	—	3.7	6.3
Amounts reclassified from AOCI (b)	(1.3)	2.1	—	—	0.8
Net other comprehensive income	1.3	2.1	—	3.7	7.1
Balance at March 31, 2018	$ 22.1	$ (292.3)	$ (0.3)	$ (37.5)	$ (308.0)

(a) All amounts are net of tax. Amounts in parentheses indicate debits.
(b) See separate table below for further details.

The changes in AOCI by component, net of tax, for the nine months ended March 31, 2019 and 2018 were as follows:

Nine Months Ended March 31, 2019 ($ in millions) (a)	Cash flow hedging items	Pension and other postretirement benefit plan items	Unrealized (losses) gains on available-for-sale securities	Foreign currency items	Total
Balance at June 30, 2018	$ 23.8	$ (220.4)	$ (0.3)	$ (42.9)	$ (239.8)
Cumulative adjustment upon adoption of ASU 2017-12 reclassified to reinvested earnings	(1.0)	—	—	—	(1.0)
Other comprehensive (loss) income before reclassifications	(34.2)	—	0.3	(0.9)	(34.8)
Amounts reclassified from AOCI (b)	(1.0)	5.1	—	—	4.1
Net other comprehensive (loss) income	(36.2)	5.1	0.3	(0.9)	(31.7)
Balance at March 31, 2019	$ (12.4)	$ (215.3)	$ —	$ (43.8)	$ (271.5)

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Nine Months Ended March 31, 2018 ($ in millions) (a)	Cash flow hedging items	Pension and other postretirement benefit plan items	Unrealized losses on available-for-sale securities	Foreign currency items	Total
Balance at June 30, 2017	$ (2.3)	$ (299.0)	$ (0.3)	$ (41.5)	$ (343.1)
Other comprehensive income before reclassifications	23.7	—	—	4.0	27.7
Amounts reclassified from AOCI (b)	0.7	6.7	—	—	7.4
Net other comprehensive income	24.4	6.7	—	4.0	35.1
Balance at March 31, 2018	$ 22.1	$ (292.3)	$ (0.3)	$ (37.5)	$ (308.0)

(a) All amounts are net of tax. Amounts in parentheses indicate debits.
(b) See separate table below for further details.

The following is a summary of amounts reclassified from AOCI for the three and nine months ended March 31, 2019 and 2018:

Details about AOCI Components	Location of	Amount Reclassified from AOCI Three Months Ended March 31,		Amount Reclassified from AOCI Nine Months Ended March 31,	
($ in millions) (a)	gain (loss)	2019	2018	2019	2018
Cash flow hedging items:					
Commodity contracts	Cost of sales	$ 2.1	$ 2.5	$ 0.3	$ (0.3)
Foreign exchange contracts	Net sales	0.2	(0.5)	0.8	(1.0)
Forward interest rate swaps	Interest expense	0.1	0.1	0.3	0.3
Total before tax		2.4	2.1	1.4	(1.0)
Tax (expense) benefit		(0.6)	(0.8)	(0.4)	0.3
Net of tax		$ 1.8	$ 1.3	$ 1.0	$ (0.7)

Details about AOCI Components	Location of	Amount Reclassified from AOCI Three Months Ended March 31,		Amount Reclassified from AOCI Nine Months Ended March 31,	
($ in millions) (a)	(loss) gain	2019	2018	2019	2018
Amortization of pension and other postretirement benefit plan items:					
Net actuarial loss	(b)	$ (3.0)	$ (4.1)	$ (9.0)	$ (12.4)
Prior service benefit	(b)	0.8	0.8	2.4	2.5
Total before tax		(2.2)	(3.3)	(6.6)	(9.9)
Tax benefit		0.5	1.2	1.5	3.2
Net of tax		$ (1.7)	$ (2.1)	$ (5.1)	$ (6.7)

(a) Amounts in parentheses indicate debits to income/loss.
(b) These AOCI components are included in the computation of net periodic benefit cost (see Note 8. Pension and Other Postretirement Benefits for additional details).

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

Background and General

We are engaged in the manufacturing, fabrication and distribution of specialty metals. We primarily process basic raw materials such as nickel, cobalt, titanium, manganese, chromium, molybdenum, iron scrap and other metal alloying elements through various melting, hot forming and cold working facilities to produce finished products in the form of billet, bar, rod, wire and narrow strip in many sizes and finishes. We also produce certain metal powders and parts. Our metal powder technology capabilities support a range of next-generation products and manufacturing techniques, including Additive Manufacturing and 3D Printing. We also manufacture and rent down-hole drilling tools and components used in the oil and gas industry. Our sales are distributed directly from our production plants and distribution networks as well as through independent distributors. Unlike many other specialty steel producers, we operate our own worldwide network of service and distribution centers. These service centers, located in the United States, Canada, Mexico, Europe and Asia, allow us to work more closely with customers and to offer various just-in-time stocking programs.

As part of our overall business strategy, we have and continue to seek out and execute opportunities related to strategic acquisitions, divestitures and joint collaborations aimed at broadening our offerings to the marketplace. We have participated with other companies to explore potential terms and structures of such opportunities and expect that we will continue to evaluate these opportunities.

Our discussions below in this Item 2 are based upon the more detailed discussions about our business, operations and financial condition included in Item 7 of our 2018 Form 10-K. Our discussions here focus on our results during or as of the three and nine-month periods ended March 31, 2019 and the comparable periods of fiscal year 2018, and to the extent applicable, on material changes from information discussed in the 2018 Form 10-K and other important intervening developments or information that we have reported on Form 8-K. These discussions should be read in conjunction with the 2018 Form 10-K for detailed background information and with any such intervening Form 8-K.

Impact of Raw Material Prices and Product Mix

We value most of our inventory utilizing the last-in, first-out ("LIFO") inventory costing method. Under the LIFO inventory costing method, changes in the cost of raw materials and production activities are recognized in cost of sales in the current period even though these materials may potentially have been acquired at significantly different values due to the length of time from the acquisition of the raw materials to the sale of the processed finished goods to the customers. In a period of rising raw material costs, the LIFO inventory valuation normally results in higher cost of sales. Conversely, in a period of decreasing raw material costs, the LIFO inventory valuation normally results in lower cost of sales.

The volatility of the costs of raw materials has impacted our operations over the past several years. We, and others in our industry, generally have been able to pass cost increases on major raw materials through to our customers using surcharges that are structured to recover increases in raw material costs. Generally, the formula used to calculate a surcharge is based on published prices of the respective raw materials for the previous month which correlates to the prices we pay for our raw material purchases. However, a portion of our surcharges to customers may be calculated using a different surcharge formula or may be based on the raw material prices at the time of order, which creates a lag between surcharge revenue and corresponding raw material costs recognized in cost of sales. The surcharge mechanism protects our net income on such sales except for the lag effect discussed above. However, surcharges have had a dilutive effect on our gross margin and operating margin percentages as described later in this report.

Approximately 30 percent of our net sales are sales to customers under firm price sales arrangements. Firm price sales arrangements involve a risk of profit margin fluctuations, particularly when raw material prices are volatile. In order to reduce the risk of fluctuating profit margins on these sales, we enter into commodity forward contracts to purchase certain critical raw materials necessary to produce the related products sold. Firm price sales arrangements generally include certain annual purchasing commitments and consumption schedules agreed to by the customers at selling prices based on raw material prices at the time the arrangements are established. If a customer fails to meet the volume commitments (or the consumption schedule deviates from the agreed-upon terms of the firm price sales arrangements), the Company may need to absorb the gains or losses associated with the commodity forward contracts on a temporary basis. Gains or losses associated with commodity forward contracts are reclassified to earnings/loss when earnings are impacted by the hedged transaction. Because we value most of our inventory under the LIFO costing methodology, changes in the cost of raw materials and production activities are recognized in cost of sales in the current period attempting to match the most recently incurred costs with revenues. Gains or losses on the commodity forward contracts are reclassified from other comprehensive income (loss) together with the actual purchase price of the underlying commodities when the underlying commodities are purchased and recorded in inventory. To the extent that the total purchase price of the commodities, inclusive of the gains or losses on the commodity forward contracts, are higher or lower relative to the beginning of year costs, our cost of goods sold reflects such amounts. Accordingly, the gains and/or losses associated with commodity forward contracts may not impact the same period that the firm price sales arrangements revenue is recognized, and comparisons of gross profit from period to period may be impacted. These firm price sales arrangements are expected to continue as we look to strengthen our long-term customer relationships by expanding, renewing and in certain cases extending to a longer-term, our customer long-term arrangements.

We produce hundreds of grades of materials with a wide range of pricing and profit levels depending on the grade. In addition, our product mix within a period is subject to the fluctuating order patterns of our customers as well as decisions we may make on participation in certain products based on available capacity, including the impacts of capacity commitments we may have under existing customer agreements. While we expect to see positive contribution from a more favorable product mix in our margin performance over time, the impact by period may fluctuate and period-to-period comparisons may vary.

Net Pension Expense

Net pension expense, as we define it below, includes the net periodic benefit costs related to both our pension and other postretirement plans. The net periodic benefit costs are determined annually based on beginning of year balances and are recorded ratably throughout the fiscal year, unless a significant re-measurement event occurs. We currently expect that the total net periodic benefit costs for fiscal year 2019 will be $11.4 million as compared with $14.4 million in fiscal year 2018. The following is the pension expense for the three and nine months ended March 31, 2019 and 2018:

	Three Months Ended March 31,		Nine Months Ended March 31,	
($ in millions)	2019	2018	2019	2018
Pension plans	$ 2.4	$ 2.8	$ 7.2	$ 8.4
Other postretirement plans	0.5	0.8	1.5	2.2
Net periodic benefit costs	$ 2.9	$ 3.6	$ 8.7	$ 10.6

Net pension expense is recorded in accounts that are included in cost of sales and selling, general and administrative expenses based on the function of the associated employees and in other income (expense), net. The following is a summary of the classification of net pension expense for the three and nine months ended March 31, 2019 and 2018:

	Three Months Ended March 31,		Nine Months Ended March 31,	
($ in millions)	2019	2018	2019	2018
Cost of sales:				
Service cost	$ 2.5	$ 2.7	$ 7.5	$ 7.9
Selling, general and administrative expenses:				
Service cost	0.4	0.4	1.2	1.1
Other income (expense), net:				
Pension earnings, interest and deferrals	—	0.5	—	1.6
Net pension expense	$ 2.9	$ 3.6	$ 8.7	$ 10.6

As of March 31, 2019 and June 30, 2018, amounts related to the net pension expense capitalized in gross inventory were $1.7 million and $1.7 million, respectively.

Operating Performance Overview

Our third quarter results reflect the ongoing momentum we are driving across our core business as we generated strong operational results and delivered our ninth consecutive quarter of year-over-year sales and earnings growth. We continue to capitalize on the solid demand patterns across our end-use markets by winning incremental market share and expanding our customer relationships. Backlog levels increased 44 percent year-over-year marking the eleventh consecutive quarter of growth. In the Aerospace and Defense end-use market, backlog increased across all our major sub-markets and demand remains strong. In the Medical end-use market, we delivered year-over-year growth due to expanded direct customer relationships and incremental capacity unlocked through the Carpenter Operating Model in our premium titanium bar products.

We also continue to progress with obtaining the necessary qualifications for our Athens facility and received four additional qualifications in the current quarter. Customer engagement levels related to Athens qualifications remain high and we are working diligently with our partners to secure additional approvals and provide critical incremental capacity for the industry.

As we continue to drive our core business forward, we remain committed to maintaining a balance between near-term earnings growth and investing for the long-term. We continue to take innovative action in significant growth areas including additive manufacturing and soft magnetics to accelerate profitable revenue growth to deliver increasing value to shareholders in the years ahead.

Results of Operations — Three Months Ended March 31, 2019 vs. Three Months Ended March 31, 2018

For the three months ended March 31, 2019, we reported net income of $51.1 million, or $1.05 per diluted share. This compares with net income for the same period a year earlier of $30.2 million, or $0.63 per diluted share. Excluding special items, earnings per share would have been $0.60 per diluted share for the three months ended March 31, 2018. The current period results reflect strong market conditions combined with our solutions-focused approach driving increased sales in our end-use markets compared to the prior year period as well as an $11.4 million benefit related to an insurance recovery.

Net Sales

Net sales for the three months ended March 31, 2019 were $609.9 million, which was a 7 percent increase over the same period a year ago. Excluding surcharge revenue, sales increased 6 percent on a 1 percent decrease in shipment volume from the same period a year ago. The results reflect a favorable product mix in our Aerospace and Defense, Medical and Energy end-use markets.

Geographically, sales outside the United States decreased 1 percent from the same period a year ago to $195.8 million for the three months ended March 31, 2019. The decrease is primarily due to the impact of certain trade actions partially offset by stronger demand in the Aerospace and Defense end-use market in Mexico. A portion of our sales outside the United States are denominated in foreign currencies. The impact of fluctuations in foreign currency exchange rates resulted in a $1.4 million decrease in sales during the three months ended March 31, 2019 compared to the three months ended March 31, 2018. Net sales outside the United States represented 32 percent and 35 percent of total net sales for the three months ended March 31, 2019 and 2018, respectively.

Sales by End-Use Markets

We sell to customers across diversified end-use markets. The following table includes comparative information for our net sales, which includes surcharge revenue by principal end-use markets. We believe this is helpful supplemental information in analyzing the performance of the business from period to period:

($ in millions)	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018	$ Increase (Decrease)	% Increase (Decrease)
Aerospace and Defense	$ 342.1	$ 323.7	$ 18.4	6 %
Medical	55.1	45.1	10.0	22 %
Energy	49.0	36.5	12.5	34 %
Transportation	39.9	41.6	(1.7)	(4)%
Industrial and Consumer	87.4	90.1	(2.7)	(3)%
Distribution	36.4	35.2	1.2	3 %
Total net sales	$ 609.9	$ 572.2	$ 37.7	7 %

The following table includes comparative information for our net sales by the same principal end-use markets, but excluding surcharge revenue:

($ in millions)	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018	$ Increase (Decrease)	% Increase (Decrease)
Aerospace and Defense	$ 273.8	$ 260.5	$ 13.3	5 %
Medical	47.1	37.6	9.5	25 %
Energy	40.8	33.3	7.5	23 %
Transportation	33.5	33.9	(0.4)	(1)%
Industrial and Consumer	71.9	72.2	(0.3)	— %
Distribution	35.9	35.0	0.9	3 %
Total net sales excluding surcharge	$ 503.0	$ 472.5	$ 30.5	6 %

Sales to the Aerospace and Defense end-use market increased 6 percent from the third quarter a year ago to $342.1 million. Excluding surcharge revenue, sales increased 5 percent from the third quarter a year ago on a 2 percent decrease in shipment volume. The results reflect the continued benefits from our broad solutions portfolio across multiple attractive sub-markets. Demand for aerospace engine materials remains strong due to higher build rates. In addition, we continue to experience strong demand for our defense related applications driven by specific programs.

Medical end-use market sales increased 22 percent from the third quarter a year ago to $55.1 million. Excluding surcharge revenue, sales increased 25 percent on 19 percent higher shipment volume from the third quarter a year ago. The results reflect continued strong demand for materials used in orthopedic applications.

Sales to the Energy end-use market of $49.0 million reflect a 34 percent increase from the third quarter a year ago. Excluding surcharge revenue, sales increased 23 percent from a year ago. The results primarily reflect the impact of an increase in sales in oil and gas sub-market expansion internationally.

Transportation end-use market sales decreased 4 percent from the third quarter a year ago to $39.9 million. Excluding surcharge revenue, sales decreased 1 percent on 6 percent lower shipment volume from the third quarter a year ago. The results reflect a weaker demand for certain applications due to trade actions and tariffs which have impacted customer order patterns.

Industrial and Consumer end-use market sales decreased 3 percent from the third quarter a year ago to $87.4 million. Excluding surcharge revenue, sales were flat on a 6 percent decrease in shipment volume. The results reflect the impact of weaker product demand for materials used in select industrial applications offset by growth in consumer sporting goods applications compared to the prior year period.

Gross Profit

Our gross profit in the third quarter increased 28 percent to $123.2 million, or 20.2 percent of net sales as compared with $96.0 million, or 16.8 percent of net sales in the same quarter a year ago. Excluding the impact of surcharge revenue, our gross margin in the third quarter was 24.5 percent as compared to 20.3 percent in the same period a year ago. The current period results were driven by a favorable product mix as well as an $11.4 million benefit related to an insurance recovery.

While the surcharge generally protects the absolute gross profit dollars, it does have a dilutive effect on gross margin as a percent of sales. The following represents a summary of the dilutive impact of the surcharge on gross margin for the comparative three month periods. See the section "Non-GAAP Financial Measures" below for further discussion of these financial measures.

	Three Months Ended March 31,	
($ in millions)	**2019**	**2018**
Net sales	$ 609.9	$ 572.2
Less: surcharge revenue	106.9	99.7
Net sales excluding surcharge revenue	$ 503.0	$ 472.5
Gross profit	$ 123.2	$ 96.0
Gross margin	20.2%	16.8%
Gross margin excluding surcharge revenue	24.5%	20.3%

Selling, General and Administrative Expenses

Selling, general and administrative expenses of $50.0 million were 8.2 percent of net sales (9.9 percent of net sales excluding surcharge) as compared with $50.3 million and 8.8 percent of net sales (10.6 percent of net sales excluding surcharge) in the same quarter a year ago. The selling, general and administrative expenses reflect the addition of LPW costs in the current quarter offset by lower variable compensation expense compared to the same period a year ago.

Operating Income

Our operating income in the recent third quarter was $73.2 million or 12.0 percent of net sales as compared with $45.7 million or 8.0 percent of net sales in the same quarter a year ago. Excluding surcharge revenue, operating margin was 14.6 percent for the most recent quarter as compared with 9.7 percent a year ago. The results for the third quarter of fiscal year 2019 primarily reflect stronger product mix and an $11.4 million benefit related to an insurance recovery compared to the same period a year ago.

The following presents our operating income and operating margin, in each case excluding the impact of surcharge revenue on net sales. We present and discuss these financial measures because management believes removing this item provides a more consistent and meaningful basis for comparing ongoing results of operations from period to period. See the section "Non-GAAP Financial Measures" below for further discussion of these financial measures.

	Three Months Ended March 31,	
($ in millions)	**2019**	**2018**
Net sales	$ 609.9	$ 572.2
Less: surcharge revenue	106.9	99.7
Net sales excluding surcharge revenue	$ 503.0	$ 472.5
Operating income	$ 73.2	$ 45.7
Operating margin	12.0%	8.0%
Operating margin excluding surcharge revenue	14.6%	9.7%

Interest Expense

Interest expense for the three months ended March 31, 2019 was $7.1 million compared with $7.5 million in the same period a year ago. Capitalized interest reduced interest expense by $1.3 million for the three months ended March 31, 2019 and $0.7 million for the three months ended March 31, 2018.

Other Income (Expense), Net

Other income, net for the three months ended March 31, 2019 was $1.9 million as compared with $0.5 million of other expense, net for the three months ended March 31, 2018. The results reflect favorable market return on investments used to fund Company-owned life insurance contracts and investments held in rabbi trusts.

Income Taxes

Income tax expense in the recent third quarter was $16.9 million, or 24.9 percent of pre-tax income compared with $7.5 million, or 19.9 percent of pre-tax income in the same quarter a year ago. Income tax expense in the three months ended March 31, 2018 included discrete income tax net benefits of $1.6 million. Included in this benefit are a $0.9 million tax benefit to reflect adjustments to the provisional amount previously recorded for the impact of the re-measurement of deferred tax assets and liabilities at the reduced federal tax rate, a $0.2 million expense for adjustments to the provisional amount previously recorded for the transition tax and an income tax benefit of $0.9 million for reductions in certain state valuation allowances for deferred tax assets resulting from the impact of an Act to Provide for Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018 (the "Act").

Business Segment Results

We have two reportable business segments: SAO and PEP.

The following table includes comparative information for volumes by business segment:

(Pounds sold, in thousands)	Three Months Ended March 31, 2019	2018	(Decrease) Increase	% (Decrease) Increase
Specialty Alloys Operations	65,296	66,866	(1,570)	(2)%
Performance Engineered Products *	3,540	2,946	594	20 %
Intersegment	(918)	(914)	(4)	— %
Consolidated pounds sold	67,918	68,898	(980)	(1)%

* Pounds sold data for PEP segment includes Dynamet, Carpenter Powder Products and LPW businesses only.

The following table includes comparative information for net sales by business segment:

($ in millions)	Three Months Ended March 31, 2019	2018	$ Increase	% Increase
Specialty Alloys Operations	$ 498.3	$ 482.4	$ 15.9	3%
Performance Engineered Products	128.7	107.9	20.8	19%
Intersegment	(17.1)	(18.1)	1.0	6%
Total net sales	$ 609.9	$ 572.2	$ 37.7	7%

The following table includes comparative information for our net sales by business segment, but excluding surcharge revenue:

($ in millions)	Three Months Ended March 31, 2019	2018	$ Increase	% Increase
Specialty Alloys Operations	$ 393.3	$ 381.3	$ 12.0	3%
Performance Engineered Products	125.9	107.5	18.4	17%
Intersegment	(16.2)	(16.3)	0.1	1%
Total net sales excluding surcharge revenue	$ 503.0	$ 472.5	$ 30.5	6%

Specialty Alloys Operations Segment

Net sales for the quarter ended March 31, 2019 for the SAO segment increased 3 percent to $498.3 million, as compared with $482.4 million in the same quarter a year ago. Excluding surcharge revenue, net sales increased 3 percent on 2 percent lower shipment volume from a year ago. The results primarily reflect the impact of stronger product mix in the Aerospace and Defense and Energy end-use markets compared to the prior year same quarter.

Operating income for the SAO segment was $73.6 million or 14.8 percent of net sales (18.7 percent of net sales excluding surcharge revenue) in the recent third quarter, as compared with $58.0 million or 12.0 percent of net sales (15.2 percent of net sales excluding surcharge revenue) in the same quarter a year ago. The results reflect favorable product mix compared to the prior year same quarter.

Performance Engineered Products Segment

Net sales for the quarter ended March 31, 2019 for the PEP segment increased 19 percent to $128.7 million, as compared with $107.9 million in the same quarter a year ago. Excluding surcharge revenue, net sales of $125.9 million increased 17 percent from a year ago. The results reflect strengthening demand for titanium products in the Aerospace and Defense and Medical end-use markets.

Operating income for the PEP segment was $16.6 million or 12.9 percent of net sales in the recent third quarter, compared with operating income of $5.4 million or 5.0 percent of net sales in the same quarter a year ago. The results were impacted by an $11.4 million benefit related to an insurance recovery in the current period.

Results of Operations — Nine Months Ended March 31, 2019 vs. Nine Months Ended March 31, 2018

Net Sales

Net sales for the nine months ended March 31, 2019 were $1,738.8 million, which was a 13 percent increase over the same period a year ago. Excluding surcharge revenue, sales increased 9 percent on 3 percent higher shipment volume from the same period a year ago. The results reflect the impact of stronger product mix for materials used in the Aerospace and Defense and Industrial and Consumer end-use markets in addition to stronger demand in the Medical and Energy end-use markets.

Geographically, sales outside the United States increased 7 percent from the same period a year ago to $555.5 million for the nine months ended March 31, 2019. The increase is primarily due to stronger product demand in the Aerospace and Defense end-use market in Asia Pacific and Mexico partially offset by the impact of certain trade actions in Europe. A portion of our sales outside the United States are denominated in foreign currencies. The impact of fluctuations in foreign currency exchange rates resulted in a $3.1 million decrease in sales during the nine months ended March 31, 2019 compared to the nine months ended March 31, 2018. Net sales outside the United States represented 32 percent and 34 percent of total net sales for the nine months ended March 31, 2019 and 2018, respectively.

Sales by End-Use Markets

We sell to customers across diversified end-use markets. The following table includes comparative information for our net sales, which includes surcharge revenue by principal end-use markets. We believe this is helpful supplemental information in analyzing the performance of the business from period to period:

	Nine Months Ended March 31,			
($ in millions)	2019	2018	$ Increase	% Increase
Aerospace and Defense	$ 951.9	$ 847.2	$ 104.7	12%
Medical	147.6	126.1	21.5	17%
Energy	136.1	100.3	35.8	36%
Transportation	118.0	114.0	4.0	4%
Industrial and Consumer	280.9	257.6	23.3	9%
Distribution	104.3	94.5	9.8	10%
Total net sales	$ 1,738.8	$ 1,539.7	$ 199.1	13%

The following table includes comparative information for our net sales by the same principal end-use markets, but excluding surcharge revenue:

	Nine Months Ended March 31,			
($ in millions)	2019	2018	$ Increase	% Increase
Aerospace and Defense	$ 747.6	$ 696.5	$ 51.1	7%
Medical	125.0	108.2	16.8	16%
Energy	114.7	91.0	23.7	26%
Transportation	94.3	94.2	0.1	—%
Industrial and Consumer	224.0	214.0	10.0	5%
Distribution	103.2	93.9	9.3	10%
Total net sales excluding surcharge	$ 1,408.8	$ 1,297.8	$ 111.0	9%

Sales to the Aerospace and Defense end-use market increased 12 percent from the same period a year ago to $951.9 million. Excluding surcharge revenue, sales increased 7 percent from the same period a year ago on a 1 percent increase in shipment volume. The results reflect the impact of a favorable product mix for materials used in aerospace engine and distribution applications and stronger demand for defense applications driven by specific programs.

Medical end-use market sales increased 17 percent from the same period a year ago to $147.6 million. Excluding surcharge revenue, sales increased 16 percent on 16 percent higher shipment volume from the same period a year ago. The results reflect strong market conditions within the orthopedic and cardiology sub-markets.

Sales to the Energy end-use market of $136.1 million reflect a 36 percent increase from the same period a year ago. Excluding surcharge revenue, sales increased 26 percent from a year ago. The results reflect the impact of an increase in sales in oil and gas sub-market expansion internationally.

Transportation end-use market sales increased 4 percent from the same period a year ago to $118.0 million. Excluding surcharge revenue, sales were flat on 3 percent lower shipment volume from the same period a year ago. The results reflect a weaker demand for our applications due to trade actions and tariffs which has impacted customer order patterns.

Industrial and Consumer end-use market sales increased 9 percent from the same period a year ago to $280.9 million. Excluding surcharge revenue, sales increased 5 percent on a 1 percent increase in shipment volume. The results reflect the impact of stronger product mix for materials used in industrial applications and increased demand for consumer sporting goods applications.

Gross Profit

Our gross profit in the nine months ended March 31, 2019 increased 20 percent to $321.9 million, or 18.5 percent of net sales as compared with $267.4 million, or 17.4 percent of net sales in the same period a year ago. Excluding the impact of surcharge revenue, our gross margin in the nine months ended March 31, 2019 was 22.8 percent as compared to 20.6 percent in the same period a year ago. The results for the nine months ended March 31, 2019 reflect stronger product mix, $16.1 million of benefits related to insurance recoveries as well as operating cost improvements compared to the same period a year ago.

Our surcharge mechanism is structured to recover increases in raw material costs, although in certain cases with a lag effect as discussed above. While the surcharge generally protects the absolute gross profit dollars, it does have a dilutive effect on gross margin as a percent of sales. The following represents a summary of the dilutive impact of the surcharge on gross margin for the comparative nine month periods. See the section “Non-GAAP Financial Measures” below for further discussion of these financial measures.

	Nine Months Ended March 31,	
($ in millions)	**2019**	**2018**
Net sales	$ 1,738.8	$ 1,539.7
Less: surcharge revenue	330.0	241.9
Net sales excluding surcharge revenue	$ 1,408.8	$ 1,297.8
Gross profit	$ 321.9	$ 267.4
Gross margin	18.5%	17.4%
Gross margin excluding surcharge revenue	22.8%	20.6%

Selling, General and Administrative Expenses

Selling, general and administrative expenses of $148.3 million were 8.5 percent of net sales (10.5 percent of net sales excluding surcharge) for the nine months ended March 31, 2019 as compared with $138.1 million or 9.0 percent of net sales (10.6 percent of net sales excluding surcharge) in the same period a year ago. Selling, general and administrative expenses increased in the nine months ended March 31, 2019 due to the addition of LPW acquisition-related and operating costs and higher spending in key growth areas including additive manufacturing and soft magnetics.

Operating Income

Our operating income in the nine months ended March 31, 2019 was $173.6 million, or 10.0 percent of net sales as compared with $129.3 million, or 8.4 percent of net sales in the same period a year ago. Excluding surcharge revenue and special items, operating margin was 12.4 percent for the nine months ended March 31, 2019 and 10.0 percent for the same period a year ago. The increase in the operating margin primarily reflects stronger end-use market conditions and $16.1 million of benefits related to insurance recoveries partially offset by higher selling, general and administrative expenses compared to the same period a year ago.

Operating income has been impacted by special items. The following presents our operating income and operating margin, in each case excluding the impact of surcharge revenue on net sales and special items. We present and discuss these financial measures because management believes removing these items provides a more consistent and meaningful basis for comparing ongoing results of operations from period to period. See the section "Non-GAAP Financial Measures" below for further discussion of these financial measures.

	Nine Months Ended March 31,	
($ in millions)	**2019**	**2018**
Net sales	$ 1,738.8	$ 1,539.7
Less: surcharge revenue	330.0	241.9
Net sales excluding surcharge revenue	$ 1,408.8	$ 1,297.8
Operating income	$ 173.6	$ 129.3
Special items:		
Acquisition-related costs	1.2	—
Operating income excluding special items	$ 174.8	$ 129.3
Operating margin	10.0%	8.4%
Operating margin excluding surcharge revenue and special items	12.4%	10.0%

Interest Expense

Interest expense for the nine months ended March 31, 2019 was $20.3 million compared with $22.0 million in the same period a year ago. Capitalized interest reduced interest expense by $3.2 million for the nine months ended March 31, 2019 and $1.8 million for the nine months ended March 31, 2018.

Other Income (Expense), Net

Other income, net was $0.1 million for the recent nine months ended March 31, 2019 compared with other expense, net of $0.7 million in the same period a year ago.

Income Taxes

Income tax expense in the nine months ended March 31, 2019 was $35.3 million, or 23.0 percent of pre-tax income as compared with a benefit of $39.1 million, or negative 36.7 percent of pre-tax income in the nine months ended March 31, 2018.

In December 2017, the United States enacted tax reform legislation. The Act included provisions that reduce the federal corporate income tax rate, create a territorial tax system with a one-time mandatory tax on previously deferred foreign earnings (i.e. transition tax), and change certain business deductions including allowing for immediate expensing of certain qualified capital expenditures and limitations on deductions of interest expense. The permanent reduction to the U.S. federal corporate income tax rate from 35 percent to 21 percent was effective January 1, 2018. Based on the provisions of the Act, reasonable estimates were made to record provisional adjustments during fiscal year 2018 for the transition tax and the re-measurement of deferred tax assets and liabilities. The accounting for the income tax effects of the Act was completed by December 31, 2018. A discrete tax benefit of $0.2 million was recorded for the transition tax offset by a discrete tax charge of $0.2 million for the re-measurement of deferred tax assets and liabilities in the three months ended December 31, 2018.

The Act also established new tax provisions that became effective in fiscal year 2019, including but not limited to eliminating the corporate alternative minimum tax, creating the BEAT, establishing new limitations on deductible interest expense and certain executive compensation, creating a new provision designed to tax GILTI and generally eliminating U.S. federal income taxes on dividends from foreign subsidiaries. We do not anticipate being subject to the BEAT provision due to the revenue thresholds. An accounting policy election must be made to either treat taxes due on future GILTI inclusions in U.S. taxable income as a current period expense when incurred or reflect such portion of the future GILTI inclusions in U.S. taxable income that relate to existing basis differences in the Company's current measurement of deferred taxes. We will treat the GILTI inclusion in U.S. taxable income as a current period expense when incurred.

Income tax expense in the nine months ended March 31, 2019 includes tax benefits of $1.8 million as a result of changes in the Company's prior year tax positions. Income tax benefit in the nine months ended March 31, 2018 included a net tax benefit of $67.6 million which reflects a $74.2 million tax benefit related to the re-measurement of deferred tax assets and liabilities at the reduced federal tax rate and a charge of $5.3 million for the transition tax. Tax expense in the prior period also included a charge of $1.3 million associated with a state law change that will limit our ability to utilize certain state net operating loss carryforwards.

Business Segment Results

We have two reportable business segments: SAO and PEP.

The following table includes comparative information for volumes by business segment:

(Pounds sold, in thousands)	Nine Months Ended March 31, 2019	Nine Months Ended March 31, 2018	Increase (Decrease)	% Increase (Decrease)
Specialty Alloys Operations	189,678	188,136	1,542	1 %
Performance Engineered Products *	9,572	9,754	(182)	(2)%
Intersegment	(1,798)	(5,382)	3,584	67 %
Consolidated pounds sold	197,452	192,508	4,944	3 %

* Pounds sold data for PEP segment includes Dynamet, Carpenter Powder Products and LPW businesses only.

The following table includes comparative information for net sales by business segment:

($ in millions)	Nine Months Ended March 31, 2019	Nine Months Ended March 31, 2018	$ Increase	% Increase
Specialty Alloys Operations	$ 1,435.4	$ 1,285.6	$ 149.8	12%
Performance Engineered Products	353.4	313.4	40.0	13%
Intersegment	(50.0)	(59.3)	9.3	16%
Total net sales	$ 1,738.8	$ 1,539.7	$ 199.1	13%

The following table includes comparative information for our net sales by business segment, but excluding surcharge revenue:

($ in millions)	Nine Months Ended March 31, 2019	Nine Months Ended March 31, 2018	$ Increase	% Increase
Specialty Alloys Operations	$ 1,111.0	$ 1,038.7	$ 72.3	7%
Performance Engineered Products	343.3	312.6	30.7	10%
Intersegment	(45.5)	(53.5)	8.0	15%
Total net sales excluding surcharge revenue	$ 1,408.8	$ 1,297.8	$ 111.0	9%

Specialty Alloys Operations Segment

Net sales for the nine months ended March 31, 2019 for the SAO segment increased 12 percent to $1,435.4 million, as compared with $1,285.6 million in the same period a year ago. Excluding surcharge revenue, net sales increased 7 percent on 1 percent higher shipment volume from a year ago. The results primarily reflect the impact of stronger product mix in the Aerospace and Defense end-use market compared to the prior year same period.

Operating income for the SAO segment was $195.3 million or 13.6 percent of net sales (17.6 percent of net sales excluding surcharge revenue) in the recent nine months ended March 31, 2019 as compared with $158.3 million or 12.3 percent of net sales (15.2 percent of net sales excluding surcharge revenue) in the same period a year ago. The increase in operating income reflects the impact of stronger product mix, a $4.7 million benefit related to an insurance recovery as well as operating cost improvements compared to the prior year same period.

Performance Engineered Products Segment

Net sales for the nine months ended March 31, 2019 for the PEP segment increased 13 percent to $353.4 million, as compared with $313.4 million in the same period a year ago. Excluding surcharge revenue, net sales increased 10 percent from a year ago. The results reflect an increase in sales primarily in the Medical and Energy end-use markets.

Operating income for the PEP segment was $28.3 million or 8.0 percent of net sales in the recent nine months ended March 31, 2019, compared with an operating income of $18.1 million or 5.8 percent of net sales in the same period a year ago. The current year results were impacted by an $11.4 million benefit related to an insurance recovery.

Liquidity and Financial Resources

During the nine months ended March 31, 2019, we generated cash from operations of $57.2 million compared to $90.7 million in the same period a year ago. Our free cash flow, which we define under "Non-GAAP Financial Measures" below, was negative $169.7 million as compared to negative $21.0 million for the same period a year ago. The decrease in cash provided from operating activities for the nine months ended March 31, 2019 compared to the same period a year ago was primarily driven by working capital investments partially offset by higher income levels. The free cash flow results reflect higher capital spending levels in the current period as we increased our investment in strategic growth areas including additive manufacturing and soft magnetics compared to the prior year same period. Included in the free cash flow results during the current period, we acquired a business, LPW, for a cash purchase price of $79 million. In the same period last year, we acquired a business, CalRAM, for a cash purchase price of $13.3 million.

Capital expenditures for property, plant, equipment and software were $130.7 million for the nine months ended March 31, 2019 as compared to $80.9 million for the same period a year ago. In fiscal year 2019, we expect capital expenditures to be $180 million to $190 million.

Dividends during the nine months ended March 31, 2019 and 2018 were $28.9 million and $25.8 million, respectively, and were paid at a quarterly rate of $0.20 and $0.18 per share of common stock in fiscal year 2019 and 2018, respectively.

We have demonstrated the ability to generate cash to meet our needs through cash flows from operations, management of working capital and the availability of outside sources of financing to supplement internally generated funds. We generally target minimum liquidity of $150 million, consisting of cash and cash equivalents added to available borrowing capacity under our Credit Agreement. Our Credit Agreement contains a revolving credit commitment of $400 million, which expires in March 2022. As of March 31, 2019, we had $6 million of issued letters of credit and $127 million of short-term borrowings under the Credit Agreement. The balance of the Credit Agreement, $267 million, remains available to us. As of March 31, 2019, we had total liquidity of $285.9 million, including $18.9 million of cash and cash equivalents. From time to time during the nine months ended March 31, 2019, we have borrowed under our Credit Agreement. The weighted average daily borrowing under the Credit Agreement during the nine months ended March 31, 2019 was approximately $71.4 million with daily outstanding borrowings ranging from $0.0 million to $154.5 million during the period.

We believe that our cash and cash equivalents of $18.9 million as of March 31, 2019 and available borrowing capacity of $267.0 million under our credit facility will be sufficient to fund our cash needs over the foreseeable future.

During the nine months ended March 31, 2019, we made pension contributions of $4.3 million to our qualified defined benefit pension plans. We currently expect to make $1.2 million of additional contributions to our qualified defined benefit pension plans during the remainder of fiscal year 2019.

As of March 31, 2019, we had cash and cash equivalents of approximately $17 million held at various foreign subsidiaries. Our global cash deployment considers, among other things, the geographic location of our subsidiaries' cash balances, the locations of our anticipated liquidity needs, and the cost to access international cash balances, as necessary. The Act required a one-time tax on previously deferred foreign earnings and generally provides for tax-free repatriations of these earnings beginning January 1, 2018. During the nine months ended March 31, 2019, we repatriated cash of approximately $5 million from foreign jurisdictions. From time to time, we may make short-term intercompany borrowings against our cash held outside the United States in order to reduce or eliminate any required borrowing under our Credit Agreement.

We are subject to certain financial and restrictive covenants under the Credit Agreement, which, among other things, require the maintenance of a minimum interest coverage ratio (3.50 to 1.00 as of March 31, 2019). The interest coverage ratio is defined in the Credit Agreement as, for any period, the ratio of consolidated earnings before interest, taxes, depreciation and amortization and non-cash net pension expense ("EBITDA") to consolidated interest expense for such period. The Credit Agreement also requires the Company to maintain a debt to capital ratio of less than 55%. The debt to capital ratio is defined in the Credit Agreement as the ratio of consolidated indebtedness, as defined therein, to consolidated capitalization, as defined therein. As of March 31, 2019, the Company was in compliance with all of the covenants of the Credit Agreement.

The following table shows our actual ratio performance with respect to the financial covenants as of March 31, 2019:

Covenant	Covenant Requirement	Actual Ratio
Consolidated interest coverage	3.50 to 1.00 (minimum)	14.36 to 1.00
Consolidated debt to capital	55% (maximum)	30.3%

We continue to believe that we will maintain compliance with the financial and restrictive covenants in future periods. To the extent that we do not comply with the covenants under the Credit Agreement, this could reduce our liquidity and flexibility due to potential restrictions on borrowings available to us unless we are able to obtain waivers or modifications of the covenants.

Non-GAAP Financial Measures

The following provides additional information regarding certain non-GAAP financial measures that we use in this report. Our definitions and calculations of these items may not necessarily be the same as those used by other companies.

Net Sales and Gross Margin Excluding Surcharge Revenue

This report includes discussions of net sales as adjusted to exclude the impact of raw material surcharge and the resulting impact on gross margins, which represent financial measures that have not been determined in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"). We present and discuss these financial measures because management believes removing the impact of raw material surcharge from net sales and cost of sales provides a more consistent basis for comparing results of operations from period to period for the reasons discussed earlier in this report. Management uses its results excluding these amounts to evaluate its operating performance and to discuss its business with investment institutions, our board of directors and others. See our earlier discussion of "Gross Profit" for a reconciliation of net sales and gross margin, excluding surcharge revenue to net sales as determined in accordance with U.S. GAAP. Net sales and gross margin excluding surcharge revenue is not a U.S. GAAP financial measure and should not be considered in isolation of, or as a substitute for, net sales and gross margin calculated in accordance with U.S. GAAP.

Operating Margin Excluding Surcharge Revenue and Special Items

This report includes discussions of operating margin as adjusted to exclude the impact of raw material surcharge revenue and special items which represents a financial measure that has not been determined in accordance with U.S. GAAP. We present and discuss this financial measure because management believes removing the impact of raw material surcharge from net sales and cost of sales provides a more consistent and meaningful basis for comparing results of operations from period to period for the reasons discussed earlier in this report. In addition, management believes that excluding special items from operating income and operating margin is helpful in analyzing our operating performance as these items are not indicative of ongoing operating performance. Management uses its results excluding these amounts to evaluate its operating performance and to discuss its business with investment institutions, our board of directors and others. See our earlier discussion of operating income for a reconciliation of operating income and operating margin excluding the surcharge and special items to operating income and operating margin determined in accordance with U.S. GAAP. Operating margin excluding surcharge revenue and special items is not a U.S. GAAP financial measure and should not be considered in isolation of, or as a substitute for, operating margin calculated in accordance with U.S. GAAP.

Adjusted Earnings Per Share

The following provides a reconciliation of adjusted earnings per share, to its most directly comparable U.S. GAAP financial measures:

($ in millions, except per share amounts)	Income Before Income Taxes	Income Tax Expense	Net Income	Earnings Per Diluted Share
Three months ended March 31, 2019, as reported	$ 68.0	$ (16.9)	$ 51.1	$ 1.05
Special items:				
None reported	—	—	—	—
Three months ended March 31, 2019, as adjusted	$ 68.0	$ (16.9)	$ 51.1	$ 1.05

($ in millions, except per share amounts)	Income Before Income Taxes	Income Tax Expense	Net Income	Earnings Per Diluted Share*
Three months ended March 31, 2018, as reported	$ 37.7	$ (7.5)	$ 30.2	$ 0.63
Special items:				
Impact of US tax reform and other legislative changes	—	(1.6)	(1.6)	(0.03)
Three months ended March 31, 2018, as adjusted	$ 37.7	$ (9.1)	$ 28.6	$ 0.60

* Impact per diluted share calculated using weighted average common shares outstanding of 47.7 million for the three months ended March 31, 2018.

($ in millions, except per share amounts)	Income Before Income Taxes	Income Tax Expense	Net Income	Earnings Per Diluted Share*
Nine months ended March 31, 2019, as reported	$ 153.4	$ (35.3)	$ 118.1	$ 2.43
Special items:				
Acquisition-related costs	1.2	—	1.2	0.03
Nine months ended March 31, 2019, as adjusted	$ 154.6	$ (35.3)	$ 119.3	$ 2.46

* Impact per diluted share calculated using weighted average common shares outstanding of 48.1 million for the nine months ended March 31, 2019.

($ in millions, except per share amounts)	Income Before Income Taxes	Income Tax Benefit (Expense)	Net Income	Earnings Per Diluted Share*
Nine months ended March 31, 2018, as reported	$ 106.6	$ 39.1	$ 145.7	$ 3.04
Special items:				
Impact of US tax reform and other legislative changes	—	(67.6)	(67.6)	(1.41)
Nine months ended March 31, 2018, as adjusted	$ 106.6	$ (28.5)	$ 78.1	$ 1.63

* Impact per diluted share calculated using weighted average common shares outstanding of 47.5 million for the nine months ended March 31, 2018.

Management believes that the presentation of earnings per share adjusted to exclude special items is helpful in analyzing the operating performance of the Company, as these items are not indicative of ongoing operating performance. Our definitions and calculations of these items may not necessarily be the same as those used by other companies. Management uses its results excluding these amounts to evaluate its operating performance and to discuss its business with investment institutions, our board of directors and others. Adjusted earnings per share is not a U.S. GAAP financial measure and should not be considered in isolation of, or as a substitute for, earnings per share calculated in accordance with U.S. GAAP.

Free Cash Flow

The following provides a reconciliation of free cash flow, as used in this report, to its most directly comparable U.S. GAAP financial measures:

	Nine Months Ended March 31,	
($ in millions)	**2019**	**2018**
Net cash provided from operating activities	$ 57.2	$ 90.7
Purchases of property, plant, equipment and software	(130.7)	(80.9)
Proceeds from disposals of property, plant and equipment and assets held for sale	0.3	2.0
Acquisition of businesses, net of cash acquired	(79.0)	(13.3)
Proceeds from note receivable from the sale of equity method investment	—	6.3
Dividends paid	(28.9)	(25.8)
Proceeds from insurance recovery	11.4	—
Free cash flow	$ (169.7)	$ (21.0)

Management believes that the presentation of free cash flow provides useful information to investors regarding our financial condition because it is a measure of cash generated which management evaluates for alternative uses. It is management's current intention to use excess cash to fund investments in capital equipment, acquisition opportunities and consistent dividend payments. Free cash flow is not a U.S. GAAP financial measure and should not be considered in isolation of, or as a substitute for, cash flows calculated in accordance with U.S. GAAP.

Contingencies

Environmental

We are subject to various federal, state, local and international environmental laws and regulations relating to pollution, protection of public health and the environment, natural resource damages and occupational safety and health. Although compliance with these laws and regulations may affect the costs of our operations, compliance costs to date have not been material. We have environmental remediation liabilities at some of our owned operating facilities and have been designated as a PRP with respect to certain third party Superfund waste-disposal sites and other third party-owned sites. We accrue amounts for environmental remediation costs that represent our best estimate of the probable and reasonably estimable future costs related to environmental remediation. During the nine months ended March 31, 2019, the Company decreased the liability for a Company-owned former operating site by $0.1 million. The liabilities recorded for environmental remediation costs at Superfund sites, other third party-owned sites and Carpenter-owned current or former operating facilities remaining at March 31, 2019 and June 30, 2018 were $16.0 million and $16.1 million, respectively. Additionally, we have been notified that we may be a PRP with respect to other Superfund sites as to which no proceedings have been instituted against us. Neither the exact amount of remediation costs nor the final method of their allocation among all designated PRPs at these Superfund sites have been determined. Accordingly, at this time, we cannot reasonably estimate expected costs for such matters. The liability for future environmental remediation costs that can be reasonably estimated is evaluated on a quarterly basis.

Estimates of the amount and timing of future costs of environmental remediation requirements are inherently imprecise because of the continuing evolution of environmental laws and regulatory requirements, the availability and application of technology, the identification of currently unknown remediation sites and the allocation of costs among the PRPs. Based upon information currently available, such future costs are not expected to have a material effect on our financial position, results of operations or cash flows over the long-term. However, such costs could be material to our financial position, results of operations or cash flows in a particular future quarter or year.

Other

We are defending various routine claims and legal actions that are incidental to our business, and that are common to our operations, including those pertaining to product claims, commercial disputes, patent infringement, employment actions, employee benefits, compliance with domestic and foreign laws, personal injury claims and tax issues. Like many other manufacturing companies in recent years we, from time to time, have been named as a defendant in lawsuits alleging personal injury as a result of exposure to chemicals and substances in the workplace such as asbestos. We provide for costs relating to these matters when a loss is probable and the amount of the loss is reasonably estimable. The effect of the outcome of these matters on our future results of operations and liquidity cannot be predicted because any such effect depends on future results of operations and the amount and timing (both as to recording future charges to operations and cash expenditures) of the resolution of such matters. While it is not feasible to determine the outcome of these matters, we believe that the total liability from these matters will not have a material effect on our financial position, results of operations or cash flows over the long-term. However, there can be no assurance that an increase in the scope of pending matters or that any future lawsuits, claims, proceedings or investigations will not be material to our financial position, results of operations or cash flows in a particular future quarter or year.

Critical Accounting Policies and Estimates

A summary of other significant accounting policies is discussed in our 2018 Form 10-K Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations", and in Note 1, Summary of Significant Accounting Policies, of the Notes to our consolidated financial statements included in Part II, Item 8 thereto.

Goodwill

Goodwill is not amortized but instead is tested at least annually for impairment as of June 30, or more frequently if events or circumstances indicate that the carrying amount of goodwill may be impaired. Potential impairment is identified by comparing the fair value of a reporting unit to its carrying value. The fair value is estimated using discounted cash flows and the use of market multiples valuation techniques. If the carrying value of the reporting unit exceeds its fair value, any impairment loss is measured by comparing the carrying value of the reporting unit's goodwill to its implied fair value. The discounted cash flow analysis for each reporting unit tested requires significant estimates and assumptions related to cash flow forecasts, discount rates, terminal values and income tax rates. The cash flow forecasts are developed based on assumptions about each reporting unit's markets, product offerings, pricing, capital expenditure and working capital requirements as well as cost performance. The discount rates used in the discounted cash flow are estimated based on a market participant's perspective of each reporting unit's weighted average cost of capital. The terminal value, which represents the value attributed to the reporting unit beyond the forecast period, is estimated using a perpetuity growth rate assumption. The income tax rates used in the discounted cash flow analysis represent estimates of the long-term statutory income tax rates for each reporting unit based on the jurisdictions in which the reporting units operate.

As of March 31, 2019, we had six reporting units with goodwill recorded. Goodwill associated with our SAO reporting unit is tested at the SAO segment level and represents approximately 60 percent of our total goodwill. All other goodwill is associated with our PEP segment, which includes five reporting units with goodwill recorded.

As of June 30, 2018, the fair value of the SAO reporting unit exceeded the carrying value by over 41 percent. The goodwill recorded related to the SAO reporting unit as of June 30, 2018 was $195.5 million. The discounted cash flows analysis for the SAO reporting unit includes assumptions related to our ability to increase volume, improve mix, expand product offerings and continue to implement opportunities to reduce costs over the next several years. For purposes of the discounted cash flow analysis for SAO's fair value, we used a weighted average cost capital of 9.5 percent and a terminal growth rate assumption of 3 percent.

The estimate of fair value requires significant judgment. We based our fair value estimates on assumptions that we believe to be reasonable but that are unpredictable and inherently uncertain, including estimates of future growth rates and operating margins and assumptions about the overall economic climate and the competitive environment for our business units. There can be no assurance that our estimates and assumptions made for purposes of our goodwill and identifiable intangible asset testing as of the time of testing will prove to be accurate predictions of the future. If our assumptions regarding business projections, competitive environments or anticipated growth rates are not correct, we may be required to record goodwill and/or intangible asset impairment charges in future periods, whether in connection with our next annual impairment testing or earlier, if an indicator of an impairment is present before our next annual evaluation.

Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the Private Securities Litigation Act of 1995. These forward-looking statements are subject to risks and uncertainties that could cause actual results to differ from those projected, anticipated or implied. The most significant of these uncertainties are described in Carpenter Technology's filings with the Securities and Exchange Commission, including its report on Form 10-K for the year ended June 30, 2018, Form 10-Q for the quarters ended September 30, 2018 and December 31, 2018, and the exhibits attached to those filings. They include but are not limited to: (1) the cyclical nature of the specialty materials business and certain end-use markets, including aerospace, defense, industrial, transportation, consumer, medical, and energy, or other influences on Carpenter Technology's business such as new competitors, the consolidation of competitors, customers, and suppliers or the transfer of manufacturing capacity from the United States to foreign countries; (2) the ability of Carpenter Technology to achieve cash generation, growth, earnings, profitability, operating income, cost savings and reductions, qualifications, productivity improvements or process changes; (3) the ability to recoup increases in the cost of energy, raw materials, freight or other factors; (4) domestic and foreign excess manufacturing capacity for certain metals; (5) fluctuations in currency exchange rates; (6) the effect of government trade actions; (7) the valuation of the assets and liabilities in Carpenter Technology's pension trusts and the accounting for pension plans; (8) possible labor disputes or work stoppages; (9) the potential that our customers may substitute alternate materials or adopt different manufacturing practices that replace or limit the suitability of our products; (10) the ability to successfully acquire and integrate acquisitions, including LPW Technology Ltd.; (11) the availability of credit facilities to Carpenter Technology, its customers or other members of the supply chain; (12) the ability to obtain energy or raw materials, especially from suppliers located in countries that may be subject to unstable political or economic conditions; (13) Carpenter Technology's manufacturing processes are dependent upon highly specialized equipment located primarily in facilities in Reading and Latrobe, Pennsylvania and Athens, Alabama for which there may be limited alternatives if there are significant equipment failures or a catastrophic event; (14) the ability to hire and retain key personnel, including members of the executive management team, management, metallurgists and other skilled personnel; and (15) fluctuations in oil and gas prices and production. Any of these factors could have an adverse and/or fluctuating effect on Carpenter Technology's results of operations. The forward-looking statements in this document are intended to be subject to the safe harbor protection provided by Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended. Carpenter Technology undertakes no obligation to update or revise any forward-looking statements.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

We use derivative financial instruments to reduce certain types of financial risk. Firm price sales arrangements involve a risk of profit margin fluctuations particularly as raw material prices have been volatile. As discussed in Note 12 to the consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q, “Financial Statements”, in order to reduce the risk of fluctuating profit margins on these sales, we enter into commodity forward contracts to purchase certain critical raw materials necessary to produce the products sold under the firm price sales arrangements. If a customer fails to perform its obligations under the firm price sales arrangements, we may realize losses as a result of the related commodity forward contracts. As of March 31, 2019, we had approximately $13.7 million of net deferred losses related to commodity forward contracts to purchase certain raw materials. A large portion of this balance is related to commodity forward contracts to support firm price sales arrangements associated with many customers. However, approximately 65 percent of these net deferred losses relate to commodity forward contracts entered into to support sales under firm price sales arrangements with one customer in addition to the credit already extended to this customer in connection with outstanding trade receivables. Our customers have historically performed under these arrangements, and we believe that they will honor such obligations in the future.

We are actively involved in managing risks associated with energy resources. Risk containment strategies include interaction with primary and secondary energy suppliers as well as obtaining adequate insurance coverage to compensate us for potential business interruption related to lack of availability of energy resources. In addition, we have used forwards and options to fix the price of a portion of our anticipated future purchases of certain energy requirements to protect against the impact of significant increases in energy costs. We also use surcharge mechanisms to offset a portion of these charges where appropriate.

Fluctuations in foreign currency exchange rates could subject us to risk of losses on anticipated future cash flows from our international operations or customers. Foreign currency forward contracts are used to hedge certain foreign exchange risks.

We use interest rate swaps to achieve a level of floating rate debt relative to fixed rate debt where appropriate. Historically, we have entered into forward interest rate swap contracts to manage the risk of cash flow variability associated with fixed interest debt expected to be issued.

All hedging strategies are reviewed and approved by senior financial management before being implemented. Senior financial management has established policies regarding the use of derivative instruments that prohibit the use of speculative or leveraged derivatives. Market valuations are performed at least quarterly to monitor the effectiveness of our risk management programs.

Based on the current funding level, the allocation policy for pension plan assets is to have approximately 60 percent in return seeking assets and 40 percent in liability matching assets. Return seeking assets include domestic and international equities and diversified loan funds. Liability matching assets include long duration bond funds.

The status of our financial instruments as of March 31, 2019 is provided in Note 12 to the consolidated financial statements included in Part I, Item 1, “Financial Statements” of this Quarterly Report on Form 10-Q. Assuming either of the following occurred on March 31, 2019, (a) an instantaneous 10 percent decrease in the price of raw materials and energy for which we have commodity forward contracts, or (b) a 10 percent strengthening of the U.S. dollar versus foreign currencies for which foreign exchange forward contracts existed, our results of operations would not have been materially affected in either scenario.

Item 4. Controls and Procedures

(a) Evaluation of Effectiveness of Disclosure Controls and Procedures

The Company's management, with the participation of the Company's President and Chief Executive Officer and Vice President and Chief Financial Officer, evaluated the effectiveness of the Company's disclosure controls and procedures as defined in Rules 13a—15(e) and 15d—15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as of March 31, 2019. Based on that evaluation, our management, including the President and Chief Executive Officer and Vice President and Chief Financial Officer, concluded that the Company's disclosure controls and procedures as of March 31, 2019 were effective in providing a reasonable level of assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods required under the Securities and Exchange Commission's rules and forms, including a reasonable level of assurance that information required to be disclosed by us in such reports is accumulated and communicated to the Company's management, including the Company's President and Chief Executive Officer and Vice President and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

(b) Changes in Internal Control over Financial Reporting

There have been no changes in the Company's internal control over financial reporting that occurred during the quarter ended March 31, 2019 that have materially affected, or are likely to materially affect, the Company's internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

Pending legal proceedings involve ordinary routine litigation incidental to our business, which we do not believe would have a material adverse effect on our business regardless of their outcome. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Contingencies."

Item 1A. Risk Factors

We have evaluated the risks associated with our business and operations and determined that those risk factors included in Part 1, Item 1A of our 2018 Annual Report on Form 10-K and Part II, Item 1A of our Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2018 adequately disclose the material risks that we face.

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

There were no reportable purchases during the quarter ended March 31, 2019, however employees surrendered 1,307 shares to the Company, at an average purchase price of $48.00, during such quarter for the payment of the minimum tax liability withholding obligations upon the vesting of shares of restricted stock and the exercise of options. We do not consider this a share buyback program.

Item 6. Exhibits

Exhibit No.	Description
31 (A)	Certification of President and Chief Executive Officer pursuant to Rule 13a—14(a) and Rule 15d—14(a) of the Securities Exchange Act, as amended. (filed herewith)
31 (B)	Certification of Vice President and Chief Financial Officer pursuant to Rule 13a—14(a) and Rule 15d—14(a) of the Securities Exchange Act, as amended. (filed herewith)
32	Certification of President and Chief Executive Officer and Vice President and Chief Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (filed herewith)
101	The following financial information from this Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2019, formatted in XBRL (Extensible Business Reporting Language) and filed electronically herewith: (i) the Consolidated Balance Sheets; (ii) the Consolidated Statements of Income; (iii) the Consolidated Statements of Comprehensive Income; (iv) the Consolidated Statements of Cash Flows; (v) the Consolidated Statements of Changes in Equity; and (vi) the Notes to the Consolidated Financial Statements.

SIGNATURE

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 officer.

Carpenter Technology Corporation
(Registrant)

Date: April 25, 2019

/s/ Timothy Lain
Timothy Lain
Vice President and Chief Financial Officer

(Principal Financial Officer)

Exhibit 31 (A)

CERTIFICATIONS OF PERIODIC REPORTS PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Tony R. Thene, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q (the "Report") of Carpenter Technology Corporation (the "Registrant");

2. Based on my knowledge, this Report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this Report;

3. Based on my knowledge, the financial statements, and other financial information included in this Report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this Report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this Report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this Report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this Report based on such evaluation; and

   (d) Disclosed in this Report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: April 25, 2019

/s/ Tony R. Thene

Tony R. Thene
President and Chief Executive Officer

Exhibit 31 (B)

CERTIFICATIONS OF PERIODIC REPORTS PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Timothy Lain, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q (the “Report”) of Carpenter Technology Corporation (the “Registrant”);

2. Based on my knowledge, this Report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this Report;

3. Based on my knowledge, the financial statements, and other financial information included in this Report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this Report;

4. The Registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this Report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the Registrant’s disclosure controls and procedures and presented in this Report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this Report based on such evaluation; and

   (d) Disclosed in this Report any change in the Registrant’s internal control over financial reporting that occurred during the Registrant’s most recent fiscal quarter (the Registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant’s internal control over financial reporting; and

5. The Registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant’s auditors and the audit committee of the Registrant’s board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant’s ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant’s internal control over financial reporting.

Date: April 25, 2019

/s/ Timothy Lain

Timothy Lain
Vice President and Chief Financial Officer

Exhibit 32

**CERTIFICATION OF PERIODIC FINANCIAL REPORTS PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Carpenter Technology Corporation (the "Issuer") on Form 10-Q for the quarter ended March 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Periodic Report"), I, Tony R. Thene, and I, Timothy Lain, each hereby certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Periodic Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and that information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of the Issuer.

Date: April 25, 2019

/s/ Tony R. Thene	/s/ Timothy Lain
Tony R. Thene	Timothy Lain
President and Chief Executive Officer	Vice President and Chief Financial Officer