

**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 December 31, 2022

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

(State or other jurisdiction of incorporation or organization)

23-0458500

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

1735 Market Street, 15th Floor

Philadelphia, Pennsylvania

(Address of principal executive offices)

19103

(Zip Code)

610-208-2000

(Registrant's telephone number, including area code)

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

Common Stock, \$5 Par Value

Title of each class

CRS

Trading Symbol

New York Stock Exchange

Name of each exchange on which registered

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 January 23, 2023, was 48,509,209.

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)	December 31, 2022	June 30, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 20.0	\$ 154.2
Accounts receivable, net	441.6	382.3
Inventories	722.7	496.1
Other current assets	99.1	86.8
Total current assets	1,283.4	1,119.4
Property, plant and equipment, net	1,390.5	1,420.8
Goodwill	241.4	241.4
Other intangibles, net	31.7	35.2
Deferred income taxes	5.2	5.7
Other assets	104.3	109.8
Total assets	\$ 3,056.5	\$ 2,932.3
LIABILITIES		
Current liabilities:		
Short-term credit agreement borrowings	\$ 81.2	\$ —
Accounts payable	304.7	242.1
Accrued liabilities	124.4	133.5
Total current liabilities	510.3	375.6
Long-term debt	692.4	691.8
Accrued pension liabilities	199.4	196.6
Accrued postretirement benefits	78.3	77.4
Deferred income taxes	162.0	162.4
Other liabilities	93.0	98.0
Total liabilities	1,735.4	1,601.8
Contingencies and commitments (see Note 9)		
STOCKHOLDERS' EQUITY		
Common stock — authorized 100,000,000 shares; issued 56,026,448 shares at December 31, 2022 and 56,025,510 shares at June 30, 2022; outstanding 48,507,489 shares at December 31, 2022 and 48,286,439 shares at June 30, 2022	280.1	280.1
Capital in excess of par value	315.3	320.3
Reinvested earnings	1,190.7	1,211.0
Common stock in treasury (7,518,959 shares and 7,739,071 shares at December 31, 2022 and June 30, 2022, respectively), at cost	(298.4)	(307.4)
Accumulated other comprehensive loss	(166.6)	(173.5)
Total stockholders' equity	1,321.1	1,330.5
Total liabilities and stockholders' equity	\$ 3,056.5	\$ 2,932.3

See accompanying notes to consolidated financial statements.

CARPENTER TECHNOLOGY CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

(\$ in millions, except per share data)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Net sales	\$ 579.1	\$ 396.0	\$ 1,102.0	\$ 783.6
Cost of sales	509.1	382.9	977.2	745.3
Gross profit	70.0	13.1	124.8	38.3
Selling, general and administrative expenses	47.4	44.6	93.9	88.9
Operating income (loss)	22.6	(31.5)	30.9	(50.6)
Interest expense, net	13.0	10.1	25.6	20.3
Other expense (income), net	1.9	(6.6)	5.4	(10.7)
Income (loss) before income taxes	7.7	(35.0)	(0.1)	(60.2)
Income tax expense (benefit)	1.5	(5.6)	0.5	(16.1)
Net income (loss)	\$ 6.2	\$ (29.4)	\$ (0.6)	\$ (44.1)
EARNINGS (LOSS) PER COMMON SHARE:				
Basic	\$ 0.13	\$ (0.61)	\$ (0.02)	\$ (0.91)
Diluted	\$ 0.13	\$ (0.61)	\$ (0.02)	\$ (0.91)
WEIGHTED AVERAGE COMMON SHARES OUTSTANDING:				
Basic	48.8	48.6	48.7	48.5
Diluted	49.0	48.6	48.7	48.5

See accompanying notes to consolidated financial statements.

CARPENTER TECHNOLOGY CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited)

(\$ in millions)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Net income (loss)	\$ 6.2	\$ (29.4)	\$ (0.6)	\$ (44.1)
Other comprehensive income (loss), net of tax				
Pension and postretirement benefits, net of tax of \$(0.4), \$(0.4), \$(0.8) and \$(0.8), respectively	1.1	0.8	2.1	1.9
Net gain on derivative instruments, net of tax of \$(2.1), \$(0.5), \$(0.4) and \$(0.9), respectively	6.5	1.7	1.2	2.8
Foreign currency translation	6.9	(0.7)	3.6	(2.8)
Other comprehensive income, net of tax	14.5	1.8	6.9	1.9
Comprehensive income (loss), net of tax	\$ 20.7	\$ (27.6)	\$ 6.3	\$ (42.2)

See accompanying notes to consolidated financial statements.

CARPENTER TECHNOLOGY CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

(\$ in millions)	Six Months Ended December 31,	
	2022	2021
OPERATING ACTIVITIES		
Net loss	\$ (0.6)	\$ (44.1)
Adjustments to reconcile net loss to net cash used for operating activities:		
Depreciation and amortization	64.8	65.3
Deferred income taxes	(0.9)	(17.6)
Net pension expense (income)	9.9	(3.6)
Share-based compensation expense	7.1	5.6
Net loss on disposals of property, plant and equipment	0.6	0.2
Changes in working capital and other:		
Accounts receivable	(58.5)	—
Inventories	(226.7)	(109.8)
Other current assets	(4.1)	(7.4)
Accounts payable	62.1	26.9
Accrued liabilities	(12.1)	(42.9)
Pension plan contributions	—	(0.2)
Other postretirement plan contributions	(1.5)	(1.9)
Other, net	(4.6)	(6.8)
Net cash used for operating activities	(164.5)	(136.3)
INVESTING ACTIVITIES		
Purchases of property, plant, equipment and software	(31.0)	(33.4)
Proceeds from disposals of property, plant and equipment and assets held for sale	—	1.8
Net cash used for investing activities	(31.0)	(31.6)
FINANCING ACTIVITIES		
Short-term credit agreement borrowings, net change	41.2	—
Credit agreement borrowings	60.1	—
Credit agreement repayments	(20.1)	—
Dividends paid	(19.7)	(19.7)
Withholding tax payments on share-based compensation awards	(3.4)	(3.1)
Net cash provided from (used for) financing activities	58.1	(22.8)
Effect of exchange rate changes on cash and cash equivalents	3.2	0.2
DECREASE IN CASH AND CASH EQUIVALENTS	(134.2)	(190.5)
Cash and cash equivalents at beginning of year	154.2	287.4
Cash and cash equivalents at end of period	\$ 20.0	\$ 96.9
SUPPLEMENTAL CASH FLOW INFORMATION:		
Non-cash investing activities: Purchase of property, plant, equipment and software	\$ 8.1	\$ 8.4

See accompanying notes to consolidated financial statements.

CARPENTER TECHNOLOGY CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
FOR THE THREE AND SIX MONTHS ENDED DECEMBER 31, 2022 AND 2021
(Unaudited)

(\$ in millions, except per share data)	Common Stock		Reinvested Earnings	Common Stock in Treasury	Accumulated Other Comprehensive (Loss) Income	Total Equity
	Par Value of \$5	Capital in Excess of Par Value				
Balances at September 30, 2022	\$ 280.1	\$ 314.3	\$ 1,194.3	\$ (300.8)	\$ (181.1)	\$ 1,306.8
Net income			6.2			6.2
Pension and postretirement benefits, net of tax					1.1	1.1
Net gain on derivative instruments, net of tax					6.5	6.5
Foreign currency translation					6.9	6.9
Cash Dividends:						
Common @ \$0.20 per share			(9.8)			(9.8)
Share-based compensation plans		1.0		2.4		3.4
Balances at December 31, 2022	\$ 280.1	\$ 315.3	\$ 1,190.7	\$ (298.4)	\$ (166.6)	\$ 1,321.1

(\$ in millions, except per share data)	Common Stock		Reinvested Earnings	Common Stock in Treasury	Accumulated Other Comprehensive (Loss) Income	Total Equity
	Par Value of \$5	Capital in Excess of Par Value				
Balances at September 30, 2021	\$ 280.1	\$ 316.3	\$ 1,274.7	\$ (311.3)	\$ (192.2)	\$ 1,367.6
Net loss			(29.4)			(29.4)
Pension and postretirement benefits, net of tax					0.8	0.8
Net gain on derivative instruments, net of tax					1.7	1.7
Foreign currency translation					(0.7)	(0.7)
Cash Dividends:						
Common @ \$0.20 per share			(9.8)			(9.8)
Share-based compensation plans		(0.4)		3.3		2.9
Balances at December 31, 2021	\$ 280.1	\$ 315.9	\$ 1,235.5	\$ (308.0)	\$ (190.4)	\$ 1,333.1

See accompanying notes to consolidated financial statements.

CARPENTER TECHNOLOGY CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
FOR THE THREE AND SIX MONTHS ENDED DECEMBER 31, 2022 AND 2021
(Unaudited)

(\$ in millions, except per share data)	Common Stock		Reinvested Earnings	Common Stock in Treasury	Accumulated Other Comprehensive (Loss) Income	Total Equity
	Par Value of \$5	Capital in Excess of Par Value				
Balances at June 30, 2022	\$ 280.1	\$ 320.3	\$ 1,211.0	\$ (307.4)	\$ (173.5)	\$ 1,330.5
Net loss			(0.6)			(0.6)
Pension and postretirement benefits, net of tax					2.1	2.1
Net gain on derivative instruments, net of tax					1.2	1.2
Foreign currency translation					3.6	3.6
Cash Dividends:						
Common @ \$0.40 per share			(19.7)			(19.7)
Share-based compensation plans		(5.0)		9.0		4.0
Balances at December 31, 2022	\$ 280.1	\$ 315.3	\$ 1,190.7	\$ (298.4)	\$ (166.6)	\$ 1,321.1

(\$ in millions, except per share data)	Common Stock		Reinvested Earnings	Common Stock in Treasury	Accumulated Other Comprehensive (Loss) Income	Total Equity
	Par Value of \$5	Capital in Excess of Par Value				
Balances at June 30, 2021	\$ 280.1	\$ 322.6	\$ 1,299.3	\$ (317.4)	\$ (192.3)	\$ 1,392.3
Net loss			(44.1)			(44.1)
Pension and postretirement benefits, net of tax					1.9	1.9
Net gain on derivative instruments, net of tax					2.8	2.8
Foreign currency translation					(2.8)	(2.8)
Cash Dividends:						
Common @ \$0.40 per share			(19.7)			(19.7)
Share-based compensation plans		(6.7)		9.4		2.7
Balances at December 31, 2021	\$ 280.1	\$ 315.9	\$ 1,235.5	\$ (308.0)	\$ (190.4)	\$ 1,333.1

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, 2022 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 Technology's Annual Report on Form 10-K for the fiscal year ended June 30, 2022 (the "2022 Form 10-K"). Operating results for the three and six months ended December 31, 2022 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", "Carpenter Technology", the "Company", "Registrant", "Issuer", "we" and "our" refer to Carpenter Technology Corporation.

2. Recent Accounting Pronouncements

Recently Issued Accounting Pronouncements

At this time there are no issued pronouncements, adopted or pending adoption, in the current fiscal year that would materially impact the Company.

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. 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.

Each 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.

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

Revenue is measured as the amount of consideration the Company expects to receive in exchange for its product. The standard 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 operations. 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 \$13.8 million and \$14.4 million at December 31, 2022 and June 30, 2022, 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 and six months ended December 31, 2022 and 2021 were as follows:

End-Use Market Data (\$ in millions)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Aerospace and Defense	\$ 280.1	\$ 167.6	\$ 541.8	\$ 334.7
Medical	73.7	46.7	132.9	89.8
Transportation	41.4	38.2	78.3	79.8
Energy	34.8	23.1	62.7	45.3
Industrial and Consumer	119.7	90.5	224.6	177.0
Distribution	29.4	29.9	61.7	57.0
Total net sales	\$ 579.1	\$ 396.0	\$ 1,102.0	\$ 783.6

Geographic Data (\$ in millions)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
United States	\$ 353.7	\$ 254.2	\$ 673.3	\$ 501.1
Europe	87.2	52.3	178.0	100.8
Asia Pacific	79.2	53.2	137.3	114.8
Mexico	32.2	21.6	65.2	37.5
Canada	15.4	8.1	27.1	15.9
Other	11.4	6.6	21.1	13.5
Total net sales	\$ 579.1	\$ 396.0	\$ 1,102.0	\$ 783.6

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

4. Earnings (Loss) per Common Share

The Company calculates basic and diluted earnings (loss) per share using the two class method. Under the two class method, earnings (loss) 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 (loss) available to each class of stock are divided by the weighted average number of outstanding shares for the period in each class. Diluted earnings (loss) per share assumes the issuance of common stock for all potentially dilutive share equivalents outstanding. For the three months ended December 31, 2021, and the six months ended December 31, 2022 and 2021, the Company incurred a net loss and accordingly excluded all potentially dilutive securities from the determination of diluted loss per share as their impact was anti-dilutive.

The calculations of basic and diluted earnings (loss) per common share for the three and six months ended December 31, 2022 and 2021 were as follows:

(in millions, except per share data)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Net income (loss)	\$ 6.2	\$ (29.4)	\$ (0.6)	\$ (44.1)
Dividends allocated under share-based compensation plans	(0.1)	—	(0.2)	(0.1)
Earnings (loss) available for common stockholders used in calculation of basic loss per common share	<u>\$ 6.1</u>	<u>\$ (29.4)</u>	<u>\$ (0.8)</u>	<u>\$ (44.2)</u>
Weighted average number of common shares outstanding, basic	<u>48.8</u>	<u>48.6</u>	<u>48.7</u>	<u>48.5</u>
Basic earnings (loss) per common share	<u>\$ 0.13</u>	<u>\$ (0.61)</u>	<u>\$ (0.02)</u>	<u>\$ (0.91)</u>
Net income (loss)	\$ 6.2	\$ (29.4)	\$ (0.6)	\$ (44.1)
Dividends allocated under share-based compensation plans	(0.1)	—	(0.2)	(0.1)
Earnings (loss) available for common stockholders used in calculation of diluted loss per common share	<u>\$ 6.1</u>	<u>\$ (29.4)</u>	<u>\$ (0.8)</u>	<u>\$ (44.2)</u>
Weighted average number of common shares outstanding, basic	48.8	48.6	48.7	48.5
Effect of shares issuable under share-based compensation plans	0.2	—	—	—
Weighted average number of common shares outstanding, diluted	<u>49.0</u>	<u>48.6</u>	<u>48.7</u>	<u>48.5</u>
Diluted earnings (loss) per common share	<u>\$ 0.13</u>	<u>\$ (0.61)</u>	<u>\$ (0.02)</u>	<u>\$ (0.91)</u>

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

(in millions)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Stock options	<u>1.7</u>	<u>2.0</u>	<u>1.8</u>	<u>2.0</u>

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

5. Inventories

Inventories consisted of the following components as of December 31, 2022 and June 30, 2022:

(\$ in millions)	December 31, 2022	June 30, 2022
Raw materials and supplies	\$ 186.3	\$ 127.8
Work in process	403.3	261.2
Finished and purchased products	133.1	107.1
Total inventories	<u>\$ 722.7</u>	<u>\$ 496.1</u>

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 December 31, 2022 and June 30, 2022, \$137.1 million and \$122.9 million of inventory, respectively, was accounted for using a method other than the LIFO inventory costing method.

6. Accrued Liabilities

Accrued liabilities consisted of the following as of December 31, 2022 and June 30, 2022:

(\$ in millions)	December 31, 2022	June 30, 2022
Accrued compensation and benefits	\$ 42.5	\$ 53.2
Accrued interest expense	18.7	18.4
Accrued postretirement benefits	14.1	14.1
Contract liabilities	13.8	14.4
Current portion of lease liabilities	9.6	9.9
Accrued taxes	4.9	6.3
Accrued pension liabilities	3.4	3.4
Derivative financial instruments	2.8	0.3
Accrued income taxes	0.4	0.4
Other	14.2	13.1
Total accrued liabilities	<u>\$ 124.4</u>	<u>\$ 133.5</u>

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

7. Pension and Other Postretirement Benefits

The components of the net periodic pension expense (income) related to the Company's pension and other postretirement benefits for the three and six months ended December 31, 2022 and 2021 were as follows:

Three months ended December 31, (\$ in millions)	Pension Plans		Other Postretirement Plans	
	2022	2021	2022	2021
Service cost	\$ 2.0	\$ 2.1	\$ 0.5	\$ 0.6
Interest cost	11.5	9.1	2.4	1.8
Expected return on plan assets	(11.2)	(14.9)	(1.7)	(2.0)
Amortization of net loss (gain)	2.4	2.1	(0.4)	(0.2)
Amortization of prior service cost (credits)	0.5	0.6	(1.0)	(1.0)
Net pension expense (income)	<u>\$ 5.2</u>	<u>\$ (1.0)</u>	<u>\$ (0.2)</u>	<u>\$ (0.8)</u>

Six months ended December 31, (\$ in millions)	Pension Plans		Other Postretirement Plans	
	2022	2021	2022	2021
Service cost	\$ 4.0	\$ 4.2	\$ 1.0	\$ 1.3
Interest cost	23.0	18.2	4.8	3.5
Expected return on plan assets	(22.4)	(29.8)	(3.4)	(4.0)
Amortization of net loss (gain)	4.8	4.2	(0.8)	(0.4)
Amortization of prior service cost (credits)	1.0	1.2	(2.1)	(2.0)
Net pension expense (income)	<u>\$ 10.4</u>	<u>\$ (2.0)</u>	<u>\$ (0.5)</u>	<u>\$ (1.6)</u>

During the six months ended December 31, 2022 and 2021, the Company made \$0.0 million and \$0.2 million, respectively, of contributions to its qualified defined benefit pension plans. The Company currently does not expect to contribute to the qualified defined benefit pension plans during the remainder of fiscal year 2023.

8. Debt

On March 16, 2022, the Company completed its offering and sale of \$300.0 million in aggregate principal amount of 7.625 percent Senior Notes due 2030 (the "2030 Notes"). The 2030 Notes accrue interest at the rate of 7.625 percent per annum, with interest payable in cash semi-annually in arrears on March 15 and September 15, commencing September 15, 2022. The 2030 Notes will mature on March 15, 2030. The 2030 Notes are senior unsecured indebtedness of the Company, ranking equally in right of payment with all its existing and future senior unsecured indebtedness and senior to its future subordinated indebtedness. The Company used the net proceeds from the issuance of the 2030 Notes to repay, in April 2022, in full \$300.0 million in principal of its 4.45 percent senior unsecured notes due March 2023, including any interest and premium due thereon.

On March 26, 2021, the Company entered into a \$300.0 million secured revolving credit facility (the "Credit Facility"). The Credit Facility amended and restated the Company's previous revolving credit facility, dated March 31, 2017, which had been set to expire in March 2022. The Credit Facility extends the maturity to March 31, 2024. This was subject to a springing maturity of November 30, 2022. If, by November 30, 2022, the Company's \$300.0 million 4.45 percent Senior Notes due in March 2023 were not redeemed, repurchased or refinanced with indebtedness having a maturity date of October 1, 2024 or later, all indebtedness under the Credit Facility would have been due. The springing maturity clause has been satisfied with the issuance of the 2030 Notes and subsequent payment in full of the 4.45 percent Senior Notes, as discussed above. The Credit Facility contains a revolving credit commitment amount of \$300.0 million, subject to the Company's right, from time to time, to request an increase of the commitment to \$500.0 million in the aggregate; and provides for the issuance of letters of credit subject to a \$40.0 million sub-limit. The Company has the right to terminate or reduce the commitments under the Credit Facility, and, subject to certain lender approvals, to join subsidiaries as subsidiary borrowers.

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On February 14, 2022, the Company entered into an amendment (the "Amendment") to its Credit Facility. The Amendment revised the interest coverage ratio covenant under the Credit Facility so the first test date was June 30, 2022, and required a minimum interest coverage ratio of 2.00 to 1.00 at June 30, 2022 (calculated for the two fiscal quarters then ended), 3.00 to 1.00 at September 30, 2022 (calculated for the three fiscal quarters then ended) and 3.50 to 1.00 at December 31, 2022 and thereafter (calculated for the four fiscal quarters then ended). The Amendment revised the restricted period under the Credit Facility, during which the Company was prohibited from incurring any secured debt other than purchase money financing for new equipment and was subject to additional restrictions on its ability to make dividends or distributions or to make certain investments. The restricted period expired on September 30, 2022.

Interest on the borrowings under the Credit Facility accrues at variable rates, based upon a "Eurocurrency Rate" or a defined "Base Rate". Both are determined based upon the credit rating of the Company's senior unsecured long-term debt (the "Debt Rating"). The applicable margin to be added to the Eurocurrency Rate ranges from 1.25 percent to 2.25 percent (2.00 percent as of December 31, 2022), and for Base Rate-determined loans, from 0.25 percent to 1.25 percent (1.00 percent as of December 31, 2022). The Company also pays a quarterly commitment fee ranging from 0.275 percent to 0.375 percent (0.35 percent as of December 31, 2022), determined based upon the Debt Rating, of the unused portion of the \$300.0 million commitment under the Credit Facility. In addition, the Company must pay certain letter of credit fees, ranging from 1.25 percent to 2.25 percent (2.00 percent as of December 31, 2022), with respect to letters of credit issued under the Credit Facility. The Company has the right to voluntarily prepay and re-borrow loans and to terminate or reduce the commitments under the facility. As of December 31, 2022, the Company had \$1.8 million of issued letters of credit under the Credit Facility and \$81.2 million of short-term borrowings with the balance of \$217.0 million available to the Company. As of December 31, 2022, the borrowing rate for the Credit Facility was 6.38 percent.

The Company is subject to certain financial and restrictive covenants under the Credit Facility, which, among other things, require the maintenance of a minimum interest coverage ratio. The interest coverage ratio is defined in the Credit Facility 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 interest coverage covenant was waived until the quarter ended June 30, 2022 at which time it was required to be 2.00 to 1.00, then 3.00 to 1.00 at September 30, 2022 and then 3.50 to 1.00 at December 31, 2022. The Credit Facility 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 Facility as the ratio of consolidated indebtedness, as defined therein, to consolidated capitalization, as defined therein. In addition, the Company is also subject to an asset coverage ratio minimum of 1.10 to 1.00. The asset coverage ratio is defined in the Credit Facility as eligible receivables and inventory, as defined therein, to outstanding loans and obligations, as defined therein. As of December 31, 2022, the Company was in compliance with all of the covenants of the Credit Facility.

Long-term debt outstanding as of December 31, 2022 and June 30, 2022 consisted of the following:

(\$ in millions)	December 31, 2022	June 30, 2022
Senior unsecured notes, 6.375% due July 2028 (face value of \$400.0 million at December 31, 2022 and June 30, 2022)	\$ 396.2	\$ 395.9
Senior unsecured notes, 7.625% due March 2030 (face value of \$300.0 million at December 31, 2022 and June 30, 2022)	296.2	295.9
Total debt	692.4	691.8
Less: amounts due within one year	—	—
Long-term debt, net of current portion	\$ 692.4	\$ 691.8

For the three months ended December 31, 2022 and 2021, interest costs totaled \$13.3 million and \$10.3 million, respectively, of which \$0.3 million and \$0.2 million, respectively, were capitalized as part of the cost of property, plant, equipment and software. For the six months ended December 31, 2022 and 2021, interest costs totaled \$26.1 million and \$20.6 million, respectively, of which \$0.5 million and \$0.3 million, respectively were capitalized as part of the cost of property, plant, equipment and software.

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9. 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 six months ended December 31, 2022, the Company increased the liability for environmental remediation costs by \$0.5 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 December 31, 2022 and June 30, 2022 were \$18.8 million and \$18.3 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 we 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. 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.

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.

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.

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10. Leases

The Company records right-of-use ("ROU") assets and operating lease liabilities on the consolidated balance sheet for several types of operating leases, including land and buildings, equipment (e.g. trucks and forklifts), vehicles and computer equipment. On the lease commencement date, the Company measures and records a ROU asset and lease liability equal to the present value of the remaining lease payments, discounted using the rate implicit in the lease (or if that rate cannot be readily determined, the Company's incremental borrowing rate). Operating leases are included in other assets, accrued liabilities (current) and other liabilities (long-term) on the consolidated balance sheets.

The Company elected the practical expedient to not separate lease components from non-lease components for all asset classes. The Company recognizes lease expense in the consolidated statements of operations on a straight-line basis over the lease term. The Company elected to not recognize ROU assets and lease liabilities for short-term leases with an initial term of 12 months or less for all asset classes. Leases with the option to extend their term or terminate early are reflected in the lease term when it is reasonably certain that the Company will exercise such options. Some leasing arrangements require variable payments that are dependent on usage, output, or may vary for other reasons, such as insurance and tax payments. The variable lease payments are not presented as part of the ROU asset or lease liability. Income from subleased properties is recognized and presented as a reduction of selling, general and administrative expenses in the Company's consolidated statements of operations.

The following table sets forth the components of the Company's lease cost for the three and six months ended December 31, 2022 and December 31, 2021:

(\$ in millions)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Operating lease cost	\$ 2.8	\$ 2.5	\$ 5.6	\$ 5.0
Short-term lease cost	1.0	0.8	1.9	1.7
Variable lease cost	—	0.1	—	0.3
Sublease income	(0.2)	(0.2)	(0.5)	(0.5)
Total lease cost, net	<u>\$ 3.6</u>	<u>\$ 3.2</u>	<u>\$ 7.0</u>	<u>\$ 6.5</u>
Operating cash flow payments from operating leases	\$ 3.1	\$ 2.8	\$ 6.2	\$ 5.6
Non-cash ROU assets obtained in exchange for lease obligations	\$ 0.9	\$ 15.1	\$ 1.2	\$ 15.5

The leases have remaining terms of one to fourteen years. The following table sets forth the Company's weighted-average remaining lease term and weighted-average discount rate at December 31, 2022 and June 30, 2022:

	December 31, 2022	June 30, 2022
Weighted-average remaining lease term - operating leases	8.3 years	8.5 years
Weighted-average discount rate - operating leases	3.8 %	3.7 %

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The following table sets forth the Company's ROU assets and lease liabilities at December 31, 2022 and June 30, 2022:

(\$ in millions)	December 31, 2022	June 30, 2022
Operating lease assets:		
Other assets	\$ 39.4	\$ 42.9
Operating lease liabilities:		
Accrued liabilities	\$ 9.6	\$ 9.9
Other liabilities	39.1	42.7
Total operating lease liabilities	\$ 48.7	\$ 52.6

Minimum lease payments for operating leases by fiscal year expiring subsequent to December 31, 2022 are as follows:

(\$ in millions)	December 31, 2022
2023 (remaining period of fiscal year)	\$ 6.0
2024	9.2
2025	6.6
2026	5.1
2027	5.1
Thereafter	25.4
Total future minimum lease payments	57.4
Less: imputed interest	(8.7)
Total	\$ 48.7

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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:

December 31, 2022 (\$ in millions)		Fair Value Measurements Using Input Type Level 2
Assets:		
Derivative financial instruments	\$	21.8
Liabilities:		
Derivative financial instruments	\$	3.1
June 30, 2022 (\$ in millions)		Fair Value Measurements Using Input Type Level 2
Assets:		
Derivative financial instruments	\$	16.6
Liabilities:		
Derivative financial instruments	\$	0.4

The Company's derivative financial instruments consist of commodity forward contracts and foreign currency forward contracts. These instruments are measured at fair value using the market method valuation technique. The inputs to this technique utilize information related to commodity prices and foreign exchange 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 Derivatives and Hedging Activities.

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:

(\$ in millions)	December 31, 2022		June 30, 2022	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Long-term debt	\$ 692.4	\$ 683.8	\$ 691.8	\$ 641.5
Company-owned life insurance	\$ 23.6	\$ 23.6	\$ 22.9	\$ 22.9

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The fair values of long-term debt as of December 31, 2022 and June 30, 2022 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.

The carrying amount of company-owned life insurance as of December 31, 2022 and June 30, 2022 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.

12. Derivatives and Hedging Activities

The Company from time to time 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 December 31, 2022, the Company had forward contracts to purchase 3.9 million pounds of certain raw materials with settlement dates through May 2025.

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 were amortized over the term of the underlying debt. For the three months ended December 31, 2022 and 2021, net gains related to the previously terminated contracts of \$0.0 million and \$0.1 million, respectively, were recorded as a reduction to interest expense. For the six months ended December 31, 2022 and 2021, net gains related to the previously terminated contracts of \$0.0 million and \$0.2 million, respectively, were recorded as a reduction to interest expense.

Cash Flow Hedging — Foreign currency forward contracts: From time-to-time, the Company uses foreign currency forward contracts to hedge a portion of anticipated future sales denominated in foreign currencies, principally the Euro 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 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 expense (income), net. As of December 31, 2022 and June 30, 2022, 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.

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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 December 31, 2022 and June 30, 2022:

December 31, 2022				
(\$ in millions)		Foreign Currency Contracts	Commodity Contracts	Total Derivatives
Asset Derivatives:				
<i>Derivatives designated as hedging instruments:</i>				
Other current assets	\$	4.5	\$ 15.2	\$ 19.7
Other assets		—	2.1	2.1
Total asset derivatives	\$	4.5	\$ 17.3	\$ 21.8
Liability Derivatives:				
<i>Derivatives designated as hedging instruments:</i>				
Accrued liabilities	\$	—	\$ 2.8	\$ 2.8
Other liabilities		—	0.3	0.3
Total liability derivatives	\$	—	\$ 3.1	\$ 3.1
June 30, 2022				
(\$ in millions)		Foreign Currency Contracts	Commodity Contracts	Total Derivatives
Asset Derivatives:				
<i>Derivatives designated as hedging instruments:</i>				
Other current assets	\$	—	\$ 11.5	\$ 11.5
Other assets		2.6	2.5	5.1
Total asset derivatives	\$	2.6	\$ 14.0	\$ 16.6
Liability Derivatives:				
<i>Derivatives designated as hedging instruments:</i>				
Accrued liabilities	\$	0.2	\$ 0.1	\$ 0.3
Other liabilities		—	0.1	0.1
Total liability derivatives	\$	0.2	\$ 0.2	\$ 0.4

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 \$22.8 million and total liability derivatives would have been \$4.1 million as of December 31, 2022.

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 December 31, 2022 and June 30, 2022, 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.

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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) on cash flow hedges recognized during the three and six months ended December 31, 2022 and 2021:

(\$ in millions)	Amount of Gain Recognized in AOCI on Derivatives			
	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Derivatives in Cash Flow Hedging Relationship:				
Commodity contracts	\$ 9.8	\$ 1.3	\$ 9.6	\$ 1.0
Total	\$ 9.8	\$ 1.3	\$ 9.6	\$ 1.0

(\$ in millions)	Location of Gain (Loss) Reclassified from AOCI into Income	Amount of Gain (Loss) Reclassified from AOCI into Income	
		Three Months Ended December 31,	
		2022	2021
Derivatives in Cash Flow Hedging Relationship:			
Commodity contracts	Cost of sales	\$ 1.2	\$ (1.0)
Forward interest rate swaps	Interest expense, net	—	0.1
Total		\$ 1.2	\$ (0.9)

(\$ in millions)	Location of Gain (Loss) Reclassified from AOCI into Income	Amount of Gain (Loss) Reclassified from AOCI into Income	
		Six Months Ended December 31,	
		2022	2021
Derivatives in Cash Flow Hedging Relationship:			
Commodity contracts	Cost of sales	\$ 7.9	\$ (2.9)
Forward interest rate swaps	Interest expense, net	—	0.2
Total		\$ 7.9	\$ (2.7)

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The following is a summary of total amounts presented in the consolidated statements of operations in which the effects of cash flow and fair value hedges are recorded during the three and six months ended December 31, 2022 and 2021:

	Three Months Ended December 31, 2022		Three Months Ended December 31, 2021	
(\$ in millions)	Cost of Sales	Interest Expense, Net	Cost of Sales	Interest Expense, Net
Total amounts presented in the consolidated statement of operations in which the effects of cash flow and fair value hedges are recorded	\$ 509.1	\$ 13.0	\$ 382.9	\$ 10.1
Gain (Loss) on Derivatives in Cash Flow Hedging Relationship:				
Commodity contracts				
Amount of gain (loss) reclassified from AOCI to income	\$ 1.2	\$ —	\$ (1.0)	\$ —
Interest rate swap agreements				
Amount of gain reclassified from AOCI to income	—	—	—	0.1
Total gain (loss)	\$ 1.2	\$ —	\$ (1.0)	\$ 0.1
	Six Months Ended December 31, 2022		Six Months Ended December 31, 2021	
(\$ in millions)	Cost of Sales	Interest Expense, Net	Cost of Sales	Interest Expense, Net
Total amounts presented in the consolidated statement of income in which the effects of cash flow and fair value hedges are recorded	\$ 977.2	\$ 25.6	\$ 745.3	\$ 20.3
Gain (Loss) on Derivatives in Cash Flow Hedging Relationship:				
Commodity contracts				
Amount of gain (loss) reclassified from AOCI to income	\$ 7.9	\$ —	\$ (2.9)	\$ —
Interest rate swap agreements				
Amount of gain reclassified from AOCI to income	—	—	—	0.2
Total gain (loss)	\$ 7.9	\$ —	\$ (2.9)	\$ 0.2

The Company estimates that \$8.3 million of net derivative gains included in AOCI as of December 31, 2022 will be reclassified into income within the next 12 months. No significant cash flow hedges were discontinued during the three and six months ended December 31, 2022.

As of December 31, 2022, and June 30, 2022, there were no amounts recorded on the consolidated balance sheets related to cumulative basis adjustments for fair value hedges of interest rate risk.

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13. Other Expense (Income), Net

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

(\$ in millions)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Unrealized gains on company-owned life insurance contracts and investments held in rabbi trusts	\$ (1.6)	\$ (2.4)	\$ (0.6)	\$ (2.2)
Foreign exchange loss	1.2	0.3	1.2	0.6
Interest income	(0.1)	—	(0.2)	—
Pension earnings, interest and deferrals expense (income)	2.5	(4.5)	4.9	(9.1)
Other	(0.1)	—	0.1	—
Total other expense (income), net	\$ 1.9	\$ (6.6)	\$ 5.4	\$ (10.7)

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, or loss, 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 or benefit 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.

During the three and six months ended December 31, 2022 and 2021, deferred taxes were determined by the year-to-date tax benefit with current taxes accounting for the remaining tax expense or benefit recorded in the period. Income tax expense was \$1.5 million, or 19.5 percent of pre-tax income for the three months ended December 31, 2022, as compared with income tax benefit of \$5.6 million, or 16.0 percent of pre-tax loss for the three months ended December 31, 2021. Income tax expense for the six months ended December 31, 2022, was \$0.5 million, or negative 500.0 percent of pre-tax loss as compared with income tax benefit of \$16.1 million, or 26.7 percent of pre-tax loss for the six months ended December 31, 2021. The effective tax rate for the six months ended December 31, 2022 of negative 500.0 percent is due primarily to the near breakeven year-to-date pre-tax loss of \$0.1 million for the six months ended December 31, 2022 in relation to permanent tax adjustments and discrete items during the current period.

Income tax expense for the three months ended December 31, 2022, includes the unfavorable impact of losses in certain foreign jurisdictions for which no tax benefit can be recognized. Also included is a discrete tax benefit of \$0.6 million for anticipated interest on IRS income tax refund claims. Income tax benefit for the three months ended December 31, 2021 reflected a change in the estimated full year results for the fiscal year. Also included was the unfavorable impact of losses in certain foreign jurisdictions for which no tax benefit can be recognized.

Income tax expense for the six months ended December 31, 2022, includes the unfavorable impact of losses in certain foreign jurisdictions for which no tax benefit can be recognized. Also included is a discrete tax benefit of \$0.6 million for anticipated interest on IRS income tax refund claims as well as a discrete tax charge of \$0.6 million for the impact of a state tax legislative change. Income tax benefit for the six months ended December 31, 2021 included the unfavorable impacts of losses in certain foreign jurisdictions for which no tax benefit can be recognized.

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The Inflation Reduction Act of 2022 (the "IRA") was enacted on August 16, 2022. The IRA includes climate and energy provisions, extends the Affordable Care Act subsidies, increases Internal Revenue Enforcement funding and allows Medicare to negotiate prescription drug prices. The IRA creates a 15 percent corporate alternative minimum tax on profits of corporations whose average annual adjusted financial statement income for any consecutive three-tax-year period preceding the tax year exceeds \$1.0 billion and is effective for tax years beginning after December 31, 2022. The IRA also creates an excise tax of 1 percent on stock repurchases by publicly traded U.S. corporations, effective for repurchases after December 31, 2022. The provisions of the IRA are not expected to have a significant impact on our financial position, results of operations or cash flows.

15. Business Segments

The Company has two reportable segments, Specialty Alloys Operations ("SAO") and Performance Engineered Products ("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 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 Additive 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 results exclude general corporate costs, which are comprised of executive and director compensation and other corporate facilities and administrative expenses not allocated to the segments. Also excluded are items that management considers not representative of ongoing operations, such as restructuring charges and other specifically-identified income or expense items.

On a consolidated basis, no single customer accounted for 10 percent or more of net sales for the three and six months ended December 31, 2022 and December 31, 2021. On a consolidated basis, no single customer accounted for 10 percent or more of accounts receivable outstanding at December 31, 2022 and June 30, 2022.

(\$ in millions)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Net Sales:				
Specialty Alloys Operations	\$ 495.8	\$ 330.8	\$ 943.2	\$ 662.8
Performance Engineered Products	106.7	85.7	200.0	160.3
Intersegment	(23.4)	(20.5)	(41.2)	(39.5)
Consolidated net sales	<u>\$ 579.1</u>	<u>\$ 396.0</u>	<u>\$ 1,102.0</u>	<u>\$ 783.6</u>
(\$ in millions)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Operating Income (Loss):				
Specialty Alloys Operations	\$ 30.3	\$ (20.3)	\$ 50.2	\$ (26.2)
Performance Engineered Products	9.3	3.0	15.6	3.6
Corporate costs	(16.4)	(14.5)	(33.5)	(28.6)
Intersegment	(0.6)	0.3	(1.4)	0.6
Consolidated operating income (loss)	<u>\$ 22.6</u>	<u>\$ (31.5)</u>	<u>\$ 30.9</u>	<u>\$ (50.6)</u>

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(\$ in millions)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Depreciation and Amortization:				
Specialty Alloys Operations	\$ 27.3	\$ 27.4	\$ 54.4	\$ 54.6
Performance Engineered Products	3.8	4.0	7.7	7.9
Corporate	1.4	1.4	2.7	2.8
Consolidated depreciation and amortization	<u>\$ 32.5</u>	<u>\$ 32.8</u>	<u>\$ 64.8</u>	<u>\$ 65.3</u>

(\$ in millions)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Capital Expenditures:				
Specialty Alloys Operations	\$ 16.0	\$ 16.6	\$ 27.4	\$ 28.7
Performance Engineered Products	1.2	2.0	3.1	3.2
Corporate	0.3	0.5	0.5	1.5
Consolidated capital expenditures	<u>\$ 17.5</u>	<u>\$ 19.1</u>	<u>\$ 31.0</u>	<u>\$ 33.4</u>

(\$ in millions)	December 31, 2022	June 30, 2022
Total Assets:		
Specialty Alloys Operations	\$ 2,482.1	\$ 2,262.4
Performance Engineered Products	444.9	418.9
Corporate	136.0	248.9
Intersegment	(6.5)	2.1
Consolidated total assets	<u>\$ 3,056.5</u>	<u>\$ 2,932.3</u>

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16. Reclassifications from Accumulated Other Comprehensive Loss

The changes in AOCI by component, net of tax, for the three months ended December 31, 2022 and 2021 were as follows:

Three Months Ended December 31, 2022 (\$ in millions) (a)	Cash flow hedging items	Pension and other postretirement benefit plan items	Foreign currency items	Total
Balances at September 30, 2022	\$ 0.2	\$ (131.9)	\$ (49.4)	\$ (181.1)
Other comprehensive income before reclassifications	7.4	—	6.9	14.3
Amounts reclassified from AOCI (b)	(0.9)	1.1	—	0.2
Net other comprehensive income	6.5	1.1	6.9	14.5
Balances at December 31, 2022	\$ 6.7	\$ (130.8)	\$ (42.5)	\$ (166.6)

Three Months Ended December 31, 2021 (\$ in millions) (a)	Cash flow hedging items	Pension and other postretirement benefit plan items	Foreign currency items	Total
Balances at September 30, 2021	\$ 8.0	\$ (158.0)	\$ (42.2)	\$ (192.2)
Other comprehensive income (loss) before reclassifications	1.0	(0.3)	(0.7)	—
Amounts reclassified from AOCI (b)	0.7	1.1	—	1.8
Net other comprehensive income (loss)	1.7	0.8	(0.7)	1.8
Balances at December 31, 2021	\$ 9.7	\$ (157.2)	\$ (42.9)	\$ (190.4)

(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 six months ended December 31, 2022 and 2021 were as follows:

Six Months Ended December 31, 2022 (\$ in millions) (a)	Cash flow hedging items	Pension and other postretirement benefit plan items	Foreign currency items	Total
Balances at June 30, 2022	\$ 5.5	\$ (132.9)	\$ (46.1)	\$ (173.5)
Other comprehensive income before reclassifications	7.2	—	3.6	10.8
Amounts reclassified from AOCI (b)	(6.0)	2.1	—	(3.9)
Net other comprehensive income	1.2	2.1	3.6	6.9
Balances at December 31, 2022	\$ 6.7	\$ (130.8)	\$ (42.5)	\$ (166.6)

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Six Months Ended December 31, 2021 (\$ in millions) (a)	Cash flow hedging items	Pension and other postretirement benefit plan items	Foreign currency items	Total
Balances at June 30, 2021	\$ 6.9	\$ (159.1)	\$ (40.1)	\$ (192.3)
Other comprehensive income (loss) before reclassifications	0.7	(0.3)	(2.8)	(2.4)
Amounts reclassified from AOCI (b)	2.1	2.2	—	4.3
Net other comprehensive income (loss)	2.8	1.9	(2.8)	1.9
Balances at December 31, 2021	\$ 9.7	\$ (157.2)	\$ (42.9)	\$ (190.4)

(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 six months ended December 31, 2022 and 2021:

Details about AOCI Components (\$ in millions) (a)	Location of gain (loss)	Amount Reclassified from AOCI Three Months Ended December 31,		Amount Reclassified from AOCI Six Months Ended December 31,	
		2022	2021	2022	2021
Cash flow hedging items:					
Commodity contracts	Cost of sales	\$ 1.2	\$ (1.0)	\$ 7.9	\$ (2.9)
Forward interest rate swaps	Interest expense, net	—	0.1	—	0.2
Total before tax		1.2	(0.9)	7.9	(2.7)
Tax (expense) benefit		(0.3)	0.2	(1.9)	0.6
Net of tax		\$ 0.9	\$ (0.7)	\$ 6.0	\$ (2.1)

Details about AOCI Components (\$ in millions) (a)	Location of (loss) gain	Amount Reclassified from AOCI Three Months Ended December 31,		Amount Reclassified from AOCI Six Months Ended December 31,	
		2022	2021	2022	2021
Amortization of pension and other postretirement benefit plan items:					
Net actuarial loss	(b)	\$ (2.0)	\$ (1.9)	\$ (4.0)	\$ (3.8)
Prior service benefit	(b)	0.5	0.4	1.1	0.8
Total before tax		(1.5)	(1.5)	(2.9)	(3.0)
Tax benefit		0.4	0.4	0.8	0.8
Net of tax		\$ (1.1)	\$ (1.1)	\$ (2.1)	\$ (2.2)

(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 7. 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 a producer and distributor of premium specialty alloys, including titanium alloys, powder metals, stainless steels, alloy steels and tool steels. We are a recognized leader in high-performance specialty alloy-based materials and process solutions for critical applications in the aerospace, defense, medical, transportation, energy, industrial and consumer markets. We have evolved to become a pioneer in premium specialty alloys, including titanium, nickel, and cobalt, as well as alloys specifically engineered for additive manufacturing ("AM") processes and soft magnetism applications. We have expanded our AM capabilities to provide a complete "end-to-end" solution to accelerate materials innovation and streamline parts production. 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 sales are distributed directly from our production plants and distribution network 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 sought out and considered opportunities related to strategic acquisitions and joint collaborations as well as possible business unit dispositions aimed at broadening our offering 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 2022 Form 10-K. Our discussions here focus on our results during or as of the three and six-month periods ended December 31, 2022 and the comparable periods of fiscal year 2022, and to the extent applicable, on material changes from information discussed in the 2022 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 2022 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 40 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), we 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 accumulated other comprehensive 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 Benefit

Net pension benefit, 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 remeasurement event occurs. We currently expect the total net pension expense for fiscal year 2023 will be \$19.6 million as compared with total net pension income of \$7.3 million in fiscal year 2022.

The following is the net pension expense (income) for the three and six months ended December 31, 2022 and December 31, 2021:

(\$ in millions)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Pension plans	\$ 5.2	\$ (1.0)	\$ 10.4	\$ (2.0)
Other postretirement plans	(0.2)	(0.8)	(0.5)	(1.6)
Net pension expense (income)	\$ 5.0	\$ (1.8)	\$ 9.9	\$ (3.6)

Net pension expense (income) 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 expense (income), net. The following is a summary of the classification of net pension expense (income) for the three and six months ended December 31, 2022 and 2021:

(\$ in millions)	Three Months Ended December 31,		Six Months Ended December 31,	
	2022	2021	2022	2021
Service cost included in Cost of sales	\$ 2.2	\$ 2.4	\$ 4.3	\$ 4.8
Service cost included in Selling, general and administrative expenses	0.3	0.3	0.7	0.7
Pension earnings, interest and deferrals included in Other expense (income), net	2.5	(4.5)	4.9	(9.1)
Net pension expense (income)	\$ 5.0	\$ (1.8)	\$ 9.9	\$ (3.6)

As of December 31, 2022 and June 30, 2022, service cost amounts related to the net pension expense (income) capitalized in gross inventory were \$2.3 million and \$1.7 million, respectively.

Operating Performance Overview

The quarter ended December 31, 2022, was a meaningful step on our path back to pre-pandemic levels and further long-term growth. Our return to profitability was driven by ongoing strong demand in each of our end-use markets, as evidenced by the continued growth of our backlog, and increased throughput across our manufacturing facilities. The Specialty Alloys Operations ("SAO") segment demonstrated continued improvement with operating income of \$30.3 million for the second quarter of fiscal year 2023. The results for SAO were driven by the ongoing aerospace ramp and our focus on increasing our productivity and throughput. The Performance Engineered Products ("PEP") segment had another strong quarter, with operating income of \$9.3 million, led by our Dynamet Titanium and Additive businesses. Looking ahead, we remain confident in our growth trajectory. We continue to see strong demand across each of our end-use markets and are focused on driving operational improvements. As a result, we expect to realize accelerating sales momentum and improved margins.

Results of Operations — Three Months Ended December 31, 2022 vs. Three Months Ended December 31, 2021

For the three months ended December 31, 2022, we reported net income of \$6.2 million, or \$0.13 per diluted share. This compares with net loss for the same period a year earlier of \$29.4 million, or \$0.61 loss per diluted share. There were no reported special items for the quarter ended December 31, 2022. COVID-19 related costs negatively impacted operating results by \$1.7 million in the three months ended December 31, 2021. Excluding these costs, adjusted loss per diluted share was \$0.58 for the quarter ended December 31, 2021. The results for the three months ended December 31, 2022 reflect improving demand patterns, higher prices and improving product mix partially offset by inflationary cost increases compared to the prior year quarter.

Net Sales

Net sales for the three months ended December 31, 2022 were \$579.1 million, which was a 46 percent increase over the same period a year ago. Excluding surcharge revenue, sales increased 34 percent on a 17 percent increase in shipment volume from the same period a year ago. The results reflect higher demand in all end-use markets except Distribution during the three months ended December 31, 2022 compared to the three months ended December 31, 2021. Net sales in the Aerospace and Defense end-use market increased 67 percent compared to the same period a year ago.

Geographically, sales in the United States increased 39 percent from the same period a year ago to \$353.7 million. The increase is driven by higher demand in all end-use markets except Distribution. Sales outside the United States increased 59 percent from the same period a year ago to \$225.4 million for the three months ended December 31, 2022. The increase is driven by higher demand in all regions and in all end-use markets except Distribution, with Aerospace and Defense increasing 102 percent compared to the three months ended December 31, 2021. A portion of our sales outside the United States are denominated in foreign currencies. The fluctuations in foreign currency exchange rates resulted in a \$2.1 million decrease in sales during the three months ended December 31, 2022 compared to the three months ended December 31, 2021. Net sales outside the United States represented 39 percent and 36 percent of total net sales for the three months ended December 31, 2022 and 2021, 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 December 31,		\$ Increase (Decrease)	% Increase (Decrease)
	2022	2021		
Aerospace and Defense	\$ 280.1	\$ 167.6	\$ 112.5	67 %
Medical	73.7	46.7	27.0	58 %
Transportation	41.4	38.2	3.2	8 %
Energy	34.8	23.1	11.7	51 %
Industrial and Consumer	119.7	90.5	29.2	32 %
Distribution	29.4	29.9	(0.5)	(2)%
Total net sales	\$ 579.1	\$ 396.0	\$ 183.1	46 %

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 December 31,		\$ Increase (Decrease)	% Increase (Decrease)
	2022	2021		
Aerospace and Defense	\$ 200.4	\$ 134.0	\$ 66.4	50 %
Medical	62.7	40.4	22.3	55 %
Transportation	27.3	28.5	(1.2)	(4)%
Energy	22.6	16.0	6.6	41 %
Industrial and Consumer	78.6	66.4	12.2	18 %
Distribution	29.2	29.6	(0.4)	(1)%
Total net sales excluding surcharge revenue	\$ 420.8	\$ 314.9	\$ 105.9	34 %

Sales to the Aerospace and Defense end-use market increased 67 percent from the second quarter a year ago to \$280.1 million. Excluding surcharge revenue, sales increased 50 percent from the second quarter a year ago on a 38 percent increase in shipment volume. The results for the three months ended December 31, 2022 reflect increases in all sub-markets driven by ramping activity levels across the aerospace supply chain due to higher aircraft build rates to replace aging fleets and meet increasing passenger travel.

Medical end-use market sales increased 58 percent from the second quarter a year ago to \$73.7 million. Excluding surcharge revenue, sales increased 55 percent on 38 percent higher shipment volume from the second quarter a year ago. The current second quarter results reflect stronger demand as a result of the medical supply chain replenishing inventory levels and meeting increased demand for elective medical procedures.

Transportation end-use market sales increased 8 percent from the second quarter a year ago to \$41.4 million. Excluding surcharge revenue, sales decreased 4 percent on 12 percent lower shipment volume from the second quarter a year ago. The results reflect reduced heavy-duty build rates globally from ongoing supply shortages partially offset by tempered recovery in light-duty vehicle production in North America.

Sales to the Energy end-use market of \$34.8 million in the current quarter reflect a 51 percent increase from the second quarter a year ago. Excluding surcharge revenue, sales increased 41 percent from a year ago. The results reflect increasing global rig counts benefiting the oil and gas sub-market and higher sales for power generation materials compared to the prior year period.

Industrial and Consumer end-use market sales of \$119.7 million increased \$29.2 million compared to the second quarter a year ago. Excluding surcharge revenue, sales increased 18 percent on 3 percent higher shipment volume. The results reflect higher demand for semiconductor materials and increased sales in the electronic sub-market.

Gross Profit

Our gross profit in the second quarter increased \$56.9 million to \$70.0 million, or 12.1 percent of net sales as compared with \$13.1 million, or 3.3 percent of net sales in the same quarter a year ago. Excluding the impact of surcharge revenue, our adjusted gross margin in the second quarter was 16.6 percent as compared to 4.2 percent in the same period a year ago. The increased gross profit for the three months ended December 31, 2022 reflects improving demand patterns with 46 percent increased sales, a stronger product mix, higher prices and improved operational efficiencies partially offset by inflationary cost increases.

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.

(\$ in millions)	Three Months Ended December 31,	
	2022	2021
Net sales	\$ 579.1	\$ 396.0
Less: surcharge revenue	158.3	81.1
Net sales excluding surcharge revenue	\$ 420.8	\$ 314.9
Gross profit	\$ 70.0	\$ 13.1
Gross margin	12.1 %	3.3 %
Gross margin excluding surcharge revenue	16.6 %	4.2 %

Selling, General and Administrative Expenses

Selling, general and administrative expenses of \$47.4 million were 8.2 percent of net sales (11.3 percent of net sales excluding surcharge) as compared with \$44.6 million and 11.3 percent of net sales (14.2 percent of net sales excluding surcharge) in the same quarter a year ago. The selling, general and administrative expenses for the three months ended December 31, 2022 reflect higher salary and benefit costs and increased travel costs compared to the same period a year ago.

Operating Income (Loss)

Our operating income in the recent second quarter was \$22.6 million, or 3.9 percent of net sales, as compared with operating loss of \$31.5 million or negative 8.0 percent of net sales in the same quarter a year ago. Excluding surcharge revenue, adjusted operating margin was 5.4 percent for the current quarter as compared with negative 9.5 percent a year ago excluding special items. The operating results for the three months ended December 31, 2022 reflect higher sales compared to the prior year quarter and improved operational efficiencies partially offset by inflationary cost increases. The three months ended December 31, 2021 reflected the ongoing impact from COVID-19 with lower demand and operational challenges resulting from the Reading press outage, labor shortages and supply chain interruptions.

The following presents our operating income (loss) 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.

(\$ in millions)	Three Months Ended December 31,	
	2022	2021
Net sales	\$ 579.1	\$ 396.0
Less: surcharge revenue	158.3	81.1
Net sales excluding surcharge revenue	\$ 420.8	\$ 314.9
Operating income (loss)	\$ 22.6	\$ (31.5)
Special item:		
COVID-19 costs	—	1.7
Adjusted operating income (loss)	\$ 22.6	\$ (29.8)
Operating margin	3.9 %	(8.0)%
Adjusted operating margin excluding surcharge revenue and special item	5.4 %	(9.5)%

Interest Expense, Net

Interest expense, net for the three months ended December 31, 2022 was \$13.0 million compared with \$10.1 million in the same period a year ago. Capitalized interest reduced interest expense by \$0.3 million for the three months ended December 31, 2022 and \$0.2 million for the three months ended December 31, 2021. The higher interest expense is largely due to higher interest rates on debt that was refinanced.

Other Expense (Income), Net

Other expense, net for the three months ended December 31, 2022 was \$1.9 million as compared with \$6.6 million of other income, net for the three months ended December 31, 2021. The current quarter reflects \$2.5 million of expense from pension earnings, interest and deferrals compared to \$4.5 million of pension income in the prior year driven by favorable returns on plan assets.

Income Taxes

Income tax expense was \$1.5 million, or 19.5 percent of pre-tax income for the three months ended December 31, 2022, as compared with income tax benefit of \$5.6 million, or 16.0 percent of pre-tax loss in the same quarter a year ago. Income tax expense for the three months ended December 31, 2022 includes the unfavorable impact of losses in certain foreign jurisdictions for which no tax benefit can be recognized. Also included is a discrete tax benefit of \$0.6 million for anticipated interest on IRS income tax refund claims. Income tax benefit for the three months ended December 31, 2021 reflected a change in the estimated full year results for the fiscal year. Also included was the unfavorable impact of losses in certain foreign jurisdictions for which no tax benefit can be recognized.

The Inflation Reduction Act of 2022 (the "IRA") was enacted on August 16, 2022. The IRA includes climate and energy provisions, extends the Affordable Care Act subsidies, increases Internal Revenue Enforcement funding and allows Medicare to negotiate prescription drug prices. The IRA creates a 15 percent corporate alternative minimum tax on profits of corporations whose average annual adjusted financial statement income for any consecutive three-tax-year period preceding the tax year exceeds \$1.0 billion and is effective for tax years beginning after December 31, 2022. The IRA also creates an excise tax of 1 percent on stock repurchases by publicly traded U.S. corporations, effective for repurchases after December 31, 2022. The provisions of the IRA are not expected to have a significant impact on our financial position, results of operations or cash flows.

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 December 31,		\$ Increase	% Increase
	2022	2021		
Specialty Alloys Operations	49,442	43,248	6,194	14 %
Performance Engineered Products *	2,978	2,776	202	7 %
Intersegment	(1,920)	(2,942)	1,022	35 %
Total pounds sold	50,500	43,082	7,418	17 %

* Pounds sold data for PEP segment includes Dynamet and Additive businesses only.

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

Net sales (\$ in millions)	Three Months Ended December 31,		\$ Increase (Decrease)	% Increase (Decrease)
	2022	2021		
Specialty Alloys Operations	\$ 495.8	\$ 330.8	\$ 165.0	50 %
Performance Engineered Products	106.7	85.7	21.0	25 %
Intersegment	(23.4)	(20.5)	(2.9)	(14)%
Total net sales	\$ 579.1	\$ 396.0	\$ 183.1	46 %

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

Net sales excluding surcharge revenue (\$ in millions)	Three Months Ended December 31,		\$ Increase (Decrease)	% Increase (Decrease)
	2022	2021		
Specialty Alloys Operations	\$ 346.2	\$ 251.6	\$ 94.6	38 %
Performance Engineered Products	98.0	83.8	14.2	17 %
Intersegment	(23.4)	(20.5)	(2.9)	(14)%
Total net sales excluding surcharge revenue	\$ 420.8	\$ 314.9	\$ 105.9	34 %

Specialty Alloys Operations Segment

Net sales for the quarter ended December 31, 2022 for the SAO segment increased 50 percent to \$495.8 million, as compared with \$330.8 million in the same quarter a year ago. Excluding surcharge revenue, net sales for the current quarter increased 38 percent on 14 percent higher shipment volume from a year ago. The higher sales in the SAO segment reflect double-digit percentage growth in all end-use markets except Transportation driven by improving demand, stronger product mix and price increases compared to the prior year same quarter.

Operating income for the SAO segment was \$30.3 million or 6.1 percent of net sales (8.8 percent of net sales excluding surcharge revenue) in the recent second quarter, as compared with operating loss of \$20.3 million or negative 6.1 percent of net sales (negative 8.1 percent of net sales excluding surcharge revenue) in the same quarter a year ago. The operating income reflects higher volume in all end-use markets except Transportation, stronger product mix and improved operational efficiencies partially offset by inflationary cost increases in the quarter ended December 31, 2022. The results for the quarter ended December 31, 2021 continued to be impacted by COVID-19 including the Reading press outage, labor shortages and supply chain disruptions.

Performance Engineered Products Segment

Net sales for the quarter ended December 31, 2022 for the PEP segment increased 25 percent to \$106.7 million, as compared with \$85.7 million in the same quarter a year ago. Excluding surcharge revenue, net sales for the current quarter increased 17 percent on 7 percent higher shipment volume from a year ago. The results reflect improving demand primarily in Aerospace and Defense and Medical end-use markets. In particular, the Medical end-use market increased 68 percent driven by steady increases in elective surgical procedures compared to the same period last year.

Operating income for the PEP segment was \$9.3 million or 8.7 percent of net sales (9.5 percent of net sales excluding surcharge revenue) in the current second quarter, compared with operating income of \$3.0 million or 3.5 percent of net sales in the same quarter a year ago. The improved results for the quarter ended December 31, 2022 reflect stronger demand conditions, improved product mix and operational gains partially offset by inflationary cost increases compared to the quarter ended December 31, 2021.

Results of Operations — Six Months Ended December 31, 2022 vs. Six Months Ended December 31, 2021

Net Sales

Net sales for the six months ended December 31, 2022 were \$1,102.0 million, which was a 41 percent increase over the same period a year ago. Excluding surcharge revenue, sales increased 27 percent on 10 percent higher shipment volume from the same period a year ago. The results reflect the impact of price increases and stronger product demand for materials used in all end-use markets except Transportation compared to the six months ended December 31, 2021.

Geographically, sales in the United States increased 34 percent from the same period a year ago to \$673.3 million. The increase is driven by higher demand in all end-use markets. Sales outside the United States increased 52 percent from the same period a year ago to \$428.7 million for the six months ended December 31, 2022. The increase is primarily due to stronger product demand in all regions and in all end-use markets except Transportation. 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 \$4.6 million decrease in sales during the six months ended December 31, 2022 compared to the six months ended December 31, 2021. Net sales outside the United States represented 39 percent and 36 percent of total net sales for the six months ended December 31, 2022 and 2021, 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)	Six Months Ended December 31,		\$ Increase (Decrease)	% Increase (Decrease)
	2022	2021		
Aerospace and Defense	\$ 541.8	\$ 334.7	\$ 207.1	62 %
Medical	132.9	89.8	43.1	48 %
Transportation	78.3	79.8	(1.5)	(2)%
Energy	62.7	45.3	17.4	38 %
Industrial and Consumer	224.6	177.0	47.6	27 %
Distribution	61.7	57.0	4.7	8 %
Total net sales	\$ 1,102.0	\$ 783.6	\$ 318.4	41 %

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

(\$ in millions)	Six Months Ended December 31,		\$ Increase (Decrease)	% Increase (Decrease)
	2022	2021		
Aerospace and Defense	\$ 383.8	\$ 268.8	\$ 115.0	43 %
Medical	112.5	77.4	35.1	45 %
Transportation	51.0	60.0	(9.0)	(15)%
Energy	40.9	32.2	8.7	27 %
Industrial and Consumer	147.0	132.7	14.3	11 %
Distribution	61.3	56.7	4.6	8 %
Total net sales excluding surcharge revenue	\$ 796.5	\$ 627.8	\$ 168.7	27 %

Sales to the Aerospace and Defense end-use market increased 62 percent from the same period a year ago to \$541.8 million. Excluding surcharge revenue, sales increased 43 percent from the same period a year ago on 31 percent higher shipment volume. The current year results reflect increases across all end-use sub-markets driven by ramping activity levels across the aerospace supply chain due to higher aircraft build rates to replace aging fleets and meet increasing passenger travel. The prior year results reflected reflect near-term operational challenges associated with the Reading press outage and labor shortages.

Medical end-use market sales increased 48 percent from the same period a year ago to \$132.9 million. Excluding surcharge revenue, sales increased 45 percent on 30 percent higher shipment volume from the same period a year ago. The current year results reflect the medical supply chain replenishing inventory levels and higher patient demand for elective medical procedures.

Transportation end-use market sales decreased 2 percent from the same period a year ago to \$78.3 million. Excluding surcharge revenue, sales decreased 15 percent on 29 percent lower shipment volume from the same period a year ago. The results reflect reduced heavy-duty build rates from ongoing supply shortages slightly offset by improved production in light-duty vehicles compared to the prior year period.

Sales to the Energy end-use market of \$62.7 million reflect a 38 percent increase from the same period a year ago. Excluding surcharge revenue, sales increased 27 percent from a year ago. The results reflect increasing global rig counts and higher oil prices benefiting the oil and gas sub-market along with slightly higher demand for power generation materials compared to the prior year period.

Industrial and Consumer end-use market sales increased 27 percent from the same period a year ago to \$224.6 million. Excluding surcharge revenue, sales increased 11 percent on flat shipment volume. The results reflect higher demand for semiconductor materials and increased sales in the electronic sub-market.

Gross Profit

Our gross profit in the six months ended December 31, 2022 increased \$86.5 million to \$124.8 million, or 11.3 percent of net sales as compared with \$38.3 million, or 4.9 percent of net sales in the same period a year ago. Excluding the impact of surcharge revenue our gross margin in the six months ended December 31, 2022 was 15.7 percent as compared to 6.1 percent in the same period a year ago. The increased gross profit for the six months ended December 31, 2022 reflects improving demand patterns with 41 percent increased sales and a stronger product mix, higher prices and improved operational efficiencies partially offset by inflationary cost increases compared to the same period a year ago.

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 six-month periods. See the section "Non-GAAP Financial Measures" below for further discussion of these financial measures.

(\$ in millions)	Six Months Ended December 31,	
	2022	2021
Net sales	\$ 1,102.0	\$ 783.6
Less: surcharge revenue	305.5	155.8
Net sales excluding surcharge revenue	\$ 796.5	\$ 627.8
Gross profit	\$ 124.8	\$ 38.3
Gross margin	11.3 %	4.9 %
Gross margin excluding surcharge revenue	15.7 %	6.1 %

Selling, General and Administrative Expenses

Selling, general and administrative expenses of \$93.9 million were 8.5 percent of net sales (11.8 percent of net sales excluding surcharge) for the six months ended December 31, 2022 as compared with \$88.9 million or 11.3 percent of net sales (14.2 percent of net sales excluding surcharge) in the same period a year ago. The selling, general and administrative expenses for the six months ended December 31, 2021 reflect higher salary and benefit costs and increased travel costs compared to the same period a year ago.

Operating Income (Loss)

Our operating income in the six months ended December 31, 2022 was \$30.9 million, or 2.8 percent of net sales, as compared with operating loss of \$50.6 million, or negative 6.5 percent of net sales in the same period a year ago. Excluding surcharge revenue and special items, operating margin was 3.9 percent for the six months ended December 31, 2022 and negative 7.5 percent for the same period a year ago. The operating results for the six months ended December 31, 2022 reflect higher sales, stronger product mix and improved operational efficiencies partially offset by inflationary cost increases compared to the prior year. Negatively impacting results for the six months ended December 31, 2021, were near-term operational challenges resulting from the Reading press outage, labor shortages and supply chain disruptions as well as the ongoing inflationary pressures on operating costs related to critical production supplies, freight and labor.

The following presents our operating income (loss) 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.

(\$ in millions)	Six Months Ended December 31,	
	2022	2021
Net sales	\$ 1,102.0	\$ 783.6
Less: surcharge revenue	305.5	155.8
Net sales excluding surcharge revenue	\$ 796.5	\$ 627.8
Operating income (loss)	\$ 30.9	\$ (50.6)
Special item:		
COVID-19 costs	—	3.3
Adjusted operating income (loss)	\$ 30.9	\$ (47.3)
Operating margin	2.8 %	(6.5)%
Operating margin excluding surcharge revenue and special item	3.9 %	(7.5)%

Interest Expense, Net

Interest expense, net for the six months ended December 31, 2022 was \$25.6 million compared with \$20.3 million in the same period a year ago. Capitalized interest reduced interest expense by \$0.5 million for the six months ended December 31, 2022 and \$0.3 million for the six months ended December 31, 2021. The higher interest expense is largely due to higher interest rates on debt that was refinanced.

Other Expense (Income), Net

Other expense, net was \$5.4 million for the recent six months ended December 31, 2022 compared to other income, net of \$10.7 million in the same period a year ago. The six months ended December 31, 2022 includes \$4.9 million of expense from pension earnings, interest and deferrals compared to \$9.1 million of pension income in the prior year driven by favorable returns on plan assets.

Income Taxes

Income tax expense for the six months ended December 31, 2022 was \$0.5 million, or negative 500.0 percent of pre-tax loss as compared with income tax benefit \$16.1 million, or 26.7 percent of pre-tax loss for the six months ended December 31, 2021. The effective tax rate for the six months ended December 31, 2022 of negative 500.0 percent is due primarily to the near breakeven year-to-date pre-tax loss of \$0.1 million for the six months ended December 31, 2022 in relation to permanent tax adjustments and discrete items during the current period.

Income tax expense for the six months ended December 31, 2022 includes the unfavorable impact of losses in certain foreign jurisdictions for which no tax benefit can be recognized. Also included is a discrete tax benefit of \$0.6 million for anticipated interest on IRS income tax refund claims as well as a discrete tax charge of \$0.6 million for the impact of a state tax legislative change. Income tax benefit for the six months ended December 31, 2021 included the unfavorable impacts of losses in certain foreign jurisdictions for which no tax benefit can be recognized.

The IRA was enacted on August 16, 2022. The IRA includes climate and energy provisions, extends the Affordable Care Act subsidies, increases Internal Revenue Enforcement funding and allows Medicare to negotiate prescription drug prices. The IRA creates a 15 percent corporate alternative minimum tax on profits of corporations whose average annual adjusted financial statement income for any consecutive three-tax-year period preceding the tax year exceeds \$1.0 billion and is effective for tax years beginning after December 31, 2022. The IRA also creates an excise tax of 1 percent on stock repurchases by publicly traded U.S. corporations, effective for repurchases after December 31, 2022. The provisions of the IRA are not expected to have a significant impact on our financial position, results of operations or cash flows.

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)	Six Months Ended December 31,		Increase	% Increase
	2022	2021		
Specialty Alloys Operations	94,006	86,256	7,750	9 %
Performance Engineered Products *	5,304	5,148	156	3 %
Intersegment	(3,920)	(4,792)	872	18 %
Total pounds sold	95,390	86,612	8,778	10 %

* Pounds sold data for PEP segment includes Dynamet and Additive businesses only.

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

Net sales (\$ in millions)	Six Months Ended December 31,		\$ Increase (Decrease)	% Increase (Decrease)
	2022	2021		
Specialty Alloys Operations	\$ 943.2	\$ 662.8	\$ 280.4	42 %
Performance Engineered Products	200.0	160.3	39.7	25 %
Intersegment	(41.2)	(39.5)	(1.7)	(4)%
Total net sales	\$ 1,102.0	\$ 783.6	\$ 318.4	41 %

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

Net sales excluding surcharge revenue (\$ in millions)	Six Months Ended December 31,		\$ Increase (Decrease)	% Increase (Decrease)
	2022	2021		
Specialty Alloys Operations	\$ 651.9	\$ 509.8	\$ 142.1	28 %
Performance Engineered Products	185.6	157.4	28.2	18 %
Intersegment	(41.0)	(39.4)	(1.6)	(4)%
Total net sales excluding surcharge revenue	\$ 796.5	\$ 627.8	\$ 168.7	27 %

Specialty Alloys Operations Segment

Net sales for the six months ended December 31, 2022 for the SAO segment increased 42 percent to \$943.2 million, as compared with \$662.8 million in the same period a year ago. Excluding surcharge revenue, net sales increased 28 percent on 9 percent higher shipment volume from a year ago. The SAO segment results reflect higher sales in all end-use markets except Transportation compared to the prior year period. In particular, Aerospace and Defense sales increased 43 percent in the six months ended December 31, 2022.

Operating income for the SAO segment was \$50.2 million or 5.3 percent of net sales (7.7 percent of net sales excluding surcharge revenue) in the recent six months ended December 31, 2022 as compared with operating loss of \$26.2 million or negative 4.0 percent of net sales (negative 5.1 percent of net sales excluding surcharge revenue) in the same period a year ago. The operating income for the six months ended December 31, 2022 reflects higher volume in key end-use markets and operational efficiency gains partially offset by inflationary cost increases. The six months ended December 31, 2021 reflected near-term operational challenges resulting from the Reading press outage, labor shortages and supply chain disruptions.

Performance Engineered Products Segment

Net sales for the six months ended December 31, 2022 for the PEP segment increased 25 percent to \$200.0 million, as compared with \$160.3 million in the same period a year ago. Excluding surcharge revenue, net sales increased 18 percent from a year ago. The current year results reflect increased sales in all end-use markets except Consumer and Industrial. In particular, the Medical end-use market increased 57 percent with steady increases in elective surgical procedures compared to the same period last year.

Operating income for the PEP segment was \$15.6 million or 7.8 percent of net sales (8.4 percent of net sales excluding surcharge revenue) in the recent six months ended December 31, 2022, compared with operating income of \$3.6 million or 2.2 percent of net sales in the same period a year ago. The improved results for the six months ended December 31, 2022 reflect stronger demand conditions compared to the prior year period.

Liquidity and Financial Resources

During the six months ended December 31, 2022, we used cash for operating activities of \$164.5 million compared to cash used for operating activities of \$136.3 million in the same period a year ago. Our free cash flow, which we define under "Non-GAAP Financial Measures" below, was negative \$215.2 million as compared to negative \$187.6 million for the same period a year ago. The decrease in cash provided from operating activities and free cash flow for the six months ended December 31, 2022 compared to the same period a year ago resulted from higher inventory to meet growing demand partially offset by improved earnings. Cash used to build inventory was \$226.7 million in the current period ended December 31, 2022 compared to \$109.8 million in the same period a year ago. The increase in inventory during the current fiscal year is in response to growing demand. During the six months ended December 31, 2022, cash used for accounts receivable was \$58.5 million compared to \$0.0 million in the same period a year ago.

Capital expenditures for property, plant, equipment and software were \$31.0 million for the six months ended December 31, 2022 as compared to \$33.4 million for the same period a year ago. In fiscal year 2023, we expect capital expenditures to be approximately \$90 million and we continue to monitor the impact of labor shortages and supply chain disruptions on the timing of our anticipated projects for the balance of the fiscal year.

Dividends during the six months ended December 31, 2022 and 2021 were \$19.7 million and \$19.7 million, respectively, and were paid at the same quarterly rate of \$0.20 per share of common stock in both periods.

We have demonstrated the ability to generate cash to meet our needs through cash flows from operations, management of working capital and the ability to access capital markets to supplement internally generated funds. We target minimum liquidity of \$150 million, consisting of cash and cash equivalents added to available borrowing capacity under our Credit Facility.

On March 26, 2021, we entered into our \$300.0 million secured revolving Credit Facility. The Credit Facility amended and restated our previous revolving credit facility, dated March 31, 2017, which had been set to expire in March 2022. The Credit Facility extends the maturity to March 31, 2024. This was subject to a springing maturity of November 30, 2022. If, by November 30, 2022, our \$300.0 million 4.45% Senior Notes due in March 2023 were not redeemed, repurchased or refinanced with indebtedness having a maturity date of October 1, 2024 or later, all indebtedness under the Credit Facility would have been due. The springing maturity clause has been satisfied with the issuance of the 2030 Notes and subsequent payment in full of the 4.45% Senior Notes, as discussed in Note 8 Debt. The Credit Facility contains a revolving credit commitment amount of \$300.0 million, subject to our right, from time to time, to request an increase of the commitment to \$500.0 million in the aggregate; and provides for the issuance of letters of credit subject to a \$40.0 million sub-limit. We have the right to voluntarily prepay and re-borrow loans, to terminate or reduce the commitments under the Credit Facility, and, subject to certain lender approvals, to join subsidiaries as subsidiary borrowers.

On February 14, 2022, we entered into the Amendment to the Credit Facility. The Amendment revised the interest coverage ratio covenant under the Credit Facility so that the first test date was June 30, 2022, and required a minimum interest coverage ratio of 2.00 to 1.00 at June 30, 2022 (calculated for the two fiscal quarters then ended), 3.00 to 1.00 at September 30, 2022 (calculated for the three fiscal quarters then ended) and 3.50 to 1.00 at December 31, 2022 and thereafter (calculated for the four fiscal quarters then ended). The Amendment revised the restricted period under the Credit Facility, during which we were prohibited from incurring any secured debt other than purchase money financing for new equipment and were subject to additional restrictions on its ability to make dividends or distributions or to make certain investments. This expired on September 30, 2022.

As of December 31, 2022, we had \$1.8 million of issued letters of credit and \$81.2 million of short-term borrowings under the Credit Facility. The balance of the Credit Facility, \$217.0 million, remains available to us. As of December 31, 2022, the borrowing rate for the Credit Facility was 6.38%.

We believe that our total liquidity of \$237.0 million as of December 31, 2022, which includes total cash and cash equivalents of \$20.0 million and available borrowing capacity of \$217.0 million under our credit facility, will be sufficient to fund our cash needs over the foreseeable future.

During the six months ended December 31, 2022, we made no pension contributions to our qualified defined benefit pension plans. We currently do not expect to contribute to our qualified defined benefit pension plans during the remainder of fiscal year 2023.

As of December 31, 2022, we had cash and cash equivalents of approximately \$19.7 million held at various foreign subsidiaries. Our global deployment considers, among other things, geographic location of our subsidiaries' cash balances, the locations of our anticipated liquidity needs, and the cost to access international cash balances, as necessary. During the six months ended December 31, 2022, we repatriated cash of approximately \$3.8 million from foreign jurisdictions that resulted in minimal tax cost. 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 Facility, which, among other things, require the maintenance of a minimum interest coverage ratio. The interest coverage ratio is defined in the Credit Facility 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 interest coverage covenant was waived until the quarter ended June 30, 2022 at which time the minimum interest coverage ratio was required to be 2.00 to 1.00; for the quarter ended September 30, 2022 it was 3.00 to 1.00 and then it became 3.50 to 1.00 thereafter. The Credit Facility also requires us to maintain a debt to capital ratio of less than 55 percent. The debt to capital ratio is defined in the Credit Facility as the ratio of consolidated indebtedness, as defined therein, to consolidated capitalization, as defined therein. In addition, we are subject to an asset coverage ratio minimum of 1.10 to 1.00. The asset coverage ratio is defined in the Credit Facility as eligible receivables and inventory, as defined therein, to outstanding loans and obligations, as defined therein. As of December 31, 2022, we were in compliance with all of the covenants of the Credit Facility.

The following table shows our actual ratio performance with respect to the financial covenants as of December 31, 2022:

Covenant	Covenant Requirement	Actual Ratio
Consolidated debt to capital	55% (maximum)	37%
Consolidated interest coverage ratio	3.50 to 1.00 (minimum)	4.03 to 1.00
Asset coverage ratio	1.10 to 1.00 (minimum)	5.81 to 1.00

To the extent that we do not comply with the current or modified covenants under the Credit Facility, 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 and Special Items

This report includes discussions of net sales as adjusted to exclude the impact of raw material surcharge and special items 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 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.

Adjusted 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 represent financial measures that have 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 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 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 (loss) for a reconciliation of operating income (loss) and operating margin excluding surcharge revenue and special items to operating income (loss) 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 (Loss) Per Share

The following provides a reconciliation of adjusted earnings (loss) 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 December 31, 2022, as reported	\$ 7.7	\$ (1.5)	\$ 6.2	\$ 0.13
Special item:				
None reported	—	—	—	—
Three Months Ended December 31, 2022, as adjusted	<u>\$ 7.7</u>	<u>\$ (1.5)</u>	<u>\$ 6.2</u>	<u>\$ 0.13</u>

* Impact per diluted share calculated using weighted average common shares outstanding of 49.0 million for the three months ended December 31, 2022.

(\$ in millions, except per share amounts)	Loss Before Income Taxes	Income Tax Benefit	Net Loss	Loss Per Diluted Share*
Three Months Ended December 31, 2021, as reported	\$ (35.0)	\$ 5.6	\$ (29.4)	\$ (0.61)
Special item:				
COVID-19 costs	1.7	(0.3)	1.4	0.03
Three Months Ended December 31, 2021, as adjusted	\$ (33.3)	\$ 5.3	\$ (28.0)	\$ (0.58)

* Impact per diluted share calculated using weighted average common shares outstanding of 48.6 million for the three months ended December 31, 2021.

(\$ in millions, except per share amounts)	Loss Before Income Taxes	Income Tax Expense	Net Loss	Loss Per Diluted Share*
Six Months Ended December 31, 2022, as reported	\$ (0.1)	\$ (0.5)	\$ (0.6)	\$ (0.02)
Special item:				
None reported	—	—	—	—
Six Months Ended December 31, 2022, as adjusted	\$ (0.1)	\$ (0.5)	\$ (0.6)	\$ (0.02)

* Impact per diluted share calculated using weighted average common shares outstanding of 48.7 million for the six months ended December 31, 2022.

(\$ in millions, except per share amounts)	Loss Before Income Taxes	Income Tax Benefit	Net Loss	Loss Per Diluted Share*
Six Months Ended December 31, 2021, as reported	\$ (60.2)	\$ 16.1	\$ (44.1)	\$ (0.91)
Special item:				
COVID-19 costs	3.3	(0.8)	2.5	0.05
Six Months Ended December 31, 2021, as adjusted	\$ (56.9)	\$ 15.3	\$ (41.6)	\$ (0.86)

* Impact per diluted share calculated using weighted average common shares outstanding of 48.5 million for the six months ended December 31, 2021.

Management believes that the presentation of earnings (loss) 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 loss per share is not a U.S. GAAP financial measure and should not be considered in isolation of, or as a substitute for, earnings (loss) 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:

(\$ in millions)	Six Months Ended December 31,	
	2022	2021
Net cash used for operating activities	\$ (164.5)	\$ (136.3)
Purchases of property, plant, equipment and software	(31.0)	(33.4)
Proceeds from disposals of property, plant and equipment and assets held for sale	—	1.8
Dividends paid	(19.7)	(19.7)
Free cash flow	<u>\$ (215.2)</u>	<u>\$ (187.6)</u>

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 six months ended December 31, 2022, we increased the liability for environmental remediation costs by \$0.5 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 December 31, 2022 and June 30, 2022 were \$18.8 million and \$18.3 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 2022 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.

Long-Lived Assets

Long-lived assets are reviewed for impairment and written down to fair value whenever events or changes in circumstances indicate that the carrying value may not be recoverable through estimated future undiscounted cash flows. The amount of the impairment loss is the excess of the carrying amount of the impaired assets over the fair value of the assets based upon estimated future discounted cash flows. We evaluate long-lived assets for impairment by individual business unit. Changes in estimated cash flows could have a significant impact on whether or not an asset is impaired and the amount of the impairment.

Goodwill

Goodwill is not amortized but instead is tested at least annually for impairment as of June 1, 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. If the carrying value of the reporting unit exceeds its fair value, any impairment loss is measured by the difference between the carrying value of the reporting unit and its fair value, not to exceed the carrying amount of goodwill. 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 include significant judgments and assumptions related to revenue growth rates, which include perpetual growth rates, gross margin and weighted average cost of capital. 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 December 31, 2022, we have three reporting units with goodwill recorded. Goodwill associated with the SAO reporting unit as of December 31, 2022 was \$195.5 million and represents approximately 81 percent of our total goodwill. The remaining goodwill is associated with the PEP segment, which includes two reporting units, Dynamet and Latrobe Distribution, with goodwill recorded as of December 31, 2022 of \$31.9 million and \$14.0 million, respectively.

Goodwill associated with the SAO reporting unit is tested at the SAO segment level. The fair value is estimated using a weighting of discounted cash flows and the use of market multiples valuation techniques. As of June 1, 2022, the fair value of the SAO reporting unit exceeded the carrying value by approximately 38.2 percent. 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, a weighted average cost capital of 9.5 percent and a terminal growth rate assumption of 2.5 percent were used. If the long-term growth rate for this reporting unit had been hypothetically reduced by 0.5 percent at June 1, 2022, the SAO reporting unit would have a fair value that exceeded the carrying value by approximately 34.5 percent.

Goodwill associated with the PEP segment is tested at the Dynamet and Latrobe Distribution reporting unit level. As of June 1, 2022, the fair value of the Dynamet reporting unit exceeded the carrying value by approximately 54.1 percent. For purposes of the discounted cash flow analysis for Dynamet's fair value, a weighted average cost capital of 13.0 percent and a terminal growth rate assumption of 2.5 percent were used. If the long-term growth rate for this reporting unit had been hypothetically reduced by 0.5 percent at June 1, 2022, the Dynamet reporting unit would have a fair value that exceeded the carrying value by approximately 52.0 percent. As of June 1, 2022, the fair value of the Latrobe Distribution reporting unit exceeded the carrying value by approximately 34.5 percent. For purposes of the discounted cash flow analysis for Latrobe Distribution's fair value, a weighted average cost capital of 11.0 percent and a terminal growth rate assumption of 2.5 percent were used. If the long-term growth rate for this reporting unit had been hypothetically reduced by 0.5 percent at June 1, 2022, the Latrobe Distribution reporting unit would have a fair value that exceeded the carrying value by approximately 32.1 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. We continuously monitor for events and circumstances that could negatively impact the key assumptions in determining fair value of the reporting units.

New Accounting Pronouncements

For information with respect to new accounting pronouncements and the impact of these pronouncements on our consolidated financial statements, see Note 2 to Notes to Consolidated Financial Statements included in Item 1.

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 fiscal year ended June 30, 2022, Form 10-Q for the fiscal quarter ended September 30, 2022, and the exhibits attached to such 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, medical, transportation, energy, industrial and consumer, 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; (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; (15) fluctuations in oil and gas prices and production; (16) uncertainty regarding the return to service of the Boeing 737 MAX aircraft and the related supply chain disruption; (17) potential impacts of the COVID-19 pandemic on our operations, financial results and financial position; (18) our efforts and efforts by governmental authorities to mitigate the COVID-19 pandemic, such as travel bans, shelter in place orders and business closures, and the related impact on resource allocations and manufacturing and supply chains; (19) our ability to execute our business continuity, operational, budget and fiscal plans in light of the COVID-19 pandemic; and (20) our ability to successfully carry out restructuring and business exit activities on the expected terms and timelines. 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. We caution you not to place undue reliance on forward-looking statements, which speak only as of the date of this Form 10-Q or as of the dates otherwise indicated in such forward-looking statements. 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 December 31, 2022, we had approximately \$15.4 million of net deferred gains 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 1 percent of these contracts 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.

When appropriate, we use interest rate swaps to achieve a level of floating rate debt relative to fixed rate debt. 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 benchmark allocation policy for the Company's largest pension plan assets is to have approximately 75 percent in return seeking assets and 25 percent in liability-hedging assets. Return seeking assets include global equities, diversified credit and real assets. Liability-hedging assets include bond funds and cash. When the funding level of the plan reaches 95 percent and improves to fully or over-funded status in increments of 5 percent, assets will be shifted from return seeking to liability-hedging assets in accordance with the glidepath policy outlined in the pension plan's Investment Policy Statement.

The status of our financial instruments as of December 31, 2022 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 December 31, 2022, (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 Senior 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 December 31, 2022. Based on that evaluation, the President and Chief Executive Officer and Senior Vice President and Chief Financial Officer, concluded that the Company's disclosure controls and procedures as of December 31, 2022 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 Senior 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 (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended December 31, 2022 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 2022 Annual Report on Form 10-K and the amended risk factor set forth below, adequately disclose the material risks that we face.

A portion of our workforce is covered by collective bargaining agreements and union attempts to organize our other employees may cause work interruptions or stoppages.

In July 2020, a union election was held involving approximately 65 employees at our Franklin, Pennsylvania location, and a majority of the employees voted for union representation. Negotiations with union representatives for an initial agreement began shortly following such time. During the quarter ended December 31, 2022, the Franklin, Pennsylvania employees elected to decertify the original vote for union representation and, as a result, the employees are no longer represented by a union. Approximately 408 production employees at our Latrobe business unit located in Latrobe, Pennsylvania are covered by a collective bargaining agreement which expires August 1, 2023. Approximately 175 production employees at our Dynamet business unit located in Washington, Pennsylvania are covered by a collective bargaining agreement which expires August 31, 2025. There can be no assurance that we will succeed in concluding collective bargaining agreements with the unions to replace those that expire which could result in work interruptions and stoppages. From time to time, the employees at our manufacturing facility in Reading, Pennsylvania, participate in election campaigns or union organizing attempts. There is no guarantee that future organization attempts will not result in union representation.

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

There were no reportable purchases during the quarter ended December 31, 2022, however employees surrendered 3,647 shares to the Company, at an average purchase price of \$40.98, during such quarter for the payment of the minimum tax liability withholding obligations upon the vesting of shares of restricted stock. We do not consider this a share buyback program.

Item 6. Exhibits

Exhibit No.	Description
<u>31(A)</u>	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)
<u>31(B)</u>	Certification of Senior 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)
<u>32</u>	Certification of President and Chief Executive Officer and Senior 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 December 31, 2022, formatted in Inline XBRL (Extensible Business Reporting Language) and filed electronically herewith: (i) the Consolidated Balance Sheets; (ii) the Consolidated Statements of Operations; (iii) the Consolidated Statements of Comprehensive Income (Loss); (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: January 26, 2023

/s/ Timothy Lain

Timothy Lain

Senior Vice President and Chief Financial Officer

(Principal Financial Officer)

**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: January 26, 2023

/s/ Tony R. Thene

Tony R. Thene

President and Chief Executive Officer

**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: January 26, 2023

/s/ Timothy Lain

Timothy Lain

Senior Vice President and Chief Financial Officer

**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 December 31, 2022, 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: January 26, 2023

/s/ Tony R. Thene

Tony R. Thene

President and Chief Executive Officer

/s/ Timothy Lain

Timothy Lain

Senior Vice President and Chief Financial Officer