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 September 30, 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 1-12981

AMETEK, Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

1100 Cassatt Road
Berwyn, Pennsylvania
(Address of principal executive offices)
14-1682544
(I.R.S. Employer Identification No.)

19312-1177
(Zip Code)

Registrant's telephone number, including area code: (610) 647-2121

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

If an emerging growth company, indicate by 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 ☒

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	**AME**	**New York Stock Exchange**

The number of shares of the registrant's common stock outstanding as of the latest practicable date was: Common Stock, $0.01 Par Value, outstanding at October 28, 2022 was 229,654,397 shares.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

AMETEK, Inc.
Consolidated Statement of Income
(In thousands, except per share amounts)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Net sales	**$ 1,551,786**	$ 1,440,681	**$ 4,524,863**	$ 4,042,769
Cost of sales	**1,004,596**	949,402	**2,941,604**	2,651,506
Selling, general and administrative	**162,670**	153,716	**480,657**	443,744
Total operating expenses	**1,167,266**	1,103,118	**3,422,261**	3,095,250
Operating income	**384,520**	337,563	**1,102,602**	947,519
Interest expense	**(20,245)**	(20,476)	**(60,165)**	(59,865)
Other income (expense), net	**3,227**	2,581	**7,752**	(3,775)
Income before income taxes	**367,502**	319,668	**1,050,189**	883,879
Provision for income taxes	**69,861**	62,208	**197,728**	175,507
Net income	**$ 297,641**	$ 257,460	**$ 852,461**	$ 708,372
Basic earnings per share	**$ 1.30**	$ 1.11	**$ 3.70**	$ 3.07
Diluted earnings per share	**$ 1.29**	$ 1.10	**$ 3.68**	$ 3.04
Weighted average common shares outstanding:				
Basic shares	**229,500**	231,171	**230,360**	230,811
Diluted shares	**230,714**	233,000	**231,675**	232,712
Dividends declared and paid per share	**$ 0.22**	$ 0.20	**$ 0.66**	$ 0.60

See accompanying notes.

AMETEK, Inc.
Condensed Consolidated Statement of Comprehensive Income
(In thousands)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	**2021**	**2022**	**2021**
Total comprehensive income	**$ 215,568**	$ 240,076	**$ 694,902**	$ 688,575

See accompanying notes.

AMETEK, Inc.
Consolidated Balance Sheet
(In thousands)

	September 30, 2022 (Unaudited)	December 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	**$ 309,944**	$ 346,772
Receivables, net	**876,460**	829,213
Inventories, net	**1,025,130**	769,175
Other current assets	**221,034**	183,605
Total current assets	**2,432,568**	2,128,765
Property, plant and equipment, net	**594,926**	617,138
Right of use assets, net	**161,217**	169,924
Goodwill	**5,190,196**	5,238,726
Other intangibles, net	**3,254,243**	3,368,629
Investments and other assets	**405,782**	375,005
Total assets	**$ 12,038,932**	$ 11,898,187
LIABILITIES AND STOCKHOLDERS’ EQUITY		
Current liabilities:		
Short-term borrowings and current portion of long-term debt, net	**$ 272,027**	$ 315,093
Accounts payable	**524,255**	470,252
Customer advanced payments	**332,244**	298,728
Income taxes payable	**49,056**	35,904
Accrued liabilities and other	**413,801**	443,337
Total current liabilities	**1,591,383**	1,563,314
Long-term debt, net	**2,085,364**	2,229,148
Deferred income taxes	**696,091**	719,675
Other long-term liabilities	**533,422**	514,166
Total liabilities	**4,906,260**	5,026,303
Stockholders’ equity:		
Common stock	**2,695**	2,689
Capital in excess of par value	**1,059,079**	1,012,526
Retained earnings	**8,600,938**	7,900,113
Accumulated other comprehensive loss	**(628,003)**	(470,444)
Treasury stock	**(1,902,037)**	(1,573,000)
Total stockholders’ equity	**7,132,672**	6,871,884
Total liabilities and stockholders’ equity	**$ 12,038,932**	$ 11,898,187

See accompanying notes.

AMETEK, Inc.
Consolidated Statement of Stockholders' Equity
(In thousands)
(Unaudited)

	Three months ended September 30, 2022	Three months ended September 30, 2021	Nine months ended September 30, 2022	Nine months ended September 30, 2021
Capital stock				
Common stock, $0.01 par value				
Balance at the beginning of the period	$ 2,695	$ 2,684	$ 2,689	$ 2,676
Shares issued	—	2	**6**	10
Balance at the end of the period	**2,695**	2,686	**2,695**	2,686
Capital in excess of par value				
Balance at the beginning of the period	1,040,951	964,791	1,012,526	921,752
Issuance of common stock under employee stock plans	**6,068**	10,098	**11,966**	29,544
Share-based compensation expense	**12,060**	11,428	**34,587**	35,021
Balance at the end of the period	**1,059,079**	986,317	**1,059,079**	986,317
Retained earnings				
Balance at the beginning of the period	8,353,735	7,453,401	7,900,113	7,094,656
Net income	**297,641**	257,460	**852,461**	708,372
Cash dividends paid	**(50,438)**	(46,178)	**(151,635)**	(138,345)
Other	—	(1)	**(1)**	(1)
Balance at the end of the period	**8,600,938**	7,664,682	**8,600,938**	7,664,682
Accumulated other comprehensive (loss) income				
Foreign currency translation:				
Balance at the beginning of the period	(352,851)	(256,421)	(275,365)	(250,748)
Translation adjustments	**(110,524)**	(31,207)	**(225,100)**	(45,160)
Change in long-term intercompany notes	**(17,393)**	(5,475)	**(40,512)**	(11,041)
Net investment hedge instruments gain (loss), net of tax of $(14,604) and $(5,715) for the quarter ended September 30, 2022 and 2021, and $(34,212) and $(10,194) for the nine months ended September 30, 2022 and 2021, respectively	**44,844**	17,668	**105,053**	31,514
Balance at the end of the period	**(435,924)**	(275,435)	**(435,924)**	(275,435)
Defined benefit pension plans:				
Balance at the beginning of the period	(193,079)	(250,460)	(195,079)	(253,720)
Amortization of net actuarial loss and other, net of tax of $(326) and $(527) for the quarter ended September 30, 2022 and 2021, and $(977) and $(1,581) for the nine months ended September 30, 2022 and 2021, respectively	**1,000**	1,630	**3,000**	4,890
Balance at the end of the period	**(192,079)**	(248,830)	**(192,079)**	(248,830)
Accumulated other comprehensive loss at the end of the period	**(628,003)**	(524,265)	**(628,003)**	(524,265)
Treasury stock				
Balance at the beginning of the period	(1,901,360)	(1,570,696)	(1,573,000)	(1,565,270)
Issuance of common stock under employee stock plans	**(632)**	(143)	**2,387**	7,309
Purchase of treasury stock	**(45)**	(185)	**(331,424)**	(13,063)
Balance at the end of the period	**(1,902,037)**	(1,571,024)	**(1,902,037)**	(1,571,024)
Total stockholders' equity	**$ 7,132,672**	$ 6,558,396	**$ 7,132,672**	$ 6,558,396

See accompanying notes.

AMETEK, Inc.
Condensed Consolidated Statement of Cash Flows
(In thousands)
(Unaudited)

	Nine months ended September 30,	
	2022	**2021**
Cash provided by (used for):		
Operating activities:		
Net income	**$ 852,461**	$ 708,372
Adjustments to reconcile net income to total operating activities:		
Depreciation and amortization	**230,968**	214,494
Deferred income taxes	**(32,889)**	(7,209)
Share-based compensation expense	**34,587**	35,021
Gain on sale of business/investment	**(3,584)**	(6,349)
Gain on sale of facilities	**(7,054)**	—
Net change in assets and liabilities, net of acquisitions	**(299,311)**	(60,947)
Pension contributions	**(5,244)**	(6,414)
Other, net	**(5,576)**	1,592
Total operating activities	**764,358**	878,560
Investing activities:		
Additions to property, plant and equipment	**(80,829)**	(67,229)
Purchases of businesses, net of cash acquired	**(190,321)**	(1,839,664)
Proceeds from sale of business/investment	**3,734**	12,000
Proceeds from sale of facilities	**11,754**	—
Other, net	**124**	(291)
Total investing activities	**(255,538)**	(1,895,184)
Financing activities:		
Net change in short-term borrowings	**(26,315)**	286,126
Repurchases of common stock	**(331,424)**	(13,063)
Cash dividends paid	**(151,635)**	(138,345)
Proceeds from stock option exercises	**23,241**	42,301
Other, net	**(15,056)**	(5,818)
Total financing activities	**(501,189)**	171,201
Effect of exchange rate changes on cash and cash equivalents	**(44,459)**	(8,723)
Decrease in cash and cash equivalents	**(36,828)**	(854,146)
Cash and cash equivalents:		
Beginning of period	346,772	1,212,822
End of period	**$ 309,944**	$ 358,676

See accompanying notes.

1. Basis of Presentation

The accompanying consolidated financial statements are unaudited. AMETEK, Inc. (the "Company") believes that all adjustments (which primarily consist of normal recurring accruals) necessary for a fair presentation of the consolidated financial position of the Company at September 30, 2022, the consolidated results of its operations for the three and nine months ended September 30, 2022 and 2021 and its cash flows for the nine months ended September 30, 2022 and 2021 have been included. Quarterly results of operations are not necessarily indicative of results for the full year. The accompanying consolidated financial statements should be read in conjunction with the audited consolidated financial statements and related notes presented in the Company's Annual Report on Form 10-K for the year ended December 31, 2021 as filed with the U.S. Securities and Exchange Commission.

2. Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncement

In October 2021, the FASB issued ASU No. 2021-08, Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers ("ASU 2021-08"), which provides a single comprehensive accounting model for the acquisition of contract balances under ASC 805. ASU 2021-08 is effective for fiscal years beginning after December 15, 2022. Early adoption is permitted. The Company early adopted the ASU on January 1, 2022, and the amendments in this ASU were applied on a prospective basis to all periods presented. The adoption of ASU 2021-08 did not impact the Company's consolidated results of operations, financial position, cash flows, or financial statement disclosures.

3. Revenues

The outstanding contract asset and liability accounts were as follows:

	2022	2021
	(In thousands)	
Contract assets—January 1	$ 95,274	$ 68,971
Contract assets – September 30	**111,687**	82,986
Change in contract assets – increase (decrease)	**16,413**	14,015
Contract liabilities – January 1	328,816	215,093
Contract liabilities – September 30	**371,411**	311,674
Change in contract liabilities – (increase) decrease	**(42,595)**	(96,581)
Net change	**$ (26,182)**	$ (82,566)

The net change for the nine months ended September 30, 2022 was primarily driven by contract liabilities, specifically growth in advance payments from customers. For the nine months ended September 30, 2022 and 2021, the Company recognized revenue of $252.4 million and $179.1 million, respectively, that was previously included in the beginning balance of contract liabilities.

Contract assets are reported as a component of Other current assets in the consolidated balance sheet. At September 30, 2022 and December 31, 2021, $39.2 million and $30.1 million of Customer advanced payments (contract liabilities), respectively, were recorded in Other long-term liabilities in the consolidated balance sheets.

The remaining performance obligations not expected to be completed within one year as of September 30, 2022 and December 31, 2021 were $520.6 million and $342.5 million, respectively. Remaining performance obligations represent the transaction price of firm, non-cancelable orders, with expected delivery dates to customers greater than one year from the balance sheet date, for which the performance obligation is unsatisfied or partially unsatisfied. These performance obligations will be substantially satisfied within two to three years.

AMETEK, Inc.
Notes to Consolidated Financial Statements
September 30, 2022
(Unaudited)

Geographic Areas

Net sales were attributed to geographic areas based on the location of the customer. Information about the Company’s operations in different geographic areas was as follows for the three and nine months ended September 30:

	Three months ended September 30, 2022			Nine months ended September 30, 2022		
	EIG	EMG	Total	EIG	EMG	Total
	(In thousands)					
United States	**$ 554,048**	**$ 265,549**	**$ 819,597**	**$ 1,589,641**	**$ 737,362**	**$ 2,327,003**
International[1]:						
United Kingdom	**18,409**	**28,694**	**47,103**	**65,414**	**88,945**	**154,359**
European Union countries	**113,935**	**100,427**	**214,362**	**344,074**	**322,620**	**666,694**
Asia	**264,432**	**70,375**	**334,807**	**776,084**	**203,439**	**979,523**
Other foreign countries	**103,300**	**32,617**	**135,917**	**294,918**	**102,366**	**397,284**
Total international	**500,076**	**232,113**	**732,189**	**1,480,490**	**717,370**	**2,197,860**
Consolidated net sales	**$ 1,054,124**	**$ 497,662**	**$ 1,551,786**	**$ 3,070,131**	**$ 1,454,732**	**$ 4,524,863**

(1) Includes U.S. export sales of $415.4 million and $1,217.2 million for the three and nine months ended September 30, 2022.

	Three months ended September 30, 2021			Nine months ended September 30, 2021		
	EIG	EMG	Total	EIG	EMG	Total
	(In thousands)					
United States	$ 509,075	$ 230,524	$ 739,599	$ 1,393,015	$ 666,618	$ 2,059,633
International[1]:						
United Kingdom	25,358	32,846	58,204	67,954	91,465	159,419
European Union countries	117,035	102,069	219,104	338,556	300,970	639,526
Asia	242,063	65,624	307,687	657,478	192,267	849,745
Other foreign countries	88,284	27,803	116,087	249,670	84,776	334,446
Total international	472,740	228,342	701,082	1,313,658	669,478	1,983,136
Consolidated net sales	$ 981,815	$ 458,866	$ 1,440,681	$ 2,706,673	$ 1,336,096	$ 4,042,769

(1) Includes U.S. export sales of $391.0 million and $1,087.3 million for the three and nine months ended September 30, 2021.

AMETEK, Inc.
Notes to Consolidated Financial Statements
September 30, 2022
(Unaudited)

Major Products and Services

The Company's major products and services in the reportable segments were as follows:

	Three months ended September 30, 2022			Nine months ended September 30, 2022		
	EIG	EMG	Total	EIG	EMG	Total
	(In thousands)					
Process and analytical instrumentation	**$ 758,868**	**$ —**	**$ 758,868**	**$ 2,219,821**	**$ —**	**$ 2,219,821**
Aerospace and power	**295,256**	**143,689**	**438,945**	**850,310**	**407,771**	**1,258,081**
Automation and engineered solutions	**—**	**353,973**	**353,973**	**—**	**1,046,961**	**1,046,961**
Consolidated net sales	**$ 1,054,124**	**$ 497,662**	**$ 1,551,786**	**$ 3,070,131**	**$ 1,454,732**	**$ 4,524,863**

	Three months ended September 30, 2021			Nine months ended September 30, 2021		
	EIG	EMG	Total	EIG	EMG	Total
	(In thousands)					
Process and analytical instrumentation	$ 661,243	$ —	$ 661,243	$ 1,881,923	$ —	$ 1,881,923
Aerospace and power	320,572	130,671	451,243	824,750	379,310	1,204,060
Automation and engineered solutions	—	328,195	328,195	—	956,786	956,786
Consolidated net sales	$ 981,815	$ 458,866	$ 1,440,681	$ 2,706,673	$ 1,336,096	$ 4,042,769

Timing of Revenue Recognition

	Three months ended September 30, 2022			Nine months ended September 30, 2022		
	EIG	EMG	Total	EIG	EMG	Total
	(In thousands)					
Products transferred at a point in time	**$ 869,455**	**$ 436,222**	**$ 1,305,677**	**$ 2,522,351**	**$ 1,272,382**	**$ 3,794,733**
Products and services transferred over time	**184,669**	**61,440**	**246,109**	**547,780**	**182,350**	**730,130**
Consolidated net sales	**$ 1,054,124**	**$ 497,662**	**$ 1,551,786**	**$ 3,070,131**	**$ 1,454,732**	**$ 4,524,863**

	Three months ended September 30, 2021			Nine months ended September 30, 2021		
	EIG	EMG	Total	EIG	EMG	Total
	(In thousands)					
Products transferred at a point in time	$ 791,486	$ 413,062	$ 1,204,548	$ 2,206,252	$ 1,204,662	$ 3,410,914
Products and services transferred over time	190,329	45,804	236,133	500,421	131,434	631,855
Consolidated net sales	$ 981,815	$ 458,866	$ 1,440,681	$ 2,706,673	$ 1,336,096	$ 4,042,769

Product Warranties

The Company provides limited warranties in connection with the sale of its products. The warranty periods for products sold vary among the Company's operations, but the majority do not exceed one year. The Company calculates its warranty expense provision based on its historical warranty experience and adjustments are made periodically to reflect actual warranty expenses. Product warranty obligations are reported as a component of Accrued liabilities and other in the consolidated balance sheet.

Changes in the accrued product warranty obligation were as follows:

	Nine Months Ended September 30,	
	2022	2021
	(In thousands)	
Balance at the beginning of the period	$ 27,478	$ 27,839
Accruals for warranties issued during the period	**8,530**	8,379
Settlements made during the period	**(8,769)**	(9,112)
Warranty accruals related to acquired businesses and other during the period	**(1,080)**	2,227
Balance at the end of the period	**$ 26,159**	$ 29,333

Accounts Receivable

The Company maintains allowances for estimated losses resulting from the inability of customers to meet their financial obligations to the Company. The Company recognizes an allowance for credit losses, on all accounts receivable and contract assets, which considers risk of future credit losses based on factors such as historical experience, contract terms, as well as general and market business conditions, country, and political risk. Balances are written off when determined to be uncollectible.

At September 30, 2022, the Company had $876.5 million of accounts receivable, net of allowances of $12.0 million. Changes in the allowance were not material for the three and nine months ended September 30, 2022.

4. Earnings Per Share

The calculation of basic earnings per share is based on the weighted average number of common shares considered outstanding during the periods. The calculation of diluted earnings per share reflects the effect of all potentially dilutive securities (principally outstanding stock options and restricted stock grants). Securities that are anti-dilutive have been excluded and are not significant. The number of weighted average shares used in the calculation of basic earnings per share and diluted earnings per share was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
	(In thousands)			
Weighted average shares:				
Basic shares	**229,500**	231,171	**230,360**	230,811
Equity-based compensation plans	**1,214**	1,829	**1,315**	1,901
Diluted shares	**230,714**	233,000	**231,675**	232,712

5. Fair Value Measurements

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

The Company utilizes a valuation hierarchy for disclosure of the inputs to the valuations used to measure fair value. This hierarchy prioritizes the inputs into three broad levels as follows. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument. Level 3 inputs are unobservable inputs based on the Company's own assumptions used to measure assets and liabilities at fair value. A financial asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The following table provides the Company's assets that are measured at fair value on a recurring basis, consistent with the fair value hierarchy, at September 30, 2022 and December 31, 2021:

	September 30, 2022	December 31, 2021
	Fair Value	Fair Value
	(In thousands)	
Mutual fund investments	**$ 8,866**	$ 10,703

The fair value of mutual fund investments, which are valued as level 1 investments, was based on quoted market prices. The mutual fund investments are shown as a component of investments and other assets on the consolidated balance sheet.

For the nine months ended September 30, 2022 and 2021, gains and losses on the investments noted above were not significant. No transfers between level 1 and level 2 investments occurred during the nine months ended September 30, 2022 and 2021.

Financial Instruments

Cash, cash equivalents and mutual fund investments are recorded at fair value at September 30, 2022 and December 31, 2021 in the accompanying consolidated balance sheet.

The following table provides the estimated fair values of the Company's financial instrument liabilities, for which fair value is measured for disclosure purposes only, compared to the recorded amounts at September 30, 2022 and December 31, 2021:

	September 30, 2022		December 31, 2021	
	Recorded Amount	Fair Value	Recorded Amount	Fair Value
	(In thousands)			
Long-term debt (including current portion)	**$ (2,088,231)**	**$ (1,910,792)**	$ (2,233,705)	$ (2,378,930)

The fair value of net short-term borrowings approximates the carrying value. Net short-term borrowings are valued as level 2 liabilities as they are corroborated by observable market data. The Company's net long-term debt is all privately held with no public market for this debt, therefore, the fair value of net long-term debt was computed based on comparable current market data for similar debt instruments and is considered a level 3 liability.

Foreign Currency

At September 30, 2022, the Company had a Euro forward contract for a total notional value of 40.0 million Euros and a Canadian dollar forward contract for a notional value of 22.0 million Canadian dollars. For the nine months ended September 30, 2022, realized and unrealized gains and losses on the foreign currency forward contracts were not significant.

6. Hedging Activities

The Company has designated certain foreign-currency-denominated long-term borrowings as hedges of the net investment in certain foreign operations. As of September 30, 2022, these net investment hedges included British-pound-and Euro-denominated long-term debt. These borrowings were designed to create net investment hedges in certain designated foreign subsidiaries. The Company designated the British-pound- and Euro-denominated loans referred to above as hedging instruments to offset translation gains or losses on the net investment due to changes in the British pound and Euro exchange rates. These net investment hedges are evidenced by management's contemporaneous documentation supporting the hedge designation. Any gain or loss on the hedging instruments (the debt) following hedge designation is reported in accumulated other comprehensive income in the same manner as the translation adjustment on the hedged investment based on changes in the spot rate, which is used to measure hedge effectiveness.

At September 30, 2022, the Company had $250.4 million of British-pound-denominated loans, which were designated as a hedge against the net investment in British pound functional currency foreign subsidiaries. At September 30, 2022, the Company had $523.7 million in Euro-denominated loans, which were designated as a hedge against the net investment in Euro functional currency foreign subsidiaries. As a result of the British-pound- and Euro-denominated loans designated and 100% effective as net investment hedges, $139.3 million of pre-tax currency remeasurement gains have been included in the foreign currency translation component of other comprehensive income for the nine months ended September 30, 2022.

7. Inventories, net

	September 30, 2022	December 31, 2021
	(In thousands)	
Finished goods and parts	**$ 128,409**	$ 89,985
Work in process	**151,456**	122,356
Raw materials and purchased parts	**745,265**	556,834
Total inventories, net	**$ 1,025,130**	$ 769,175

8. Leases

The Company has commitments under operating leases for certain facilities, vehicles and equipment used in its operations. Cash used in operations for operating leases was not materially different from operating lease expense for the nine months ended September 30, 2022 and 2021. The Company's leases have a weighted average remaining lease term of approximately five years. Certain lease agreements contain provisions for future rent increases.

The components of lease expense were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
	(In thousands)			
Operating lease cost	**$ 16,407**	$ 13,560	**$ 47,131**	$ 37,083
Variable lease cost	**2,479**	1,737	**7,131**	4,609
Total lease cost	**$ 18,886**	$ 15,297	**$ 54,262**	$ 41,692

Supplemental balance sheet information related to leases was as follows:

	September 30, 2022	December 31, 2021
	(In thousands)	
Right of use assets, net	**$ 161,217**	$ 169,924
Lease liabilities included in Accrued Liabilities and other	**45,434**	47,353
Lease liabilities included in Other long-term liabilities	**121,382**	129,101
Total lease liabilities	**$ 166,816**	$ 176,454

Maturities of lease liabilities as of September 30, 2022 were as follows:

Lease Liability Maturity Analysis		Operating Leases
		(In thousands)
Remaining 2022	$	13,154
2023		46,850
2024		35,684
2025		26,797
2026		20,476
Thereafter		36,390
Total lease payments		179,351
Less: imputed interest		12,535
	$	166,816

The Company does not have any significant leases that have not yet commenced.

9. Acquisitions

Acquisitions

The Company spent $190.3 million in cash, net of cash acquired, to acquire Navitar, Inc. in September 2022. Navitar is a market leader in the design, development and manufacturing of customized, fully integrated optical imaging systems, cameras, components and software. Navitar is part of EIG.

The following table represents the allocation of the purchase price for the net assets of the Navitar acquisition based on the estimated fair values at acquisition (in millions):

Property, plant and equipment	$	8.9
Goodwill		71.1
Other intangible assets		95.0
Net working capital and other[1]		15.3
Total cash paid	$	190.3

(1) Includes $5.5 million in accounts receivable, whose fair value, contractual cash flows and expected cash flows are approximately equal.

The amount allocated to goodwill is reflective of the benefits the Company expects to realize from the Navitar acquisition. Navitar's market leading optical components and solutions complement the Company's existing optics portfolio. The Company expects approximately $52 million of the goodwill relating to the Navitar acquisition will be tax deductible in future years.

At September 30, 2022, the purchase price allocated to other intangible assets of $95.0 million consists of $15.2 million of indefinite-lived intangible trade names, which are not subject to amortization. The remaining $79.8 million of other intangible assets consists of $64.6 million of customer relationships, which are being amortized over a period of 17 years, and $15.2 million of purchased technology, which is being amortized over a period of 17 years. Amortization expense for each of the next five years for the 2022 acquisitions is expected to approximate $5 million per year.

The Company finalized its measurements of certain tangible and intangible assets and liabilities for its November 2021 acquisition of Alphasense, which had no material impact to the consolidated statement of income and balance sheet. The Company is in the process of finalizing the measurement of the intangible assets and tangible assets and liabilities, as well as accounting for income taxes, for Navitar.

The acquisition had an immaterial impact on reported net sales, net income, and diluted earnings per share for the three and nine months ended September 30, 2022. Had the acquisition been made at the beginning of 2022 or 2021, pro forma net sales, net income, and diluted earnings per share for the three and nine months ended September 30, 2022 and 2021, would not have been materially different than the amounts reported.

Acquisition subsequent to September 30, 2022

In October 2022, the Company acquired RTDS Technologies for 325.0 million Canadian dollars (approximately $240.0 million) in cash. RTDS is a leading provider of real-time power simulation systems used by utilities, and research and education institutions in the development and testing of the electric power grid and renewable energy applications. RTDS will join EIG.

10. Goodwill

The changes in the carrying amounts of goodwill by segment were as follows:

	EIG	EMG	Total
		(In millions)	
Balance at December 31, 2021	$ 4,073.8	$ 1,164.9	$ 5,238.7
Goodwill acquired from 2022 acquisitions	**71.1**	—	**71.1**
Purchase price allocation adjustments and other	**4.2**	—	**4.2**
Foreign currency translation adjustments	**(70.1)**	**(53.7)**	**(123.8)**
Balance at September 30, 2022	**$ 4,079.0**	**$ 1,111.2**	**$ 5,190.2**

11. Income Taxes

At September 30, 2022, the Company had gross uncertain tax benefits of $170.0 million, of which $125.3 million, if recognized, would impact the effective tax rate.

The following is a reconciliation of the liability for uncertain tax positions (in millions):

Balance at December 31, 2021	$ 147.0
Additions for tax positions	**23.5**
Reductions for tax positions	**(0.5)**
Balance at September 30, 2022	**$ 170.0**

The additions above primarily reflect the tax positions for foreign tax planning initiatives. The Company recognizes interest and penalties accrued related to uncertain tax positions in income tax expense. The amounts recognized in income tax expense for interest and penalties during the three and nine months ended September 30, 2022 and 2021 were not significant.

The effective tax rate for the three months ended September 30, 2022 was 19.0%, compared with 19.5% for the three months ended September 30, 2021. The lower effective tax rate in the third quarter of 2022 is primarily due to a favorable foreign rate differential and favorable foreign deferred taxes.

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12. Debt

On May 12, 2022, the Company along with certain of its foreign subsidiaries amended and restated its credit agreement dated as of September 22, 2011, as amended and restated as of March 10, 2016 and as further amended and restated as of October 30, 2018, with the lenders, JPMorgan Chase Bank, N.A., as Administrative Agent and Bank of America, N.A., PNC Bank, National Association, Trust Bank and Wells Fargo Bank, National Association, as Co-Syndication Agents. The credit agreement amends and restates the Company's existing revolving credit facility to increase the size from $1.5 billion to $2.3 billion and terminates the $800 million term loan. The credit agreement places certain restrictions on allowable additional indebtedness. At September 30, 2022, the Company had $274.0 million outstanding on the revolver with a maturity date of May 2027.

13. Share-Based Compensation

The Company's share-based compensation plans are described in Note 11, Share-Based Compensation, to the consolidated financial statements in Part II, Item 8, filed on the Company's Annual Report on Form 10-K for the year ended December 31, 2021.

Share Based Compensation Expense

Total share-based compensation expense was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	**2022**	2021
	(In thousands)			
Stock option expense	**$ 3,043**	$ 2,768	**$ 9,866**	$ 10,017
Restricted stock expense	**4,800**	4,848	**14,831**	16,765
Performance restricted stock unit expense	**4,217**	3,812	**9,890**	8,239
Total pre-tax expense	**$ 12,060**	$ 11,428	**$ 34,587**	$ 35,021

Pre-tax share-based compensation expense is included in the consolidated statement of income in either Cost of sales or Selling, general and administrative expenses, depending on where the recipient's cash compensation is reported.

Stock Options

The fair value of each stock option grant is estimated on the grant date using a Black-Scholes-Merton option pricing model. The following weighted average assumptions were used in the Black-Scholes-Merton model to estimate the fair values of stock options granted during the periods indicated:

	Nine Months Ended September 30, 2022	Year Ended December 31, 2021
Expected volatility	**24.5 %**	24.2 %
Expected term (years)	**5.0**	5.0
Risk-free interest rate	**2.33 %**	0.85 %
Expected dividend yield	**0.65 %**	0.66 %
Black-Scholes-Merton fair value per stock option granted	**$ 32.54**	$ 25.63

The following is a summary of the Company’s stock option activity and related information:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value
	(In thousands)		(Years)	(In millions)
Outstanding at December 31, 2021	3,352	$ 76.08		
Granted	**608**	**134.69**		
Exercised	**(357)**	**64.44**		
Forfeited	**(101)**	**107.73**		
Outstanding at September 30, 2022	**3,502**	**$ 86.52**	**6.2**	**$ 110.4**
Exercisable at September 30, 2022	**2,374**	**$ 72.84**	**5.0**	**$ 97.8**

The aggregate intrinsic value of stock options exercised during the nine months ended September 30, 2022 was $23.0 million. The total fair value of stock options vested during the nine months ended September 30, 2022 was $11.3 million. As of September 30, 2022, there was approximately $20.9 million of expected future pre-tax compensation expense related to the 1.1 million non-vested stock options outstanding, which is expected to be recognized over a weighted average period of approximately two years.

Restricted Stock

The following is a summary of the Company’s non-vested restricted stock activity and related information:

	Shares	Weighted Average Grant Date Fair Value
	(In thousands)	
Non-vested restricted stock outstanding at December 31, 2021	413	$ 96.07
Granted	**182**	**134.55**
Vested	**(156)**	**86.31**
Forfeited	**(42)**	**108.42**
Non-vested restricted stock outstanding at September 30, 2022	**397**	**$ 116.26**

The total fair value of restricted stock vested during the nine months ended September 30, 2022 was $13.5 million. As of September 30, 2022, there was approximately $32.3 million of expected future pre-tax compensation expense related to the 0.4 million non-vested restricted shares outstanding, which is expected to be recognized over a weighted average period of approximately two years.

Performance Restricted Stock Units

In March 2022, the Company granted performance restricted stock units ("PRSU") to officers and certain key management-level employees. The PRSUs vest over a period up to three years from the grant date based on continuous service, with the number of shares earned (0% to 200% of the target award) depending upon the extent to which the Company achieves certain financial and market performance targets measured over the period from January 1 of the year of grant to December 31 of the third year. Half of the PRSUs were valued in a manner similar to restricted stock as the financial targets are based on the Company’s operating results, which represents a performance condition. The grant date fair value of these PRSUs are recognized as compensation expense over the vesting period based on the probable number of awards to vest at each reporting date.

The other half of the PRSUs were valued using a Monte Carlo model as the performance target is related to the Company’s total shareholder return compared to a group of peer companies, which represents a market condition. The Company recognizes the grant date fair value of these awards as compensation expense ratably over the vesting period.

The following is a summary of the Company’s non-vested performance restricted stock activity and related information:

	Shares (In thousands)	Weighted Average Grant Date Fair Value
Non-vested performance restricted stock outstanding at December 31, 2021	289	$ 85.29
Granted	**87**	**134.69**
Performance assumption change [1]	**66**	**81.76**
Vested	**(161)**	**81.76**
Forfeited	**(6)**	**98.07**
Non-vested performance restricted stock outstanding at September 30, 2022	**275**	**$ 101.98**

[1] Reflects the number of PRSUs above target levels based on performance metrics.

As of September 30, 2022, there was approximately $8.8 million of expected future pre-tax compensation expense related to the 0.3 million non-vested restricted shares outstanding, which is expected to be recognized over a weighted average period of less than one year.

14. Retirement and Pension Plans

The components of net periodic pension benefit expense (income) were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
	(In thousands)			
Defined benefit plans:				
Service cost	**$ 1,290**	$ 2,009	**$ 3,995**	$ 6,060
Interest cost	**4,949**	4,563	**15,101**	13,711
Expected return on plan assets	**(14,812)**	(14,172)	**(45,113)**	(42,567)
Amortization of net actuarial loss and other	**2,074**	7,550	**6,371**	16,282
Pension income	**(6,499)**	(50)	**(19,646)**	(6,514)
Other plans:				
Defined contribution plans	**9,217**	7,792	**32,289**	24,208
Foreign plans and other	**2,027**	2,074	**6,422**	6,431
Total other plans	**11,244**	9,866	**38,711**	30,639
Total net pension expense	**$ 4,745**	$ 9,816	**$ 19,065**	$ 24,125

For defined benefit plans, the net periodic benefit income, other than the service cost component, is included in “Other (expense) income, net” in the consolidated statement of income.

For the nine months ended September 30, 2022 and 2021, contributions to the Company’s defined benefit pension plans were $5.2 million and $6.4 million, respectively. The Company’s current estimate of 2022 contributions to its worldwide defined benefit pension plans is in line with the range disclosed in Note 12 of the Company’s Annual Report on Form 10-K for the year ended December 31, 2021.

15. Contingencies

Asbestos Litigation

The Company (including its subsidiaries) has been named as a defendant in a number of asbestos-related lawsuits. Certain of these lawsuits relate to a business which was acquired by the Company and do not involve products which were manufactured or sold by the Company. In connection with these lawsuits, the seller of such business has agreed to indemnify the Company against these claims (the "Indemnified Claims"). The Indemnified Claims have been tendered to, and are being defended by, such seller. The seller has met its obligations, in all respects, and the Company does not have any reason to believe such party would fail to fulfill its obligations in the future. To date, no judgments have been rendered against the Company as a result of any asbestos-related lawsuit. The Company believes that it has good and valid defenses to each of these claims and intends to defend them vigorously.

Environmental Matters

Certain historic processes in the manufacture of products have resulted in environmentally hazardous waste by-products as defined by federal and state laws and regulations. At September 30, 2022, the Company is named a Potentially Responsible Party ("PRP") at 13 non-AMETEK-owned former waste disposal or treatment sites (the "non-owned" sites). The Company is identified as a "de minimis" party in 12 of these sites based on the low volume of waste attributed to the Company relative to the amounts attributed to other named PRPs. In eight of these sites, the Company has reached a tentative agreement on the cost of the de minimis settlement to satisfy its obligation and is awaiting executed agreements. The tentatively agreed-to settlement amounts are fully reserved. In the other four sites, the Company is continuing to investigate the accuracy of the alleged volume attributed to the Company as estimated by the parties primarily responsible for remedial activity at the sites to establish an appropriate settlement amount. At the remaining site where the Company is a non-de minimis PRP, the Company is participating in the investigation and/or related required remediation as part of a PRP Group and reserves have been established to satisfy the Company's expected obligations. The Company historically has resolved these issues within established reserve levels and reasonably expects this result will continue. In addition to these non-owned sites, the Company has an ongoing practice of providing reserves for probable remediation activities at certain of its current or previously owned manufacturing locations (the "owned" sites). For claims and proceedings against the Company with respect to other environmental matters, reserves are established once the Company has determined that a loss is probable and estimable. This estimate is refined as the Company moves through the various stages of investigation, risk assessment, feasibility study and corrective action processes. In certain instances, the Company has developed a range of estimates for such costs and has recorded a liability based on the best estimate. It is reasonably possible that the actual cost of remediation of the individual sites could vary from the current estimates and the amounts accrued in the consolidated financial statements; however, the amounts of such variances are not expected to result in a material change to the consolidated financial statements. In estimating the Company's liability for remediation, the Company also considers the likely proportionate share of the anticipated remediation expense and the ability of the other PRPs to fulfill their obligations.

Total environmental reserves at September 30, 2022 and December 31, 2021 were $39.6 million and $37.2 million, respectively, for both non-owned and owned sites. For the nine months ended September 30, 2022, the Company recorded $8.8 million in reserves. Additionally, the Company spent $6.4 million on environmental matters for the nine months ended September 30, 2022.

The Company has agreements with other former owners of certain of its acquired businesses, as well as new owners of previously owned businesses. Under certain of the agreements, the former or new owners retained, or assumed and agreed to indemnify the Company against, certain environmental and other liabilities under certain circumstances. The Company and some of these other parties also carry insurance coverage for some environmental matters.

The Company believes it has established reserves for the environmental matters described above, which are sufficient to perform all known responsibilities under existing claims and consent orders. In the opinion of management, based on presently available information and the Company's historical experience related to such matters, an adequate provision for probable costs has been made and the ultimate cost resulting from these actions is not expected to materially affect the consolidated results of operations, financial position or cash flows of the Company.

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

Results of Operations

The following table sets forth net sales and income by reportable segment and on a consolidated basis:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
	(In thousands)			
Net sales:				
Electronic Instruments	**$ 1,054,124**	$ 981,815	**$ 3,070,131**	$ 2,706,673
Electromechanical	**497,662**	458,866	**1,454,732**	1,336,096
Consolidated net sales	**$ 1,551,786**	$ 1,440,681	**$ 4,524,863**	$ 4,042,769
Operating income and income before income taxes:				
Segment operating income:				
Electronic Instruments	**$ 272,714**	$ 245,118	**$ 782,603**	$ 678,652
Electromechanical	**136,467**	114,571	**389,047**	332,038
Total segment operating income	**409,181**	359,689	**1,171,650**	1,010,690
Corporate administrative expenses	**(24,661)**	(22,126)	**(69,048)**	(63,171)
Consolidated operating income	**384,520**	337,563	**1,102,602**	947,519
Interest expense	**(20,245)**	(20,476)	**(60,165)**	(59,865)
Other income (expense), net	**3,227**	2,581	**7,752**	(3,775)
Consolidated income before income taxes	**$ 367,502**	$ 319,668	**$ 1,050,189**	$ 883,879

Recent Events and Market Conditions

Recent events and market conditions impacting our business include the inflationary cost environment, rising interest rates, supply chain constraints, the COVID-19 pandemic, and the ongoing conflict in Ukraine. As a result of these events and conditions, we anticipate a challenging global economic environment for the remainder of 2022 and into 2023.

Beginning in 2021, we experienced heightened levels of inflation in material and transportation costs. We have taken steps to mitigate the impacts of material and transportation cost inflation by implementing pricing actions. We experienced additional pressure in our supply chain due to component shortages and strained transportation capacity, as well as the impact of continued elevated customer demand. In response to these supply chain pressures, we have taken actions to build inventory and seek alternative sources of supply to support sales and backlog growth. The inflationary environment has also resulted in central banks raising short-term interest rates. We expect inflation to continue into 2023 and will continue to take actions to mitigate this inflationary pressure.

There still remains uncertainty around the COVID-19 pandemic, its effect on labor, government mandated lockdowns and other restrictive measures, and the pandemic's ultimate duration. Lockdowns in China during the first half of 2022 limited our ability to access customer sites, operate certain facilities, and placed additional constraints on our supply chain. Depending on the course of the pandemic, additional lockdowns in China or elsewhere could impact our operations and results of operations.

The invasion of Ukraine by Russia and the sanctions imposed in response to this conflict have increased global economic and political uncertainty. Russia and Ukraine represent an insignificant portion of our business, but a significant expansion of the conflict's current scope could further complicate the economic environment.

While the ultimate impact of these events remains uncertain, we will continue to evaluate the extent to which these factors will impact our business, financial condition, and results of operations.

Results of operations for the third quarter of 2022 compared with the third quarter of 2021

For the quarter ended September 30, 2022, the Company posted record sales, operating income, and backlog as well as strong orders. The Company achieved these results from organic sales growth in both EIG and EMG, as well as the Company's Operational Excellence initiatives.

Net sales for the third quarter of 2022 were a record $1,551.8 million, an increase of $111.1 million or 7.7%, compared with net sales of $1,440.7 million for the third quarter of 2021. The increase in net sales for the third quarter of 2022 was due to an 11% increase in organic sales and a 1% increase from acquisitions, partially offset by an unfavorable 4% effect of foreign currency translation.

Total international sales for the third quarter of 2022 were $733.0 million or 47.2% of net sales, an increase of $31.9 million or 4.5%, compared with international sales of $701.1 million or 48.7% of net sales for the third quarter of 2021. The increase in international sales was primarily driven by strong demand in Asia during the quarter as well as contributions from recent acquisitions.

Orders for the third quarter of 2022 were $1,657.9 million, a increase of $105.3 million or 6.8%, compared with $1,552.6 million for the third quarter of 2021. The increase in orders for the third quarter of 2022 was due to a 9% increase in organic orders and a 3% increase from acquisitions, partially offset by an unfavorable 5% effect of foreign currency translation. As a result, the Company's backlog of unfilled orders at September 30, 2022 was a record $3,210.5 million, an increase of $480.4 million or 17.6% compared with $2,730.1 million at December 31, 2021.

Segment operating income for the third quarter of 2022 was $409.2 million, an increase of $49.5 million or 13.8%, compared with segment operating income of $359.7 million for the third quarter of 2021. Segment operating margins, as a percentage of net sales, increased to 26.4% for the third quarter of 2022, compared with 25.0% for the third quarter of 2021. Segment operating income and operating margins were positively impacted in 2022 by the increase in sales discussed above including pricing actions in the third quarter of 2022 to offset the impact of higher material and transportation costs. Segment operating income and margins also increased due to continued benefits from the Company's Operational Excellence initiatives.

Cost of sales for the third quarter of 2022 was $1,004.6 million or 64.7% of net sales, an increase of $55.2 million or 5.8%, compared with $949.4 million or 65.9% of net sales for the third quarter of 2021. The cost of sales increase was primarily due to the net sales increase discussed above.

Selling, general and administrative expenses for the third quarter of 2022 were $162.7 million or 10.5% of net sales, an increase of $9.0 million or 5.8%, compared with $153.7 million or 10.7% of net sales for the third quarter of 2021.

Consolidated operating income was a record $384.5 million or 24.8% of net sales for the third quarter of 2022, an increase of $46.9 million or 13.9%, compared with $337.6 million or 23.4% of net sales for the third quarter of 2021.

Other income, net was $3.2 million for the third quarter of 2022, compared with $2.6 million of other income, net for the third quarter of 2021, an increase of $0.6 million. The third quarter of 2022 includes higher pension income of $2.4 million partially offset by higher due diligence expense compared to the third quarter of 2021.

The effective tax rate for the third quarter of 2022 was 19.0%, compared with 19.5% for the third quarter of 2021. The lower effective tax rate in the third quarter of 2022 is primarily due to a favorable foreign rate differential and favorable foreign deferred taxes.

Net income for the third quarter of 2022 was $297.6 million, an increase of $40.1 million or 15.6%, compared with $257.5 million for the third quarter of 2021.

Diluted earnings per share for the third quarter of 2022 were $1.29, an increase of $0.19 or 17.3%, compared with $1.10 per diluted share for the third quarter of 2021.

Segment Results

EIG*'*s net sales totaled $1,054.1 million for the third quarter of 2022, an increase of $72.3 million or 7.4%, compared with $981.8 million for the third quarter of 2021. The net sales increase was due to a 10% increase in organic sales and a 1% increase from acquisitions, partially offset by an unfavorable 3% effect of foreign currency translation.

EIG’s operating income was $272.7 million for the third quarter of 2022, an increase of $27.6 million or 11.3%, compared with $245.1 million for the third quarter of 2021. EIG’s operating margins were 25.9% of net sales for the third quarter of 2022, compared with 25.0% for the third quarter of 2021. EIG operating income and margins increased compared to the third quarter of 2021 due to the increase in net sales and pricing actions discussed above as well as continued benefits from the Company's Operational Excellence initiatives.

EMG’s net sales totaled a record $497.7 million for the third quarter of 2022, an increase of $38.8 million or 8.5%, compared with $458.9 million for the third quarter of 2021. The net sales increase was due to an 13% organic sales increase, partially offset by an unfavorable 4% effect of foreign currency translation.

EMG’s operating income was a record $136.5 million for the third quarter of 2022, an increase of $21.9 million or 19.1%, compared with $114.6 million for the third quarter of 2021. EMG’s operating margins were a record 27.4% of net sales for the third quarter of 2022, compared with 25.0% for the third quarter of 2021. EMG operating income and margins increased compared to the third quarter of 2021 due to the increase in net sales and pricing actions discussed above as well as continued benefits from the Company's Operational Excellence initiatives.

Results of operations for the first nine months of 2022 compared with the first nine months of 2021

Net sales for the first nine months of 2022 were $4,524.9 million, an increase of $482.1 million or 11.9%, compared with net sales of $4,042.8 million for the first nine months of 2021. The increase in net sales for the first nine months of 2022 was due to a 12% organic sales increase and a 2% increase from acquisitions, partially offset by an unfavorable 2% effect of foreign currency translation.

Total international sales for the first nine months of 2022 were $2,198.6 million or 48.6% of net sales, an increase of $215.5 million or 10.9%, compared with international sales of $1,983.1 million or 49.1% of net sales for the first nine months of 2021. The increase in international sales was primarily driven by strong demand in all regions as well as contributions from recent acquisitions.

Orders for the first nine months of 2022 were $5,005.3 million, an increase of $141.3 million or 2.9%, compared with $4,864.0 million for the first nine months of 2021. The increase in orders for the first nine months of 2022 was due to a 12% organic order increase, partially offset by a 5% decrease from $371 million of acquired backlog from the 2021 acquisitions, as well as a 4% unfavorable effect of foreign currency translation.

Segment operating income for the first nine months of 2022 was $1,171.7 million, an increase of $161.0 million or 15.9%, compared with segment operating income of $1,010.7 million for the first nine months of 2021. During the first nine months of 2022, the Company implemented pricing actions to offset the impact of higher material and transportation costs. Segment operating income was positively impacted in 2022 by the pricing actions and increase in sales discussed above. Segment operating margins, as a percentage of net sales, increased to 25.9% for the first nine months of 2022, compared with 25.0% for the first nine months of 2021. Segment operating margins for the first nine months of 2022 were negatively impacted by the dilutive impact of the 2021 acquisitions. Excluding the dilutive impact of recent acquisitions, segment operating margins for the core businesses increased 150 basis points compared to the first nine months of 2021, due to the Company's Operational Excellence initiatives.

Cost of sales for the first nine months of 2022 was $2,941.6 million or 65.0% of net sales, an increase of $290.1 million or 10.9%, compared with $2,651.5 million or 65.6% of net sales for the first nine months of 2021. The cost of sales increase was primarily due to the net sales increase discussed above.

Selling, general and administrative expenses for the first nine months of 2022 were $480.7 million or 10.6% of net sales, an increase of $37.0 million or 8.3%, compared with $443.7 million or 11.0% of net sales for the first nine months of 2021. Selling, general and administrative expenses increased primarily due to the net sales increase discussed above.

Consolidated operating income was $1,102.6 million or 24.4% of net sales for the first nine months of 2022, an increase of $155.1 million or 16.4%, compared with $947.5 million or 23.4% of net sales for the first nine months of 2021.

Other income, net was $7.8 million for the first nine months of 2022, compared with $3.8 million of other expense, net for the first nine months of 2021, a change of $11.6 million. The first nine months of 2022 includes higher pension income of $7.4 million and lower acquisition-related due diligence expense compared to the first nine months of 2021.

The effective tax rate for the first nine months of 2022 was 18.8%, compared with 19.9% for the first nine months of 2021. The lower effective tax rate in 2022 is primarily due to improved foreign-derived intangible income ("FDII") benefits and a favorable foreign tax rate differential.

Net income for the first nine months of 2022 was $852.5 million, an increase of $144.1 million or 20.3%, compared with $708.4 million for the first nine months of 2021.

Diluted earnings per share for the first nine months of 2022 were $3.68, an increase of $0.64 or 21.1%, compared with $3.04 per diluted share for the first nine months of 2021.

Segment Results

EIG's net sales totaled $3,070.1 million for the first nine months of 2022, an increase of $363.4 million or 13.4%, compared with $2,706.7 million for the first nine months of 2021. The net sales increase was due to a 12% organic sales increase and a 3% increase from acquisitions, partially offset by an unfavorable 2% effect of foreign currency translation.

EIG's operating income was $782.6 million for the first nine months of 2022, an increase of $103.9 million or 15.3%, compared with $678.7 million for the first nine months of 2021. EIG's operating margins were 25.5% of net sales for the first nine months of 2022, compared with 25.1% for the first nine months of 2021. EIG's operating margins in the first nine months of 2022 were negatively impacted by the dilutive impact of the 2021 acquisitions. Excluding the dilutive impact of the 2021 acquisitions, EIG operating margins increased 130 basis points compared to the first nine months of 2021, due to the pricing actions and increase in net sales discussed above, as well as continued benefits from the Company's Operational Excellence initiatives.

EMG's net sales totaled $1,454.7 million for the first nine months of 2022, an increase of $118.6 million or 8.9%, compared with $1,336.1 million for the first nine months of 2021. The net sales increase was due to a 12% organic sales increase, partially offset by an unfavorable 3% effect of foreign currency translation.

EMG's operating income was $389.0 million for the first nine months of 2022, an increase of $57.0 million or 17.2%, compared with $332.0 million for the first nine months of 2021. EMG's operating income included a $7.1 million gain on the sale of a facility during the first nine months of 2022. EMG's operating margins were 26.7% of net sales for the first nine months of 2022, compared with 24.9% for the first nine months of 2021. Excluding the gain on the sale of a facility, EMG operating margins increased 140 basis points compared to the first nine months of 2021, due to the pricing actions and increase in net sales discussed above, as well as continued benefits from the Company's Operational Excellence initiatives.

Financial Condition

Liquidity and Capital Resources

Cash provided by operating activities totaled $764.4 million for the first nine months of 2022, a decrease of $114.2 million or 13.0%, compared with $878.6 million for the first nine months of 2021. The decrease in cash provided by operating activities for the first nine months of 2022 was primarily due to higher investments in inventory to support sales and backlog growth, and to mitigate inventory supply chain constraints, partially offset by higher net income.

Free cash flow (cash flow provided by operating activities less capital expenditures) was $683.5 million for the first nine months of 2022, compared with $811.3 million for the first nine months of 2021. EBITDA (earnings before interest, income taxes, depreciation and amortization) was $1,340.3 million for the first nine months of 2022, compared with $1,157.2 million for the first nine months of 2021. Free cash flow and EBITDA are presented because the Company is aware that they are measures used by third parties in evaluating the Company.

Cash used by investing activities totaled $255.5 million for the first nine months of 2022, compared with cash used by investing activities of $1,895.2 million for the first nine months of 2021. For the first nine months of 2022, the Company paid $190.3 million, net of cash acquired, to purchase Navitar, Inc. For the first nine months of 2021, the Company paid $1,839.7 million, net of cash acquired, to purchase Abaco Systems, Magnetrol International, NSI-MI Technologies, Crank Software, and EGS Automation. Additions to property, plant and equipment totaled $80.8 million for the first nine months of 2022, compared with $67.2 million for the first nine months of 2021.

Cash used by financing activities totaled $501.2 million for the first nine months of 2022, compared with cash provided by financing activities of $171.2 million for the first nine months of 2021. At September 30, 2022, total debt, net was $2,357.4 million, compared with $2,544.2 million at December 31, 2021. For the first nine months of 2022, total borrowings decreased by $26.3 million compared with a $286.1 million increase for the first nine months of 2021. At September 30, 2022, the Company had available borrowing capacity of $2,685.9 million under its revolving credit facility, including the $700 million accordion feature.

On May 12, 2022, the Company along with certain of its foreign subsidiaries amended and restated its credit agreement dated as of September 22, 2011, as amended and restated as of March 10, 2016 and as further amended and restated as of October 30, 2018, with the lenders, JPMorgan Chase Bank, N.A., as Administrative Agent and Bank of America, N.A., PNC Bank, National Association, Trust Bank and Wells Fargo Bank, National Association, as Co-Syndication Agents. The credit agreement amends and restates the Company's existing revolving credit facility to increase the size from $1.5 billion to

$2.3 billion and terminates the $800 million term loan. The credit agreement places certain restrictions on allowable additional indebtedness. At September 30, 2022, the Company had $274.0 million outstanding on the revolver with a maturity date of May 2027.

The debt-to-capital ratio was 24.8% at September 30, 2022, compared with 27.0% at December 31, 2021. The net debt-to-capital ratio (total debt, net less cash and cash equivalents divided by the sum of net debt and stockholders' equity) was 22.3% at September 30, 2022, compared with 24.2% at December 31, 2021. The net debt-to-capital ratio is presented because the Company is aware that this measure is used by third parties in evaluating the Company.

Additional financing activities for the first nine months of 2022 included cash dividends paid of $151.6 million, compared with $138.3 million for the first nine months of 2021. Effective February 9, 2022, the Company's Board of Directors approved a 10% increase in the quarterly cash dividend on the Company's common stock to $0.22 per common share from $0.20 per common share. The Company repurchased $331.4 million of its common stock for the first nine months of 2022, compared with $13.1 million for the first nine months of 2021. Effective May 5, 2022, the Company's Board of Directors approved a $1 billion share repurchase authorization. This authorization replaces an earlier $500 million share repurchase authorization approved by the Board in February 2019. Proceeds from stock option exercises were $23.2 million for the first nine months of 2022, compared with $42.3 million for the first nine months of 2021.

As a result of all of the Company's cash flow activities for the first nine months of 2022, cash and cash equivalents at September 30, 2022 totaled $309.9 million, compared with $346.8 million at December 31, 2021. At September 30, 2022, the Company had $290.7 million in cash outside the United States, compared with $334.0 million at December 31, 2021. The Company utilizes this cash to fund its international operations, as well as to acquire international businesses. The Company is in compliance with all covenants, including financial covenants, for all of its debt agreements. The Company believes it has sufficient cash-generating capabilities from domestic and unrestricted foreign sources, available credit facilities and access to long-term capital funds to enable it to meet its operating needs and contractual obligations in the foreseeable future.

Critical Accounting Policies

The Company's critical accounting policies are detailed in Part II, Item 7, Management's Discussion and Analysis of Financial Condition of its Annual Report on Form 10-K for the year ended December 31, 2021. Primary disclosure of the Company's significant accounting policies is also included in Note 1 to the Consolidated Financial Statements included in Part II, Item 8 of its Annual Report on Form 10-K.

Forward-Looking Information

Information contained in this discussion, other than historical information, is considered "forward-looking statements" and is subject to various factors and uncertainties that may cause actual results to differ significantly from expectations. These factors and uncertainties include risks related to the COVID-19 pandemic and its potential impact on AMETEK's operations, supply chain, and demand across key end markets; general economic conditions affecting the industries the Company serves; changes in the competitive environment or the effects of competition in the Company's markets; risks associated with international sales and operations; the Company's ability to consummate and successfully integrate future acquisitions; the Company's ability to successfully develop new products, open new facilities or transfer product lines; the price and availability of raw materials; compliance with government regulations, including environmental regulations; and the ability to maintain adequate liquidity and financing sources. A detailed discussion of these and other factors that may affect the Company's future results is contained in AMETEK's filings with the U.S. Securities and Exchange Commission, including its most recent reports on Form 10-K, 10-Q, and 8-K. AMETEK disclaims any intention or obligation to update or revise any forward-looking statements, unless required by the securities laws to do so.

Item 4. Controls and Procedures

The Company maintains a system of disclosure controls and procedures that is designed to provide reasonable assurance that information, which is required to be disclosed, is accumulated and communicated to management in a timely manner. Under the supervision and with the participation of our management, including the Company's principal executive officer and principal financial officer, we have evaluated the effectiveness of our system of disclosure controls and procedures as required by Exchange Act Rule 13a-15(b) as of September 30, 2022. Based on that evaluation, the Company's principal executive officer and principal financial officer concluded that the Company's disclosure controls and procedures are effective at the reasonable assurance level.

Such evaluation did not identify any change in the Company's internal control over financial reporting during the quarter ended September 30, 2022 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II. OTHER INFORMATION

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

(c) Purchase of equity securities by the issuer and affiliated purchasers.

The following table reflects purchases of AMETEK, Inc. common stock by the Company during the three months ended September 30, 2022:

Period	Total Number of Shares Purchased (1)(2)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plan (2)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plan
July 1, 2022 to July 31, 2022	354	$ 126.25	44,692	$ 825,299,713
August 1, 2022 to August 31, 2022	—	—	—	825,299,713
September 1, 2022 to September 30, 2022	—	—	—	825,299,713
Total	354	$ 126.25	44,692	

(1) Represents shares surrendered to the Company to satisfy tax withholding obligations in connection with employees' share-based compensation awards.

(2) Consists of the number of shares purchased pursuant to the Company's Board of Directors $1 billion authorization for the repurchase of its common stock announced in May 2022, which replaces the previous $500 million authorization for the repurchase of its common stock announced in February 2019. Such purchases may be effected from time to time in the open market or in private transactions, subject to market conditions and at management's discretion.

Item 6. Exhibits

Exhibit Number	Description
31.1*	Certification of Chief Executive Officer, Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Chief Financial Officer, Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Chief Executive Officer, Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Chief Financial Officer, Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	XBRL Instance Document.
101.SCH*	XBRL Taxonomy Extension Schema Document.
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101).

* Filed electronically herewith.

SIGNATURES

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

AMETEK, Inc.

By: /s/ THOMAS M. MONTGOMERY

Thomas M. Montgomery
Senior Vice President – Comptroller
(Principal Accounting Officer)

November 1, 2022

Exhibit 31.1

CERTIFICATIONS

I, David A. Zapico, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of AMETEK, Inc. (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 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: November 1, 2022

/s/ DAVID A. ZAPICO

David A. Zapico

Chairman of the Board and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, William J. Burke, certify that:

1. 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;
2. 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;
3. 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;
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 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;
   b) 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
   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
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 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: November 1, 2022

/s/ WILLIAM J. BURKE

William J. Burke

Executive Vice President – Chief Financial Officer

Exhibit 32.1

AMETEK, Inc.

**Certification 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 AMETEK, Inc. (the “Company”) on Form 10-Q for the quarter ended September 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, David A. Zapico, Chairman of the Board and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(a) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(b) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ DAVID A. ZAPICO

David A. Zapico
Chairman of the Board and Chief Executive Officer

Date: November 1, 2022

A signed original of this written statement required by Section 906 has been provided to AMETEK, Inc. and will be retained by AMETEK, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

AMETEK, Inc.

Certification 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 AMETEK, Inc. (the "Company") on Form 10-Q for the quarter ended September 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, William J. Burke, Executive Vice President – Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(a) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(b) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ WILLIAM J. BURKE

William J. Burke
Executive Vice President – Chief Financial Officer

Date: November 1, 2022

A signed original of this written statement required by Section 906 has been provided to AMETEK, Inc. and will be retained by AMETEK, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.