

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q**

- QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the quarter ended September 30, 2023
or
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File No. 1-15579



MSA SAFETY INCORPORATED

(Exact name of registrant as specified in its charter)

Pennsylvania

46-4914539

(State or other jurisdiction of
incorporation or organization)

(IRS Employer
Identification No.)

**1000 Cranberry Woods Drive
Cranberry Township, Pennsylvania**

16066-5207

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: (724) 776-8600

Former name or former address, if changed since last report: N/A

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 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 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, 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 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 is registered
Common Stock, no par value	MSA	New York Stock Exchange

As of October 20, 2023, 39,311,193 shares of common stock, of the registrant were outstanding.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

MSA SAFETY INCORPORATED
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

Unaudited

(In thousands, except per share values)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net sales	\$ 446,728	\$ 381,694	\$ 1,292,290	\$ 1,084,699
Cost of products sold	227,967	212,299	678,335	608,120
Gross profit	218,761	169,395	613,955	476,579
Selling, general and administrative	102,175	82,753	289,602	247,378
Research and development	17,682	14,416	48,906	43,017
Restructuring charges (Note 3)	3,285	899	8,382	3,146
Currency exchange losses, net	1,496	2,979	8,781	4,788
Loss on divestiture of MSA LLC (Note 17)	—	—	129,211	—
Product liability expense (Note 17)	—	4,035	3	9,733
Operating income	94,123	64,313	129,070	168,517
Interest expense	12,498	5,962	37,149	14,158
Other income, net	(6,037)	(2,359)	(15,487)	(15,121)
Total other expense (income), net	6,461	3,603	21,662	(963)
Income before income taxes	87,662	60,710	107,408	169,480
Provision for income taxes (Note 10)	22,406	15,804	125,235	41,339
Net income (loss)	<u>\$ 65,256</u>	<u>\$ 44,906</u>	<u>\$ (17,827)</u>	<u>\$ 128,141</u>
Earnings (loss) per share attributable to common shareholders (Note 9):				
Basic	\$ 1.66	\$ 1.15	\$ (0.46)	\$ 3.26
Diluted	\$ 1.65	\$ 1.14	\$ (0.46)	\$ 3.25
Dividends per common share	\$ 0.47	\$ 0.46	\$ 1.40	\$ 1.36

The accompanying notes are an integral part of the unaudited condensed consolidated financial statements.

MSA SAFETY INCORPORATED
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

Unaudited

(In thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net income (loss)	\$ 65,256	\$ 44,906	\$ (17,827)	\$ 128,141
Other comprehensive gains (losses), net of tax:				
Foreign currency translation adjustments (Note 6)	(18,771)	(32,361)	(2,538)	(58,075)
Pension and post-retirement plan actuarial gains, net of tax (Note 6)	188	2,299	742	6,893
Unrealized gain (loss) on available-for-sale securities (Note 6)	—	13	2	(5)
Reclassifications of currency translation from accumulated other comprehensive loss into net income (Note 6)	101	2,912	101	2,912
Total other comprehensive loss, net of tax	(18,482)	(27,137)	(1,693)	(48,275)
Comprehensive income (loss)	\$ 46,774	\$ 17,769	\$ (19,520)	\$ 79,866

The accompanying notes are an integral part of the unaudited condensed consolidated financial statements.

MSA SAFETY INCORPORATED
CONDENSED CONSOLIDATED BALANCE SHEETS

Unaudited

(In thousands)	September 30, 2023	December 31, 2022
Assets		
Cash and cash equivalents	\$ 164,499	\$ 162,902
Trade receivables, less allowance for credit loss of \$7,262 and \$6,769	294,907	297,028
Inventories (Note 4)	324,077	338,316
Investments, short-term (Note 16)	—	9,905
Prepaid income taxes	29,379	21,700
Notes receivable, insurance companies (Note 17)	—	5,931
Prepaid expenses and other current assets	38,957	44,344
Total current assets	<u>851,819</u>	<u>880,126</u>
Property, plant and equipment, net (Note 5)	205,650	207,552
Operating lease right-of-use assets, net	49,125	44,142
Prepaid pension cost (Note 14)	151,400	141,643
Deferred tax assets (Note 10)	25,966	25,490
Goodwill (Note 13)	620,343	620,622
Intangible assets, net (Note 13)	268,321	281,853
Notes receivable, insurance companies (Note 17)	—	38,695
Insurance receivables (Note 17) and other noncurrent assets	21,711	136,853
Total assets	<u>\$ 2,194,335</u>	<u>\$ 2,376,976</u>
Liabilities		
Notes payable and current portion of long-term debt (Note 12)	\$ 26,198	\$ 7,387
Accounts payable	108,554	112,532
Employees' compensation	58,821	45,077
Insurance and product liability (Note 17)	9,551	73,898
Income taxes payable (Note 10)	28,205	6,149
Accrued restructuring (Note 3) and other current liabilities	94,072	100,822
Total current liabilities	<u>325,401</u>	<u>345,865</u>
Long-term debt, net (Note 12)	715,814	565,445
Pensions and other employee benefits (Note 14)	137,563	137,810
Noncurrent operating lease liabilities	40,913	35,345
Deferred tax liabilities (Note 10)	102,155	31,881
Product liability (Note 17) and other noncurrent liabilities	3,763	336,889
Total liabilities	<u>\$ 1,325,609</u>	<u>\$ 1,453,235</u>
Equity		
Preferred stock, 4.5% cumulative, \$50 par value (Note 7)	\$ 3,569	\$ 3,569
Common stock, no par value (Note 7)	303,417	281,980
Treasury shares, at cost (Note 7)	(363,371)	(361,438)
Accumulated other comprehensive loss (Note 6)	(160,410)	(158,717)
Retained earnings	1,085,521	1,158,347
Total shareholders' equity	<u>868,726</u>	<u>923,741</u>
Total liabilities and shareholders' equity	<u>\$ 2,194,335</u>	<u>\$ 2,376,976</u>

The accompanying notes are an integral part of the unaudited condensed consolidated financial statements.

MSA SAFETY INCORPORATED
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

Unaudited

(In thousands)	Nine Months Ended September 30,	
	2023	2022
Operating Activities		
Net (loss) income	\$ (17,827)	\$ 128,141
Depreciation and amortization	44,965	41,883
Tax-effected loss on divestiture of MSA LLC (Note 17)	199,578	—
Stock-based compensation (Note 11)	21,506	11,325
Pension income (Note 14)	(6,060)	(7,956)
Deferred income tax benefit (Note 10)	(531)	(2,451)
(Gain) loss on asset dispositions, net	(671)	4,776
Pension contributions (Note 14)	(4,274)	(5,743)
Currency exchange losses, net	8,781	4,788
Product liability expense (Note 17)	3	9,733
Collections on insurance receivables and notes receivable, insurance companies (Note 17)	—	9,510
Product liability payments (Note 17)	(5,250)	(9,076)
Contribution on divestiture of MSA LLC (Note 17)	(341,186)	—
Changes in:		
Trade receivables	(7,449)	1,958
Inventories (Note 4)	15,386	(86,599)
Accounts payable	(4,225)	2,629
Other current assets and liabilities	26,518	270
Other noncurrent assets and liabilities	4,679	715
Cash Flow (Used in) From Operating Activities	(66,057)	103,903
Investing Activities		
Capital expenditures	(30,979)	(28,753)
Proceeds from maturities of short-term investments (Note 16)	—	94,000
Purchase of short-term investments (Note 16)	—	(69,680)
Property disposals and other investing	2,690	38
Cash Flow Used in Investing Activities	(28,289)	(4,395)
Financing Activities		
Proceeds from long-term debt (Note 12)	1,507,000	798,000
Payments on long-term debt (Note 12)	(1,338,352)	(771,000)
Debt issuance costs	(1,138)	—
Cash dividends paid	(54,999)	(53,447)
Company stock purchases (Note 7)	(3,941)	(34,365)
Exercise of stock options (Note 7)	1,440	4,163
Employee stock purchase plan (Note 7)	497	486
Cash Flow From (Used in) Financing Activities	110,507	(56,163)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(14,152)	(23,498)
Increase in cash, cash equivalents and restricted cash	2,009	19,847
Beginning cash, cash equivalents and restricted cash	164,428	141,438
Ending cash, cash equivalents and restricted cash	\$ 166,437	\$ 161,285
Supplemental cash flow information:		
Cash and cash equivalents	\$ 164,499	\$ 159,613
Restricted cash included in prepaid expenses and other current assets	1,938	1,672
Total cash, cash equivalents and restricted cash	\$ 166,437	\$ 161,285

The accompanying notes are an integral part of the unaudited condensed consolidated financial statements.

MSA SAFETY INCORPORATED

CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN RETAINED EARNINGS
AND ACCUMULATED OTHER COMPREHENSIVE LOSS

Unaudited

(In thousands, except per share values)	Retained Earnings	Accumulated Other Comprehensive (Loss)
Balances June 30, 2022	\$ 1,098,048	\$ (170,278)
Net income	44,906	—
Foreign currency translation adjustments	—	(32,361)
Pension and post-retirement plan adjustments, net of tax benefit of \$981	—	2,299
Unrealized net losses on available-for-sale securities (Note 16)	—	13
Reclassification from accumulated other comprehensive loss into net income	—	2,912
Common dividends (\$0.46 per share)	(18,036)	—
Preferred dividends (\$0.5625 per share)	(10)	—
Balances September 30, 2022	\$ 1,124,908	\$ (197,415)
Balances June 30, 2023	\$ 1,038,750	\$ (141,928)
Net income	65,256	—
Foreign currency translation adjustments	—	(18,771)
Pension and post-retirement plan adjustments, net of tax expense of \$27	—	188
Reclassification from accumulated other comprehensive loss into net income (Note 6)	—	101
Common dividends (\$0.47 per share)	(18,475)	—
Preferred dividends (\$0.5625 per share)	(10)	—
Balances September 30, 2023	\$ 1,085,521	\$ (160,410)
Balances December 31, 2021	\$ 1,050,214	\$ (149,140)
Net income	128,141	—
Foreign currency translation adjustments	—	(58,075)
Pension and post-retirement plan adjustments, net of tax benefit of \$2,947	—	6,893
Unrecognized net losses on available-for-sale securities (Note 16)	—	(5)
Reclassification from accumulated other comprehensive loss into net income (Note 6)	—	2,912
Common dividends (\$1.36 per share)	(53,417)	—
Preferred dividends (\$1.6875 per share)	(30)	—
Balances September 30, 2022	\$ 1,124,908	\$ (197,415)
Balances December 31, 2022	\$ 1,158,347	\$ (158,717)
Net loss	(17,827)	—
Foreign currency translation adjustments	—	(2,538)
Pension and post-retirement plan adjustments, net of tax expense of \$259	—	742
Unrecognized net gains on available-for-sale securities (Note 16)	—	2
Reclassification from accumulated other comprehensive loss into net income (Note 6)	—	101
Common dividends (\$1.40 per share)	(54,969)	—
Preferred dividends (\$1.6875 per share)	(30)	—
Balances September 30, 2023	\$ 1,085,521	\$ (160,410)

The accompanying notes are an integral part of the unaudited condensed consolidated financial statements.

MSA SAFETY INCORPORATED
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Unaudited

Note 1—Basis of Presentation

The condensed consolidated financial statements of MSA Safety Incorporated and its subsidiaries ("MSA" or "the Company") are unaudited. These unaudited condensed consolidated financial statements include all adjustments, consisting of normal recurring adjustments, considered necessary by management to fairly state the Company's results. Intercompany accounts and transactions have been eliminated. The results reported in these unaudited condensed consolidated financial statements are not necessarily indicative of the results that may be expected for the entire year. The December 31, 2022, Balance Sheet data was derived from the audited Consolidated Balance Sheets, but does not include all disclosures required by accounting principles generally accepted in the United States of America ("U.S. GAAP"). This Form 10-Q report should be read in conjunction with MSA's Form 10-K for the year ended December 31, 2022, which includes all disclosures required by U.S. GAAP.

Note 2—Cash and Cash Equivalents

Several of the Company's subsidiaries participate in a notional cash pooling arrangement to manage global liquidity requirements. As part of a master netting arrangement, the participants combine their cash balances in pooling accounts at the same financial institution with the ability to offset bank overdrafts of one participant against positive cash account balances held by another participant. Under the terms of the master netting arrangement, the financial institution has the right, ability and intent to offset a positive balance in one account against an overdrawn amount in another account. Amounts in each of the accounts are unencumbered and unrestricted with respect to use. As such, the net cash balance related to this pooling arrangement is included in Cash and cash equivalents in the unaudited Condensed Consolidated Balance Sheets.

The Company's net cash pool position consisted of the following:

(In thousands)	September 30, 2023
Gross cash pool position	\$ 103,618
Less: cash pool borrowings	95,416
Net cash pool position	\$ 8,202

Note 3—Restructuring Charges

During the three and nine months ended September 30, 2023, we recorded restructuring charges of \$3.3 million and \$8.4 million, respectively. Americas segment restructuring charges of \$2.7 million during the nine months ended September 30, 2023, were related to manufacturing footprint optimization activities. International segment restructuring charges of \$3.6 million during the nine months ended September 30, 2023, were related to ongoing initiatives to drive profitable growth and improve productivity. Corporate segment restructuring charges of \$2.1 million during the nine months ended September 30, 2023, were related to footprint optimization activities and management restructuring.

During the three and nine months ended September 30, 2022, we recorded restructuring charges of \$0.9 million and \$3.1 million, respectively. International segment restructuring charges of \$2.2 million during the nine months ended September 30, 2022, were primarily related to the implementation of our European Shared Service Center in Warsaw, Poland. Americas segment restructuring charges of \$1.0 million during the nine months ended September 30, 2022, were primarily related to various optimization activities.

Restructuring reserves are included in Accrued restructuring and other current liabilities in the accompanying unaudited Condensed Consolidated Balance Sheets. Activity and reserve balances for restructuring by segment were as follows:

(In millions)	Americas	International	Corporate	Total
Reserve balances at December 31, 2021	\$ 3.3	\$ 17.4	\$ 0.3	\$ 21.0
Restructuring charges	2.3	5.1	0.6	8.0
Currency translation	0.1	(1.3)	—	(1.2)
Cash payments / utilization	(4.0)	(8.4)	(0.4)	(12.8)
Reserve balances at December 31, 2022	\$ 1.7	\$ 12.8	\$ 0.5	\$ 15.0
Restructuring charges	2.7	3.6	2.1	8.4
Currency translation	(0.2)	(0.2)	—	(0.4)
Cash payments	(3.2)	(6.5)	(2.3)	(12.0)
Reserve balances at September 30, 2023	\$ 1.0	\$ 9.7	\$ 0.3	\$ 11.0

Note 4—Inventories

The following table sets forth the components of inventory:

(In thousands)	September 30, 2023	December 31, 2022
Finished products	\$ 99,588	\$ 97,142
Work in process	22,904	16,360
Raw materials and supplies	201,585	224,814
Total inventories	\$ 324,077	\$ 338,316

Note 5—Property, Plant and Equipment

The following table sets forth the components of property, plant and equipment, net:

(In thousands)	September 30, 2023	December 31, 2022
Land	\$ 4,253	\$ 4,884
Buildings	135,544	138,618
Machinery and equipment	481,614	466,394
Construction in progress	26,202	22,097
Total	647,613	631,993
Less: accumulated depreciation	(441,963)	(424,441)
Property, plant and equipment, net	\$ 205,650	\$ 207,552

Note 6—Reclassifications Out of Accumulated Other Comprehensive Loss

Changes in accumulated other comprehensive loss were as follows:

(In thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Pension and other post-retirement benefits ^(a)				
Balance at beginning of period	\$ (49,781)	\$ (52,702)	\$ (50,335)	\$ (57,296)
Amounts reclassified from accumulated other comprehensive loss into net income (loss):				
Amortization of prior service credit (Note 14)	(24)	(48)	(72)	(144)
Recognized net actuarial losses (Note 14)	185	3,328	555	9,984
Tax expense (benefit)	27	(981)	259	(2,947)
Total amount reclassified from accumulated other comprehensive loss, net of tax, into net income (loss)	188	2,299	742	6,893
Balance at end of period	\$ (49,593)	\$ (50,403)	\$ (49,593)	\$ (50,403)
Available-for-sale securities				
Balance at beginning of period	\$ —	\$ (23)	\$ (2)	\$ (5)
Unrealized net gains (losses) on available-for-sale securities (Note 16)	—	13	2	(5)
Balance at end of period	\$ —	\$ (10)	\$ —	\$ (10)
Foreign currency translation				
Balance at beginning of period	\$ (92,147)	\$ (117,553)	\$ (108,380)	\$ (91,839)
Reclassification from accumulated other comprehensive loss into net income (loss) ^(b)	101	2,912	101	2,912
Foreign currency translation adjustments	(18,771)	(32,361)	(2,538)	(58,075)
Balance at end of period	\$ (110,817)	\$ (147,002)	\$ (110,817)	\$ (147,002)

^(a) Reclassifications out of accumulated other comprehensive loss and into net income (loss) are included in the computation of net periodic pension and other post-retirement benefit costs (refer to Note 14—Pensions and Other Post-retirement Benefits).

^(b) Reclassifications out of accumulated other comprehensive loss and into net income (loss) relate primarily to the approval of our plan to close a foreign subsidiary.

Note 7—Capital Stock

Preferred Stock - The Company has authorized 100,000 shares of \$50 par value 4.5% cumulative preferred nonvoting stock which is callable at \$52.50. There were 71,340 shares issued and 52,998 shares held in treasury at both September 30, 2023 and December 31, 2022. The Treasury shares at cost line in the unaudited Condensed Consolidated Balance Sheets includes \$1.8 million related to preferred stock. There were no shares of preferred stock purchased and subsequently held in treasury during the nine months ended September 30, 2023 or 2022. The Company has also authorized 1,000,000 shares of \$10 par value second cumulative preferred voting stock. No shares have been issued as of September 30, 2023.

Common Stock - The Company has authorized 180,000,000 shares of no par value common stock. There were 62,081,391 shares issued as of September 30, 2023 and December 31, 2022. No new shares were issued during the nine months ended September 30, 2023 or 2022. There were 39,310,511 and 39,213,064 shares outstanding at September 30, 2023 and December 31, 2022, respectively.

Treasury Shares - The Company's stock repurchase program authorizes up to \$100.0 million to repurchase MSA common stock in the open market and in private transactions. The stock repurchase program has no expiration date. The maximum number of shares that may be repurchased is calculated based on the dollars remaining under the program and the respective month-end closing share price. During the nine months ended September 30, 2023, no shares were repurchased under this program. During the nine months ended September 30, 2022, 251,408 shares were repurchased under this program. There were 22,770,880 and 22,868,327 treasury shares at September 30, 2023 and December 31, 2022, respectively.

The Company issues treasury shares for all stock-based benefit plans. Shares are issued from treasury at the average treasury share cost on the date of the transaction. There were 125,967 and 203,619 Treasury shares issued for these purposes during the nine months ended September 30, 2023 and 2022, respectively.

Common stock activity is summarized as follows:

(In thousands)	Three Months Ended September 30, 2023		Three Months Ended September 30, 2022	
	Common Stock	Treasury Cost ^(a)	Common Stock	Treasury Cost ^(a)
Balance at beginning of period	\$ 294,364	\$ (362,025)	\$ 267,645	\$ (359,314)
Stock compensation expense	8,477	—	2,967	—
Restricted and performance stock awards	(15)	15	(103)	103
Stock options exercised	591	307	2,501	1,364
Treasury shares purchased for stock compensation programs	—	(70)	—	(59)
Share repurchase program	—	—	—	(2,150)
Balance at end of period	\$ 303,417	\$ (361,773)	\$ 273,010	\$ (360,056)

^(a)Excludes treasury cost related to preferred stock.

(In thousands)	Nine Months Ended September 30, 2023		Nine Months Ended September 30, 2022	
	Common Stock	Treasury Cost ^(a)	Common Stock	Treasury Cost ^(a)
Balance at beginning of period	\$ 281,980	\$ (359,838)	\$ 260,121	\$ (328,776)
Stock compensation expense	21,506	—	11,325	—
Restricted and performance stock awards	(1,449)	1,449	(1,564)	1,564
Stock options exercised	948	492	2,704	1,459
Treasury shares purchased for stock compensation programs	—	(3,941)	—	(3,990)
Employee stock purchase program	432	65	424	62
Share repurchase program	—	—	—	(30,375)
Balance at end of period	\$ 303,417	\$ (361,773)	\$ 273,010	\$ (360,056)

^(a)Excludes treasury cost related to preferred stock.

Note 8—Segment Information

The Company is organized into four geographical operating segments that are based on management responsibilities: Northern North America; Latin America; Europe, Middle East & Africa; and Asia Pacific. The operating segments have been aggregated (based on economic similarities, the nature of their products, end-user markets and methods of distribution) into three reportable segments: Americas, International, and Corporate.

The Americas segment is comprised of our operations in Northern North American and Latin American geographies. The International segment is comprised of our operations in all geographies outside of the Americas. Certain global expenses are allocated to each segment in a manner consistent with where the benefits from the expenses are derived.

The Company's sales are allocated to each segment based primarily on the country destination of the end-customer.

Adjusted operating income (loss), adjusted operating margin, adjusted earnings before interest, taxes, depreciation and amortization (EBITDA) and adjusted EBITDA margin are the measures used by the chief operating decision maker to evaluate segment performance and allocate resources. Adjusted operating income (loss) is defined as operating income (loss) excluding restructuring charges, currency exchange (gains) losses, product liability expense, loss on divestiture of Mine Safety Appliances Company, LLC ("MSA LLC"), transaction costs and acquisition-related amortization. Adjusted operating margin is defined as adjusted operating income (loss) divided by segment net sales to external customers. Adjusted EBITDA is defined as adjusted operating income (loss) plus depreciation and amortization. Adjusted EBITDA margin is defined as adjusted EBITDA divided by segment net sales to external customers.

The accounting principles applied at the operating segment level in determining operating income (loss) are generally the same as those applied at the unaudited condensed consolidated financial statement level. Sales and transfers between operating segments are accounted for at market-based transaction prices and are eliminated in consolidation.

Reportable segment information is presented in the following table:

(In thousands, except percentages)	Americas	International	Corporate	Consolidated Totals
Three Months Ended September 30, 2023				
Net sales to external customers	\$ 314,273	\$ 132,455	\$ —	\$ 446,728
Operating income				94,123
Restructuring charges (Note 3)				3,285
Currency exchange losses, net				1,496
Amortization of acquisition-related intangible assets				2,315
Transaction costs ^(a)				78
Adjusted operating income (loss)	93,918	22,577	(15,198)	101,297
Adjusted operating margin %	29.9 %	17.0 %		
Depreciation and amortization				13,189
Adjusted EBITDA	103,157	26,289	(14,960)	114,486
Adjusted EBITDA margin %	32.8 %	19.8 %		
Three Months Ended September 30, 2022				
Net sales to external customers	\$ 276,082	\$ 105,612	\$ —	\$ 381,694
Operating income				64,313
Restructuring charges (Note 3)				899
Currency exchange losses, net				2,979
Product liability expense (Note 17)				4,035
Amortization of acquisition-related intangible assets				2,279
Transaction costs ^(a)				620
Adjusted operating income (loss)	75,088	8,448	(8,411)	75,125
Adjusted operating margin %	27.2 %	8.0 %		
Depreciation and amortization				11,518
Adjusted EBITDA	83,945	10,980	(8,282)	86,643
Adjusted EBITDA margin %	30.4 %	10.4 %		

^(a) Transaction costs include advisory, legal, accounting, valuation, and other professional or consulting fees incurred during acquisitions and divestitures. These costs are included in Selling, general and administrative expense in the unaudited Condensed Consolidated Statements of Operations.

(In thousands, except percentages)	Americas	International	Corporate	Consolidated Totals
Nine Months Ended September 30, 2023				
Net sales to external customers	\$ 902,918	\$ 389,372	\$ —	\$ 1,292,290
Operating income				129,070
Restructuring charges (Note 3)				8,382
Currency exchange losses, net				8,781
Loss on divestiture of MSA LLC (Note 17)				129,211
Product liability expense (Note 17)				3
Amortization of acquisition-related intangible assets				6,936
Transaction costs ^(a)				78
Adjusted operating income (loss)	260,428	60,099	(38,066)	282,461
Adjusted operating margin %	28.8 %	15.4 %		
Depreciation and amortization				38,029
Adjusted EBITDA	287,628	70,296	(37,434)	320,490
Adjusted EBITDA margin %	31.9 %	18.1 %		
Nine Months Ended September 30, 2022				
Net sales to external customers	\$ 754,116	\$ 330,583	\$ —	\$ 1,084,699
Operating income				168,517
Restructuring charges (Note 3)				3,146
Currency exchange losses, net				4,788
Product liability expense (Note 17)				9,733
Amortization of acquisition-related intangible assets				6,922
Transaction costs ^(a)				1,476
Adjusted operating income (loss)	184,664	34,674	(24,756)	194,582
Adjusted operating margin %	24.5 %	10.5 %		
Depreciation and amortization				34,961
Adjusted EBITDA	210,201	43,708	(24,366)	229,543
Adjusted EBITDA margin %	27.9 %	13.2 %		

^(a) Transaction costs include advisory, legal, accounting, valuation, and other professional or consulting fees incurred during acquisitions and divestitures. These costs are included in Selling, general and administrative expense in the unaudited Condensed Consolidated Statements of Operations.

Total sales by product group was as follows:

Three Months Ended September 30, 2023 (In thousands, except percentages)	Consolidated		Americas		International	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Fixed Gas & Flame Detection	\$ 112,012	25%	\$ 73,074	23%	\$ 38,938	29%
Breathing Apparatus	111,024	25%	79,908	25%	31,116	24%
Firefighter Helmets & Protective Apparel	64,707	15%	51,608	16%	13,099	10%
Portable Gas Detection	43,682	10%	31,933	10%	11,749	9%
Industrial Head Protection	45,780	10%	36,402	12%	9,378	7%
Fall Protection	31,980	7%	20,235	7%	11,745	9%
Other	37,543	8%	21,113	7%	16,430	12%
Total	\$ 446,728	100%	\$ 314,273	100%	\$ 132,455	100%
Three Months Ended September 30, 2022						
(In thousands, except percentages)	Consolidated		Americas		International	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Fixed Gas & Flame Detection	\$ 87,746	23%	\$ 62,134	23%	\$ 25,612	24%
Breathing Apparatus	91,977	24%	70,482	26%	21,495	20%
Firefighter Helmets & Protective Apparel	54,738	14%	41,958	15%	12,780	12%
Portable Gas Detection	39,481	10%	28,358	10%	11,123	11%
Industrial Head Protection	43,608	11%	34,620	13%	8,988	9%
Fall Protection	27,839	7%	17,658	6%	10,181	10%
Other	36,305	11%	20,872	7%	15,433	14%
Total	\$ 381,694	100%	\$ 276,082	100%	\$ 105,612	100%
Nine Months Ended September 30, 2023						
(In thousands, except percentages)	Consolidated		Americas		International	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Fixed Gas & Flame Detection	\$ 311,502	24%	\$ 200,604	22%	\$ 110,898	28%
Breathing Apparatus	288,976	22%	201,945	22%	87,031	22%
Firefighter Helmets & Protective Apparel	192,634	15%	152,784	17%	39,850	10%
Portable Gas Detection	149,036	12%	108,088	12%	40,948	11%
Industrial Head Protection	135,851	11%	106,120	12%	29,731	8%
Fall Protection	97,019	7%	63,168	7%	33,851	9%
Other	117,272	9%	70,209	8%	47,063	12%
Total	\$ 1,292,290	100%	\$ 902,918	100%	\$ 389,372	100%
Nine Months Ended September 30, 2022						
(In thousands, except percentages)	Consolidated		Americas		International	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Fixed Gas & Flame Detection	\$ 251,321	23%	\$ 167,269	22%	\$ 84,052	25%
Breathing Apparatus	254,878	23%	185,490	25%	69,388	21%
Firefighter Helmets & Protective Apparel	151,097	14%	110,471	15%	40,626	12%
Portable Gas Detection	121,116	11%	85,815	11%	35,301	11%
Industrial Head Protection	123,489	11%	96,808	13%	26,681	8%
Fall Protection	79,114	7%	50,940	7%	28,174	9%
Other	103,684	11%	57,323	7%	46,361	14%
Total	\$ 1,084,699	100%	\$ 754,116	100%	\$ 330,583	100%

Note 9—Earnings (Loss) per Share

Basic earnings (loss) per share is computed by dividing net income, after the deduction of preferred stock dividends and undistributed earnings allocated to participating securities, by the weighted average number of common shares outstanding during the period. Diluted earnings (loss) per share assumes the issuance of common stock for all potentially dilutive share equivalents outstanding not classified as participating securities. Participating securities are defined as unvested stock-based compensation awards that contain nonforfeitable rights to dividends.

(In thousands, except per share values)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net income (loss)	\$ 65,256	\$ 44,906	\$ (17,827)	\$ 128,141
Preferred stock dividends	(10)	(10)	(30)	(30)
Net income (loss) attributable to common equity	65,246	44,896	(17,857)	128,111
Dividends and undistributed earnings allocated to participating securities	(8)	(8)	(16)	(21)
Net income (loss) attributable to common shareholders	65,238	44,888	(17,873)	128,090
Basic weighted-average shares outstanding	39,303	39,172	39,267	39,243
Stock-based compensation awards ^(a)	147	127	—	171
Diluted weighted-average shares outstanding	39,450	39,299	39,267	39,414
Antidilutive shares	—	—	154	—
Earnings (loss) per share:				
Basic	\$ 1.66	\$ 1.15	\$ (0.46)	\$ 3.26
Diluted	\$ 1.65	\$ 1.14	\$ (0.46)	\$ 3.25

^(a) During periods in which the Company incurs a net loss, stock-based compensation awards are excluded from the computation of diluted earnings per share because their effect would be anti-dilutive. As such, during periods in which the Company incurs a net loss, diluted weighted-average shares outstanding are equivalent to basic weighted-average shares outstanding.

Note 10—Income Taxes

The Company's effective tax rate for the three months ended September 30, 2023, was 25.6%, which differs from the United States of America ("U.S.") federal statutory rate of 21% primarily due to higher earnings in higher tax jurisdictions and nondeductible compensation. The Company's effective tax rate for the three months ended September 30, 2022, was 26.0%, which differs from the U.S. federal statutory rate of 21% primarily due to state income taxes and nondeductible foreign exchange on entity closures.

The Company's effective tax rate for the nine months ended September 30, 2023, was 116.6%, which differs from the "U.S." federal statutory rate of 21% primarily due to the divestiture of MSA LLC and the non-deductible loss recorded on the derecognition of the product liability reserves and related assets. Refer to Note 17—Contingencies to the unaudited condensed consolidated financial statements in Part I Item 1 of this Form 10-Q for further information on this transaction. The Company's effective tax rate for the nine months ended September 30, 2022, was 24.4%, which differs from the U.S. federal statutory rate of 21% primarily due to state income taxes and nondeductible foreign exchange on entity closures.

At September 30, 2023, the Company had a gross liability for unrecognized tax benefits of \$3.4 million. The Company has recognized tax benefits associated with these liabilities of \$1.7 million at September 30, 2023. The gross liability includes amounts associated with foreign tax exposure in prior periods.

The Company recognizes interest and penalties related to unrecognized tax benefits in interest expense and operating expenses, respectively. The Company's liability for accrued interest related to uncertain tax positions was \$0.3 million at September 30, 2023.

We are subject to regular review and audit by both foreign and domestic tax authorities. While we believe our tax positions will be sustained, the final outcome of tax audits and related litigation may differ materially from the tax amounts recorded in our unaudited condensed consolidated financial statements.

Note 11—Stock Plans

The 2016 Management Equity Incentive Plan provides for various forms of stock-based compensation for eligible employees through May 2026 including stock options, restricted stock awards, restricted stock units and performance stock units. The 2017 Non-Employee Directors' Equity Incentive Plan provides for grants of stock options, restricted stock awards and restricted stock units to non-employee directors through May 2027.

Stock compensation expense, included in Selling, general and administrative expense in the unaudited Condensed Consolidated Statements of Operations, is as follows:

(In thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Stock compensation expense	\$ 8,477	\$ 2,967	\$ 21,506	\$ 11,325
Income tax benefit	2,077	727	5,269	2,775
Stock compensation expense, net of tax	\$ 6,400	\$ 2,240	\$ 16,237	\$ 8,550

We have not capitalized any stock-based compensation expense.

A summary of stock option activity for the nine months ended September 30, 2023, is as follows:

	Shares	Weighted Average Exercise Price
Outstanding at January 1, 2023	58,156	\$ 46.48
Exercised	(30,735)	46.86
Forfeited	(226)	49.44
Outstanding and exercisable at September 30, 2023	27,195	\$ 46.02

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Restricted stock awards and restricted stock units are valued at the market value of the stock on the grant date. A summary of restricted stock activity for the nine months ended September 30, 2023, is as follows:

	Shares	Weighted Average Grant Date Fair Value
Unvested at January 1, 2023	145,886	\$ 137.36
Granted	74,004	140.37
Vested	(39,895)	124.51
Forfeited	(8,463)	141.17
Unvested at September 30, 2023	171,532	\$ 141.66

Performance stock units that have a market condition modifier are valued at an estimated fair value using a Monte Carlo model. The final number of shares to be issued for performance stock units granted in the first quarter of 2023 may range from 0% to 200% of the target award based on achieving the specified performance targets over the performance period plus an additional modifier based on total shareholder return ("TSR") over the performance period. The following weighted average assumptions were used in estimating the fair value of the performance stock units granted in the first quarter of 2023.

Fair value per unit	\$131.46
Risk-free interest rate	4.4%
Expected dividend yield	1.43%
Expected volatility	36.7%
MSA stock beta	0.739

The risk-free interest rate is based on the U.S. Treasury Constant Maturity rates as of the grant date converted into an implied spot rate yield curve. Expected dividend yield is based on the most recent annualized dividend divided by the one year average closing share price. Expected volatility is based on the three year historical volatility preceding the grant date using daily stock prices. Expected life is based on historical stock option exercise data.

A summary of performance stock unit activity for the nine months ended September 30, 2023, is as follows:

	Shares	Weighted Average Grant Date Fair Value
Unvested at January 1, 2023	178,760	\$ 146.28
Granted	77,654	132.39
Performance adjustments ^(a)	(3,009)	127.40
Vested	(53,407)	127.36
Forfeited	(10,146)	147.83
Unvested at September 30, 2023	189,852	\$ 146.14

^(a)Performance adjustments relate primarily to the final number of shares issued for the 2020 performance unit awards which vested in the first quarter of 2023 at 94.9% of the target award based on both cumulative performance against EBITDA margin and revenue growth targets and MSA's TSR during the three-year performance period.

Note 12—Long-Term Debt

(In thousands)	September 30, 2023	December 31, 2022
2016 Senior Notes payable through 2031, 3.40%, net of debt issuance costs	\$ 59,489	\$ 66,379
2021 Senior Notes payable through 2036, 2.69%, net of debt issuance costs	99,723	99,711
2021 Senior Notes payable through 2036, 2.69%, net of debt issuance costs	99,723	99,711
2023 Term Loan credit agreement maturing in 2026, net of debt issuance costs	236,788	—
2023 Senior Notes payable through 2028, 5.25%, net of debt issuance costs	49,936	—
Senior revolving credit facility maturing in 2026, net of debt issuance costs	196,353	307,031
Total	742,012	572,832
Amounts due within one year	26,198	7,387
Long-term debt, net of debt issuance costs	\$ 715,814	\$ 565,445

On May 24, 2021, the Company entered into a Fourth Amended and Restated Credit Agreement (the “Revolving Credit Facility” or “Facility”) that extended its term through May 24, 2026 and increased the capacity to \$900.0 million. Under the amended agreement, the Company may elect either a Base rate of interest (“BASE”) or an interest rate based on the London Interbank Offered Rate (“LIBOR”). The BASE is a daily fluctuating per annum rate equal to the highest of (i) 0.00%, (ii) the Prime Rate, (iii) the Federal Funds Open Rate plus one half of one percent (0.5%), (iv) the Overnight Bank Funding Rate, plus one half of one percent (0.5%), or (v) the Daily LIBOR Rate plus one percent (1.00%). The Company pays a credit spread of 0 to 175 basis points based on the Company’s net EBITDA leverage ratio and elected rate (BASE or LIBOR). The Company has a weighted average revolver interest rate of 6.72% as of September 30, 2023. At September 30, 2023, \$700.8 million of the existing \$900.0 million Revolving Credit Facility was unused, including letters of credit issued under the Facility. The Facility also provides an accordion feature that allows the Company to access an additional \$400.0 million of capacity pending approval by MSA’s board of directors and from the bank group.

On July 1, 2021, the Company entered into a Third Amended and Restated Multi-Currency Note Purchase and Private Shelf Agreement (the “Prudential Note Agreement”) with PGIM, Inc. (“Prudential”). The Prudential Note Agreement provided for (i) the issuance of \$100.0 million of 2.69% Series C Senior Notes due July 1, 2036 and (ii) the establishment of an uncommitted note issuance facility whereby the Company may request, subject to Prudential’s acceptance in its sole discretion, the issuance of up to \$335.0 million aggregate principal amount of senior unsecured notes. As of September 30, 2023, the Company has outstanding £48.8 million (approximately \$59.6 million at September 30, 2023) of 3.4% Series B Senior Notes due January 22, 2031. Remaining maturities of this note are £6.1 million (approximately \$7.4 million at September 30, 2023) due January 22, 2024, with annual maturities of £6.1 million through January 2031.

On July 1, 2021, the Company entered into a Second Amended and Restated Master Note Facility (the “NYL Note Facility”) with NYL Investors. The NYL Note Facility provided for (i) the issuance of \$100.0 million of 2.69% Series A Senior Notes due July 1, 2036, and (ii) the establishment of an uncommitted note issuance facility whereby the Company may request, subject to NYL Investors’ acceptance in its sole discretion, the issuance of up to \$200.0 million aggregate principal amount of senior unsecured notes. On June 29, 2023, the Company issued \$50 million of 5.25% Series B Senior Notes due July 1, 2028, pursuant to the NYL Note Facility (the “Notes”). The Notes bear interest at 5.25% per annum, payable semi-annually, and mature on July 1, 2028. The Notes provide for a principal payment of \$25 million on July 1, 2027, with the remaining \$25 million due on July 1, 2028. The Notes may be redeemed at the Company’s option prior to their maturity at a make-whole redemption price calculated as provided in the NYL Note Facility. The proceeds of the Notes were used on June 29, 2023, to pay down an equivalent amount of borrowings under the Company’s Revolving Credit Facility with PNC Bank, National Association, as Administrative Agent.

The Revolving Credit Facility, Prudential Note Agreement and NYL Note Facility require the Company to comply with specified financial covenants, including a requirement to maintain a minimum fixed charges coverage ratio of not less than 1.50 to 1.00 and a consolidated leverage ratio not to exceed 3.50 to 1.00; except during an acquisition period, defined as four consecutive fiscal quarters beginning with the quarter of acquisition, in which case the consolidated net leverage ratio shall not exceed 4.00 to 1.00; in each case calculated on the basis of the trailing four fiscal quarters. In addition, the agreements contain negative covenants limiting the ability of the Company and its subsidiaries to incur additional indebtedness or issue guarantees, create or incur liens, make loans and investments, make acquisitions, transfer or sell assets, enter into transactions with affiliated parties, make changes in its organizational documents that are materially adverse to lenders or modify the nature of the Company's or its subsidiaries' business, subject to certain exceptions and limitations, including carve-outs and baskets. All credit facilities exclude MSA LLC prior to the divestiture of this subsidiary on January 5, 2023, as discussed further in Note 17.

During August 2021 and June 2023, respectively, the Company amended its Revolving Credit Facility to transition from Sterling LIBOR reference rates to Sterling Overnight Interbank Average Rate ("SONIA") reference rates and from U.S. LIBOR reference rates to Secured Overnight Financing Rate ("SOFR") reference rates. The Company will apply the optional expedients in ASC 848, Reference Rate Reform, to these modifications driven by reference rate reform, accounting for the modifications as a continuation of the existing contracts. Therefore, these modifications will not require remeasurement at the modification date or a reassessment of previous accounting determinations. As such, the Company does not anticipate the change in reference rates will have an impact on the Company's unaudited condensed consolidated financial statements.

On January 5, 2023, the Company entered into a new \$250 million term loan facility to fund the divestiture of MSA LLC, a wholly owned subsidiary. Under the agreement, the Company may elect either BASE or an interest rate based on SOFR. The Company pays a credit spread of 0 to 200 basis points based on the Company's net EBITDA leverage ratio and elected rate. The Company had a Term Loan interest rate of 6.93% as of September 30, 2023.

As of September 30, 2023, the Company was in full compliance with the restrictive covenants under its various credit agreements.

The Company had outstanding bank guarantees and standby letters of credit with banks as of September 30, 2023, totaling \$9.2 million, of which \$1.5 million relate to the Revolving Credit Facility. The letters of credit serve to cover customer requirements in connection with certain sales orders and insurance companies. The Company is also required to provide cash collateral in connection with certain arrangements. At September 30, 2023, the Company has \$1.9 million of restricted cash in support of these arrangements.

Note 13—Goodwill and Intangible Assets, Net

Changes in goodwill during the nine months ended September 30, 2023, were as follows:

(In thousands)	Goodwill
Balance at January 1, 2023	\$ 620,622
Currency translation	(279)
Balance at September 30, 2023	\$ 620,343

At September 30, 2023, goodwill of \$447.6 million and \$172.7 million related to the Americas and International reportable segments, respectively.

Changes in intangible assets, net, during the nine months ended September 30, 2023, were as follows:

(In thousands)	Intangible Assets
Net balance at January 1, 2023	\$ 281,853
Amortization expense	(13,570)
Currency translation	38
Net balance at September 30, 2023	\$ 268,321

At September 30, 2023, intangible assets, net, includes a trade name related to Globe Manufacturing Company, LLC ("Globe") with an indefinite life totaling \$60.0 million.

Note 14—Pensions and Other Post-retirement Benefits

Components of net periodic benefit (income) cost consisted of the following:

(In thousands)	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Three Months Ended September 30,				
Service cost	\$ 1,884	\$ 3,099	\$ 53	\$ 82
Interest cost	5,918	3,613	273	148
Expected return on plan assets	(9,906)	(12,418)	—	—
Amortization of prior service cost (credit)	37	36	(61)	(84)
Recognized net actuarial losses	47	3,018	138	310
Net periodic benefit (income) cost ^(a)	<u>\$ (2,020)</u>	<u>\$ (2,652)</u>	<u>\$ 403</u>	<u>\$ 456</u>
Nine Months Ended September 30,				
Service cost	\$ 5,652	\$ 9,297	\$ 159	\$ 246
Interest cost	17,754	10,839	819	444
Expected return on plan assets	(29,718)	(37,254)	—	—
Amortization of prior service cost (credit)	111	108	(183)	(252)
Recognized net actuarial losses	141	9,054	414	930
Net periodic benefit (income) cost ^(a)	<u>\$ (6,060)</u>	<u>\$ (7,956)</u>	<u>\$ 1,209</u>	<u>\$ 1,368</u>

^(a) Components of net periodic benefit (income) cost other than service cost are included in the line item Other income, net, and service costs are included in the line items Cost of products sold and Selling, general and administrative in the unaudited Condensed Consolidated Statements of Operations.

We made contributions of \$4.3 million and \$5.7 million to our pension plans during the nine months ended September 30, 2023, and 2022, respectively. We expect to make total contributions of \$5.7 million to our pension plans in 2023, which are primarily associated with statutorily required plans in the International reporting segment.

Note 15—Derivative Financial Instruments

As part of our currency exchange rate risk management strategy, we enter into certain derivative foreign currency forward contracts that do not meet the U.S. GAAP criteria for hedge accounting but have the impact of partially offsetting certain of our foreign currency exposures. We account for these forward contracts at fair value and report the related gains or losses in currency exchange losses, net, in the unaudited Condensed Consolidated Statements of Operations. The notional amount of open forward contracts was \$106.4 million and \$103.0 million at September 30, 2023, and December 31, 2022, respectively.

The following table presents the unaudited Condensed Consolidated Balance Sheets location and fair value of assets and liabilities associated with derivative financial instruments:

(In thousands)	September 30, 2023	December 31, 2022
Derivatives not designated as hedging instruments:		
Foreign exchange contracts: prepaid expenses and other current assets	\$ 21	\$ 724
Foreign exchange contracts: accrued restructuring and other current liabilities	1,610	85

The following table presents the unaudited Condensed Consolidated Statements of Operations and unaudited Condensed Consolidated Statements of Cash Flows location and the loss impact of derivative financial instruments:

(In thousands)	Nine Months Ended September 30,	
	2023	2022
Derivatives not designated as hedging instruments:		
Foreign exchange contracts: currency exchange losses, net	\$ 2,986	\$ 13,586

Note 16—Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy consists of three broad levels, which gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are:

- Level 1—Observable inputs that reflect unadjusted quoted prices for identical assets or liabilities in active markets.
- Level 2—Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3—Unobservable inputs for the asset or liability.

The valuation methodologies we used to measure financial assets and liabilities include the derivative financial instruments described in Note 15—Derivative Financial Instruments. We estimate the fair value of the derivative financial instruments, consisting of foreign currency forward contracts, based upon valuation models with inputs that generally can be verified by observable market conditions and do not involve significant management judgment. Accordingly, the fair values of the derivative financial instruments are classified within Level 2 of the fair value hierarchy. With the exception of our investments in marketable securities and fixed rate long-term debt, we believe that the reported carrying amounts of our financial assets and liabilities approximate their fair values.

Our investments in available-for-sale marketable securities, primarily fixed income, were transferred to Sag Main Holdings, LLC, on January 5, 2023, as part of our MSA LLC divestiture as described in Note 17—Contingencies. Prior to the divestiture, these investments were valued at fair value using quoted market prices for similar securities or pricing models. Accordingly, the fair values of the investments were classified within Level 2 of the fair value hierarchy. The amortized cost basis of our investments was \$9.9 million as of December 31, 2022. The fair value was \$9.9 million as of December 31, 2022, which was reported in Investments, short-term in the accompanying unaudited Condensed Consolidated Balance Sheets. Prior to the divestiture, changes in fair value were recorded in Other comprehensive income (loss), net of tax. No impairment losses relating to these securities occurred during the three months ended March 31, 2023. All investments in marketable securities had maturities of one year or less and were in an unrealized loss position as of December 31, 2022.

The reported carrying amount of our fixed rate long-term debt was \$309.6 million and \$266.5 million at September 30, 2023, and December 31, 2022, respectively. The fair value of this debt was \$255.1 million and \$218.3 million at September 30, 2023, and December 31, 2022, respectively. The fair value of this debt was determined using Level 2 inputs by evaluating similarly rated companies with publicly traded bonds where available or current borrowing rates available for financings with similar terms and maturities.

Note 17—Contingencies

Product liability

The Company and its subsidiaries face an inherent business risk of exposure to legal claims arising from the alleged failure of our products to prevent the types of personal injury or death against which they are designed to protect. Product liability claims are categorized as either single incident or cumulative trauma.

Single incident product liability claims. Single incident product liability claims involve incidents of short duration that are typically known when they occur and involve observable injuries, which provide an objective basis for quantifying damages. Management has established reserves for the single incident product liability claims of the Company's various subsidiaries, including asserted single incident product liability claims and incurred but not reported ("IBNR") single incident claims. To determine the reserves, Management makes reasonable estimates of losses for single incident claims based on the number and characteristics of asserted claims, historical experience, sales volumes, expected settlement costs, and other relevant information. The reserve for single incident product liability claims was \$1.3 million at September 30, 2023 and \$1.4 million at December 31, 2022. Single incident product liability benefit was \$0.1 million for the nine months ended September 30, 2023, and expense was \$0.1 million for the nine months ended September 30, 2022. Single incident product liability exposures are evaluated on an annual basis, or more frequently if changing circumstances warrant. Adjustments are made to the reserve as appropriate. The reserve has not been discounted to present value and does not include future amounts which will be spent to defend the claims.

Cumulative trauma product liability claims. Cumulative trauma product liability claims involve alleged exposures to harmful substances (e.g., silica, asbestos and coal dust) that occurred years ago and may have developed over long periods of time into diseases such as silicosis, asbestosis, mesothelioma, or coal worker's pneumoconiosis. Prior to the divestiture described below, one of the Company's former subsidiaries, MSA LLC, was named as a defendant in various lawsuits related to such claims. These lawsuits mainly involve respiratory protection products allegedly manufactured and sold by MSA LLC or its predecessors.

Management previously established a reserve for MSA LLC's potential exposure to cumulative trauma product liability claims. Prior to its divestiture, MSA LLC's total cumulative trauma product liability reserve was \$395.1 million, including \$13.4 million for claims settled but not yet paid and related defense costs, as of December 31, 2022. The reserve included estimated amounts related to asserted and IBNR asbestos, silica, and coal dust claims expected to be resolved through the year 2075. The reserve was not discounted to present value and did not include future amounts which will be spent to defend the claims. Defense costs were recognized in the unaudited Condensed Consolidated Statements of Operations as incurred.

At December 31, 2022, \$65.1 million of the total reserve for cumulative trauma product liability claims was recorded in the Insurance and product liability line within other current liabilities in the Consolidated Balance Sheets and the remainder, \$330.0 million, is recorded in the Product liability and other noncurrent liabilities line.

Prior to the divestiture, MSA LLC's cumulative trauma product liability reserve was based upon an estimate of MSA LLC's current and potential future liability for cumulative trauma product liability claims, in accordance with applicable accounting principles. See further discussion on the process and assumptions used to derive this estimate in Note 20—Contingencies of the consolidated financial statements in Part II Item 8 of MSA's Form 10-K for the year ended December 31, 2022.

On January 5, 2023, the Company entered into a membership interest purchase agreement (the "Purchase Agreement") with Sag Main Holdings, LLC (the "Buyer"). The Buyer is a joint venture between R&Q Insurance Holdings Ltd. ("R&Q") and Obra Capital, Inc. ("Obra"). Under the Purchase Agreement, on January 5, 2023, the Company transferred to the Buyer all of the issued and outstanding limited liability company interests of MSA LLC (the "Sale"). In connection with the closing, the Company contributed \$341.2 million in cash and cash equivalents, while R&Q and Obra contributed an additional \$35.0 million.

As MSA LLC was the obligor for the Company's legacy cumulative trauma product liability reserves and policyholder of the related insurance assets, the rights and obligations related to these items transferred upon the sale to the Buyer. In addition, pursuant to the Purchase Agreement, the Buyer and MSA LLC have agreed to indemnify the Company and its affiliates for legacy cumulative trauma product liabilities and other product liabilities, and a subsidiary of the Company has agreed to indemnify MSA LLC for all other historical liabilities of MSA LLC. This indemnification is not subject to any cap or time limitation. In connection with the sale, the Company and its Board of Directors received a solvency opinion from an independent advisory firm that MSA LLC was solvent and adequately capitalized after giving effect to the transaction.

Following the completion of the sale and transfer, the Company no longer has any obligation with respect to pending and future cumulative trauma product liability claims relating to these matters. As such, all legacy cumulative trauma product liability reserves, related insurance assets, and associated deferred tax assets of the divested subsidiary were derecognized from our balance sheet and the Company incurred a tax-effected loss on the divestiture of MSA LLC of \$199.6 million, including transaction related costs of \$5.6 million. R&Q and Obra's joint venture has assumed management of the divested subsidiary, including the management of its claims and associated assets.

Below is a summary of the impact of the divestiture of MSA LLC on our unaudited Condensed Consolidated Statements of Operations for the three months ended March 31, 2023 (no additional impact for the three months ended September 30, 2023):

(In millions)	Three Months Ended March 31, 2023
Cash and cash equivalents	\$ (341.2)
Current insurance receivables	(17.3)
Notes receivable, insurance companies	(5.9)
Noncurrent insurance receivables	(110.3)
Notes receivable, insurance companies, noncurrent	(38.7)
Current product liability	65.1
Noncurrent product liability	324.7
Loss on divestiture of MSA LLC before transaction costs	(123.6)
Transaction costs	(5.6)
Loss on divestiture of MSA LLC	(129.2)
Income tax expense ^(a)	(70.4)
Tax-effected loss on divestiture of MSA LLC	\$ (199.6)

^(a) Related to the write-off of deferred tax asset related to product liability reserve

Insurance Receivable and Notes Receivable, Insurance Companies

Many years ago, MSA LLC purchased insurance policies from various insurance carriers that, subject to common contract exclusions, provided coverage for cumulative trauma product liability losses (the "Occurrence-Based Policies").

Prior to the divestiture of MSA LLC, when adjustments were made to amounts recorded in the cumulative trauma product liability reserve, we calculated amounts due to be reimbursed pursuant to the terms of the negotiated Coverage-In-Place Agreements, including cumulative trauma product liability losses and related defense costs, and we recorded the amounts probable of reimbursement as insurance receivables.

Insurance receivables at December 31, 2022 totaled \$127.6 million, of which \$17.3 million was reported in Prepaid expenses and other current assets in the unaudited Condensed Consolidated Balance Sheets and \$110.3 million was reported in Insurance receivables and other noncurrent assets.

A summary of insurance receivables balance and activity related to cumulative trauma product liability losses and divestiture of MSA LLC is as follows:

(In millions)	Nine Months Ended September 30, 2023	Year Ended December 31, 2022
Balance beginning of period	\$ 127.6	\$ 130.2
Divestiture of MSA LLC	(127.6)	—
Additions	—	1.8
Collections and other adjustments	—	(4.4)
Balance end of period	\$ —	\$ 127.6

Prior to the divestiture of MSA LLC, notes receivable from insurance companies at December 31, 2022 totaled \$44.6 million of which \$5.9 million was reported in Notes receivable, insurance companies, current in the unaudited Condensed Consolidated Balance Sheets and \$38.7 million was reported in Notes receivable, insurance companies, noncurrent.

A summary of notes receivables from insurance companies balance is as follows:

(In millions)	Nine Months Ended September 30, 2023	Year Ended December 31, 2022
Balance beginning of period	\$ 44.6	\$ 48.5
Divestiture of MSA LLC	(44.6)	—
Additions	—	1.2
Collections	—	(5.1)
Balance end of period	\$ —	\$ 44.6

Other Litigation

Globe, a subsidiary of the Company, is defending claims in which plaintiffs assert that certain products allegedly containing per- and polyfluoroalkyl substances (“PFAS”) have caused harm, including injury or health issues. PFAS are a large class of substances that are widely used in everyday products. Specifically, Globe builds turnout gear from technical fabrics sourced from a small pool of specialty textile manufacturers. These protective fabrics have been tested and certified to meet industry standards, and some of them contain PFAS to achieve water, oil, or chemical resistance. At this time, no manufacturer of firefighter protective clothing is able to meet current National Fire Protection Association safety standards while offering coats or pants that are completely PFAS free.

Globe believes it has valid defenses to these claims. These matters are at a very early stage with numerous factual and legal issues to be resolved. Defense costs relating to these lawsuits are recognized in the unaudited Condensed Consolidated Statements of Operations as incurred. Globe is also pursuing insurance coverage and indemnification related to the lawsuits. As of October 20, 2023, Globe was named as a defendant in 165 lawsuits comprised of approximately 8,432 claims, plus one action filed on behalf of a putative class of Florida firefighters and certain of their dependents.

MSA LLC is also a defendant in a number of PFAS lawsuits and the Buyer assumed responsibility for these and any similar future claims specific to MSA LLC in connection with the divestiture on January 5, 2023.

Product Warranty

The Company provides warranties on certain product sales. Product warranty reserves are established in the same period that revenue from the sale of the related products is recognized, or in the period that a specific issue arises as to the functionality of the Company's product. The determination of such reserves requires the Company to make estimates of product return rates and expected costs to repair or to replace the products under warranty.

The amounts of the reserves are based on established terms and the Company's best estimate of the amounts necessary to settle future and existing claims on products sold as of the balance sheet date. If actual return rates and/or repair and replacement costs differ significantly from estimates, adjustments to recognize additional cost of sales may be required in future periods.

The following table reconciles changes in the Company's accrued warranty reserve:

(In thousands)	Nine Months Ended September 30, 2023	Year Ended December 31, 2022
Beginning warranty reserve	\$ 15,230	\$ 12,423
Warranty payments	(7,364)	(10,631)
Warranty claims	6,832	14,544
Provision for product warranties and other adjustments	(91)	(1,106)
Ending warranty reserve	\$ 14,607	\$ 15,230

Warranty expense was \$6.7 million and \$9.0 million for the nine months ended September 30, 2023, and 2022, respectively, and is included in Costs of products sold on the unaudited Condensed Consolidated Statements of Operations.

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

The following discussion and analysis should be read in conjunction with the historical financial statements and other financial information included elsewhere in this quarterly report on Form 10-Q. This discussion may contain forward-looking statements that involve risks and uncertainties. The forward-looking statements are not historical facts, but rather are based on current expectations, estimates, assumptions and projections about our industry, business and future financial results. Our actual results could differ materially from the results contemplated by these forward-looking statements due to a number of factors, including those discussed in the sections of our annual report entitled “Forward-Looking Statements” and “Risk Factors,” and those discussed in our Form 10-Q quarterly reports filed after such annual report (such as in Part II, Item 1A, “Risk Factors.”)

BUSINESS OVERVIEW

MSA is a global leader in the development, manufacture and supply of safety products and solutions that protect people and facility infrastructures. Recognized for their market leading innovation, many MSA products integrate a combination of electronics, mechanical systems and advanced materials to protect users against hazardous or life-threatening situations. The Company's comprehensive product line, which is governed by rigorous safety standards across highly regulated industries, is used by workers around the world in a broad range of markets, including fire service, oil, gas and petrochemical industry, construction, industrial manufacturing applications, utilities, mining and the military. MSA's core products include breathing apparatus, fixed gas and flame detection systems ("FGFD"), portable gas detection instruments, industrial head protection products, firefighter helmets and protective apparel, and fall protection devices. We are committed to providing our customers with service unmatched in the safety industry and, in the process, enhancing our ability to provide a growing line of safety solutions for customers in key global markets.

On January 5, 2023, the Company divested Mine Safety Appliances, LLC ("MSA LLC"), a wholly owned subsidiary that holds legacy product liability claims relating to coal dust, asbestos, silica, and other exposures, to Sag Main Holdings, LLC, a joint venture between R&Q Insurance Holdings Ltd. ("R&Q") and Obra Capital, Inc. ("Obra"). In connection with the closing, MSA contributed \$341.2 million in cash and cash equivalents, while R&Q and Obra contributed an additional \$35.0 million. As a result of the transaction, MSA derecognized all legacy cumulative trauma product liability reserves, related insurance assets, and associated deferred tax assets of the divested subsidiary from its balance sheet in the first quarter of 2023. R&Q and Obra have assumed management of the divested subsidiary, including the management of its claims. Refer to Note 17—Contingencies to the unaudited condensed consolidated financial statements in Part I Item 1 of this Form 10-Q for further information.

We tailor our product offerings and distribution strategy to satisfy distinct customer preferences that vary across geographic regions. To best serve these customer preferences, we have organized our business into four geographical operating segments that are aggregated into three reportable geographic segments: Americas, International and Corporate.

Americas. Our largest manufacturing and research and development facilities are located in the United States. We serve our markets across the Americas with manufacturing facilities in the U.S., Mexico and Brazil. Operations in the other countries within the Americas segment focus primarily on sales and distribution in their respective home country markets.

International. Our International segment includes companies in Europe, the Middle East and Africa ("EMEA") and the Asia Pacific region. In our largest International subsidiaries (in Germany, France, U.K., Ireland and China), we develop, manufacture and sell a wide variety of products. In China, the products manufactured are sold primarily in China as well as in regional markets. Operations in other International segment countries focus primarily on sales and distribution in their respective home country markets. Although some of these companies may perform limited production, most of their sales are of products manufactured in our plants in Germany, France, the U.S., U.K., Ireland and China or are purchased from third-party vendors.

Corporate. The Corporate segment primarily consists of general and administrative expenses incurred in our corporate headquarters, costs associated with corporate development initiatives, legal expense, interest expense, foreign exchange gains or losses and other centrally-managed costs. Corporate general and administrative costs comprise the majority of the expense in the Corporate segment.

PRINCIPAL PRODUCTS

The following is a brief description of each of our principal product categories:

MSA's corporate strategy includes a focus on driving sales of core products, where we have leading market positions and a distinct competitive advantage. Core products, as mentioned above, include breathing apparatus where self-contained breathing apparatus is the principal product, FGFD systems, portable gas detection instruments, industrial head protection products, firefighter helmets and protective apparel, and fall protection devices. Core products comprised approximately 92% and 89% of sales, respectively, for the three months ended September 30, 2023 and 2022. MSA also maintains a portfolio of non-core products. Non-core products reinforce and extend the core offerings, drawing upon our customer relationships, distribution channels, geographical presence and technical experience. These products are complementary to the core offerings and sometimes reflect more episodic or contract-driven growth patterns. Non-core products include air-purifying respirators, eye and face protection, ballistic helmets and gas masks.

MSA's diversified portfolio of safety products protects workers and facility infrastructure across a broad array of end markets including fire service, the oil, gas and petrochemical industry, construction, industrial manufacturing applications, heating, ventilation, air conditioning and refrigeration, utilities, mining and the military.

A detailed listing of our significant product offerings in the aforementioned product groups above is included in MSA's Annual Report on Form 10-K for the year ended December 31, 2022.

RESULTS OF OPERATIONS

Three Months Ended September 30, 2023, Compared to Three Months Ended September 30, 2022

Net Sales. Net sales for the three months ended September 30, 2023, were \$446.7 million, an increase of \$65.0 million, or 17.0%, compared to \$381.7 million in the same period last year, driven by volume growth and pricing actions. We saw healthy growth across product categories and both reporting segments. Please refer to the Net Sales table for a reconciliation of the quarter over quarter sales change.

Net Sales (In millions)	Three Months Ended September 30,		Dollar Increase	Percent Increase
	2023	2022		
Consolidated	\$446.7	\$381.7	\$65.0	17.0%
Americas	314.3	276.1	38.2	13.8%
International	132.4	105.6	26.8	25.4%

Net Sales (Percent Change)	Three Months Ended September 30, 2023 versus September 30, 2022		
	Americas	International	Consolidated
GAAP reported sales change	13.8%	25.4%	17.0%
Currency translation effects	(1.5)%	(4.7)%	(2.3)%
Constant currency sales change	12.3%	20.7%	14.7%

Note: Constant currency sales change is a non-GAAP financial measure provided by the Company to give a better understanding of the Company's underlying business performance. Constant currency sales change is calculated by deducting the percentage impact from currency translation effects from the overall percentage change in net sales.

Net sales for the Americas segment were \$314.3 million in the third quarter of 2023, an increase of \$38.2 million, or 13.8%, compared to \$276.1 million in the third quarter of 2022. Constant currency sales in the Americas segment increased 12.3%. This growth was driven by increases in all products, particularly firefighter protective apparel, FGFD, fall protection, portable instruments and breathing apparatus associated with healthy demand and backlog conversion as a result of supply chain improvements.

Net sales for the International segment were \$132.4 million in the third quarter of 2023, an increase of \$26.8 million, or 25.4%, compared to \$105.6 million for the third quarter of 2022. Constant currency sales in the International segment increased 20.7% during the quarter. This growth was driven by increases in most products, particularly FGFD and breathing apparatus, associated with backlog conversion as a result of supply chain improvements.

Looking ahead, we continue to operate in a dynamic environment. There are a number of other evolving factors that will continue to influence our revenue and earnings outlook. These factors include, among other things, supply chain constraints, raw material availability, industrial employment rates, interest rate changes, military conflict, currency exchange volatility, the pace of economic recovery, and geopolitical risk. These or other conditions could impact our future results and growth expectations through the balance of 2023.

Refer to Note 8—Segment Information to the unaudited condensed consolidated financial statements in Part I Item 1 of this Form 10-Q, for information regarding sales by product group.

Gross profit. Gross profit for the third quarter of 2023 was \$218.8 million, an increase of \$49.4 million or 29.1%, compared to \$169.4 million for the third quarter of 2022. The ratio of gross profit to net sales was 49.0% in the third quarter of 2023 compared to 44.4% in the same quarter last year. Volume leverage, price/cost management, and productivity efforts contributed to the gross profit improvement.

Selling, general and administrative expenses. Selling, general and administrative ("SG&A") expenses were \$102.2 million during the third quarter of 2023, an increase of \$19.4 million or 23.5%, compared to \$82.8 million for the same period a year ago. Overall, SG&A expenses were 22.9% of net sales during the third quarter of 2023, compared to 21.7% of net sales during the same period in 2022. Constant currency SG&A increased by approximately \$17.7 million or 21.2%. The increase in SG&A was driven by the higher level of sales, increased variable compensation, targeted investments and inflation.

Please refer to the SG&A expenses table for a reconciliation of the quarter over quarter expense change.

Selling, general, and administrative expenses (Percent Change)	Three Months Ended September 30, 2023 versus September 30, 2022
	Consolidated
GAAP reported change	23.5%
Currency translation effects	(2.3)%
Constant currency change	21.2%

Research and development expense. Research and development expense was \$17.7 million during the third quarter of 2023, an increase of \$3.3 million, compared to \$14.4 million during the third quarter of 2022. Research and development expense was 4.0% of net sales in the third quarter of 2023 compared to 3.8% in the same period of 2022.

During the third quarter of 2023 and 2022, we capitalized \$3.3 million and \$2.2 million of software development costs, respectively. Depreciation expense for capitalized software development cost of \$2.7 million and \$2.1 million during the third quarter of 2023 and 2022, respectively, was recorded in costs of products sold on the unaudited Condensed Consolidated Statements of Operations.

MSA remains committed to dedicating significant resources to research and development activities, including the development of technology-based safety solutions. As we continue to invest a significant portion of our new product development into technology-based safety solutions, we anticipate that the historical relationship of research and development expense to net sales will continue to evolve; however, we do not anticipate reductions in the relative level of total spend on research and development activities on an annual basis. Total spend on both software development and research and development activities was \$21.0 million and \$16.6 million during the third quarter of September 30, 2023, and 2022, respectively.

Restructuring charges. Restructuring charges of \$3.3 million during the third quarter of 2023 were primarily related to manufacturing footprint optimization activities and ongoing initiatives to drive profitable growth. Restructuring charges of \$0.9 million during the third quarter of 2022 were related to various optimization activities including the implementation of our European Shared Service Center in Warsaw, Poland and other optimization activities. We remain focused on executing programs to further optimize our cost structure.

Currency exchange. Currency exchange losses were \$1.5 million in the third quarter of 2023 compared to \$3.0 million in the third quarter of 2022. Currency exchange activity for both periods related primarily to foreign currency exposure on unsettled inter-company balances. Refer to Note 15—Derivative Financial Instruments to the unaudited condensed consolidated financial statements in Part I Item 1 of this Form 10-Q, for information regarding our currency exchange rate risk management strategy.

Product liability expense. There was no product liability expense for the third quarter of 2023 due to our divestiture of MSA LLC, as discussed further in Note 17—Contingencies to the unaudited condensed consolidated financial statements in Part I Item 1 of this Form 10-Q. This compared to \$4.0 million in the third quarter of 2022 which related primarily to defense costs incurred for cumulative trauma product liability claims.

GAAP operating income. Consolidated operating income for the third quarter of 2023 was \$94.1 million compared to \$64.3 million in the same period last year. The increase in operating income was primarily driven by higher sales and gross margin partially offset by increased SG&A.

Adjusted operating income. Americas adjusted operating income for the third quarter of 2023 was \$93.9 million, an increase of \$18.8 million or 25.1% compared to \$75.1 million in the prior year third quarter. The increase in adjusted operating income is attributable to higher sales and gross margin.

International adjusted operating income for the third quarter of 2023 was \$22.6 million, an increase of \$14.1 million, or 167.2%, compared to \$8.4 million in the prior year third quarter. The increase in adjusted operating income is primarily attributable to higher sales and gross margin.

Corporate segment adjusted operating loss for the third quarter of 2023 was \$15.2 million, an increase of \$6.8 million in comparison to an adjusted operating loss of \$8.4 million in the third quarter of 2022, driven by higher performance based compensation expense related to sales growth and improved results from prior year.

The following tables represent a reconciliation from GAAP operating income to adjusted operating income (loss) and adjusted EBITDA. Adjusted operating margin % is calculated as adjusted operating income (loss) divided by net sales and adjusted EBITDA margin % is calculated as adjusted EBITDA divided by net sales.

Adjusted operating income (loss) (In thousands)	Three Months Ended September 30, 2023			
	Americas	International	Corporate	Consolidated
Net sales	\$ 314,273	\$ 132,455	\$ —	\$ 446,728
GAAP operating income				94,123
Restructuring charges (Note 3)				3,285
Currency exchange losses, net				1,496
Amortization of acquisition-related intangible assets				2,315
Transaction costs ^(a)				78
Adjusted operating income (loss)	93,918	22,577	(15,198)	101,297
Adjusted operating margin %	29.9 %	17.0 %		
Depreciation and amortization				13,189
Adjusted EBITDA	103,157	26,289	(14,960)	114,486
Adjusted EBITDA margin %	32.8 %	19.8 %		

Adjusted operating income (loss) (In thousands)	Three Months Ended September 30, 2022			
	Americas	International	Corporate	Consolidated
Net sales	\$ 276,082	\$ 105,612	\$ —	\$ 381,694
GAAP operating income				64,313
Restructuring charges (Note 3)				899
Currency exchange losses, net				2,979
Product liability expense (Note 17)				4,035
Amortization of acquisition-related intangible assets				2,279
Transaction costs ^(a)				620
Adjusted operating income (loss)	75,088	8,448	(8,411)	75,125
Adjusted operating margin %	27.2 %	8.0 %		
Depreciation and amortization				11,518
Adjusted EBITDA	83,945	10,980	(8,282)	86,643
Adjusted EBITDA margin %	30.4 %	10.4 %		

(a) Transaction costs include advisory, legal, accounting, valuation, and other professional or consulting fees incurred during acquisitions and divestitures. These costs are included in selling, general and administrative expense in the unaudited Condensed Consolidated Statements of Operations.

Note: Adjusted operating income (loss) and adjusted EBITDA are non-GAAP financial measures. Adjusted operating income (loss) is reconciled above to the nearest GAAP financial measure, Operating income (loss), and excludes restructuring, currency exchange, product liability expense, loss on divestiture of MSA LLC, transaction costs and acquisition-related amortization. Adjusted EBITDA is reconciled above to the nearest GAAP financial measure, Operating income (loss) and excludes depreciation and amortization expense.

Total other expense (income), net. Total other expense, net, for the third quarter of 2023 was \$6.5 million, compared to \$3.6 million for the same period in 2022 driven primarily by higher interest expense related to higher interest rates, increased debt balances and decreased pension income driven by a lower expected rate of return.

Income taxes. The reported effective tax rate for the third quarter of 2023 was 25.6% compared to 26.0% for the third quarter of 2022. This decrease from the prior year is primarily due to a one time expense recorded in the third quarter of 2022 related to state income tax audits and an increase in the research and development credit, partially offset by higher profits in higher tax jurisdictions and an increase in nondeductible compensation.

We are subject to regular review and audit by both foreign and domestic tax authorities. While we believe our tax positions will be sustained, the final outcome of tax audits and related litigation may differ materially from the tax amounts recorded in our unaudited condensed consolidated financial statements.

Net income. Net income was \$65.3 million for the third quarter of 2023, or \$1.65 per diluted share compared to net income of \$44.9 million, or \$1.14 per diluted share, for the same period last year.

Nine Months Ended September 30, 2023, Compared to Nine Months Ended September 30, 2022

Net Sales. Net sales for the nine months ended September 30, 2023, were \$1.3 billion, an increase of \$207.6 million, or 19.1%, compared to \$1.1 billion in the same period last year, driven by volume growth and price realization. We saw healthy growth across most of our core products and both reporting segments. Please refer to the Net Sales table for a reconciliation of the period over period sales change.

Net Sales (In millions)	Nine Months Ended September 30,		Dollar Increase	Percent Increase
	2023	2022		
Consolidated	\$1,292.3	\$1,084.7	\$207.6	19.1%
Americas	902.9	754.1	148.8	19.7%
International	389.4	330.6	58.8	17.8%

Net Sales (Percent Change)	Nine Months Ended September 30, 2023 versus September 30, 2022		
	Americas	International	Consolidated
GAAP reported sales change	19.7%	17.8%	19.1%
Currency translation effects	(0.9)%	0.5%	(0.5)%
Constant currency sales change	18.8%	18.3%	18.6%

Note: Constant currency sales change is a non-GAAP financial measure provided by the Company to give a better understanding of the Company's underlying business performance. Constant currency sales change is calculated by deducting the percentage impact from currency translation effects from the overall percentage change in net sales.

Net sales for the Americas segment were \$902.9 million in the nine months ended September 30, 2023, an increase of \$148.8 million, or 19.7%, compared to \$754.1 million in the same period last year. Constant currency sales in the Americas segment increased 18.8% compared to the prior year period. This growth was driven by increases in all products, particularly firefighter protective apparel, portable instruments and FGD associated with healthy demand and improved output as well as backlog conversion as a result of continued progress with the supply chain.

Net sales for the International segment were \$389.4 million in the nine months ended September 30, 2023, an increase of \$58.8 million, or 17.8%, compared to \$330.6 million in the same period last year. Constant currency sales in the International segment increased 18.3% during the period. This growth was driven by strength across most core products, partially offset by a decrease in firefighter helmets and protective apparel.

Refer to Note 8—Segment Information to the unaudited condensed consolidated financial statements in Part I Item 1 of this Form 10-Q, for information regarding sales by product group.

Gross profit. Gross profit for the nine months ended September 30, 2023, was \$614.0 million, an increase of \$137.4 million or 28.8%, compared to \$476.6 million during the same period last year. The ratio of gross profit to net sales was 47.5% during the nine months ended September 30, 2023 compared to 43.9% during the same period last year. Volume leverage, price/cost management, favorable product mix and productivity efforts contributed to the gross profit improvement.

Selling, general and administrative expenses. SG&A expenses were \$289.6 million during the nine months ended September 30, 2023, an increase of \$42.2 million or 17.1%, compared to \$247.4 million during the same period last year. Overall, SG&A expenses were 22.4% of net sales during the nine months ended September 30, 2023, compared to 22.8% of net sales during the same period in 2022. Constant currency SG&A increased \$41.3 million or 16.8%, demonstrating strong leverage on revenue growth. The increase in SG&A was driven by the higher level of sales, increased variable compensation and inflation.

Please refer to the selling, general, and administrative expenses table for a reconciliation of the period over period expense change.

Selling, general, and administrative expenses (Percent Change)	Nine Months Ended September 30, 2023 versus September 30, 2022
	Consolidated
GAAP reported change	17.1%
Currency translation effects	(0.3)%
Constant currency change	16.8%

Research and development expense. Research and development expense was \$48.9 million during the nine months ended September 30, 2023, an increase of \$5.9 million, compared to \$43.0 million during the same period last year. Research and development expense was 3.8% of net sales in the first nine months ended September 30, 2023 and 4.0% in the same period of 2022.

During the nine months ended September 30, 2023 and 2022, we capitalized \$9.4 million and \$6.5 million of software development costs, respectively. Depreciation expense for capitalized software development cost of \$7.5 million and \$5.7 million during the nine months ended September 30, 2023 and 2022, respectively, was recorded in costs of products sold on the unaudited Condensed Consolidated Statements of Operations.

MSA remains committed to dedicating significant resources to research and development activities, including the development of technology-based safety solutions. As we continue to invest a significant portion of our new product development into technology-based safety solutions, we anticipate that the historical relationship of research and development expense to net sales will continue to evolve; however, we do not anticipate reductions in the relative level of total spend on research and development activities on an annual basis. Total spend on both software development and research and development activities was \$58.3 million and \$49.5 million during the nine months ended September 30, 2023, and 2022, respectively.

Restructuring charges. Restructuring charges of \$8.4 million during the nine months ended September 30, 2023 related to our ongoing initiatives to adjust our cost structure and improve productivity. Restructuring charges of \$3.1 million during nine months ended September 30, 2022 related to our ongoing initiatives to drive profitable growth and rightsize our operations. We remain focused on executing programs to optimize our cost structure.

Currency exchange. Currency exchange losses were \$8.8 million during the nine months ended September 30, 2023, compared to \$4.8 million in the same period of 2022. Currency exchange activity for both periods related primarily due to foreign currency exposure on unsettled inter-company balances. During 2022, we also recognized non-cash cumulative translation losses as a result of our plan to close a foreign subsidiary.

Refer to Note 15—Derivative Financial Instruments to the unaudited condensed consolidated financial statements in Part I Item 1 of this Form 10-Q, for information regarding our currency exchange rate risk management strategy.

Product liability expense. Product liability expense for the nine months ended September 30, 2023 was minimal due to our divestiture of MSA LLC. This compared to \$9.7 million in the same period of 2022 which related primarily to defense costs incurred for cumulative trauma product liability claims.

Loss on divestiture of MSA LLC. The \$129.2 million pre-tax loss on divestiture of MSA LLC for the nine months ended September 30, 2023 relates to the derecognition of all legacy cumulative trauma product liability reserves and related insurance assets of the divested subsidiary during the first quarter of 2023. The loss also includes a \$341.2 million contribution of cash and cash equivalents, as well as transaction related costs of \$5.6 million. Refer to Note 17—Contingencies to the unaudited condensed consolidated financial statements in Part I Item 1 of this Form 10-Q for further information.

GAAP operating income. Consolidated operating income for the nine months ended September 30, 2023, was \$129.1 million compared to \$168.5 million in the same period last year. The decrease in operating results was primarily driven by the loss on divestiture of MSA LLC, partially offset by higher sales and gross margin.

Adjusted operating income. Americas adjusted operating income for the nine months ended September 30, 2023 was \$260.4 million, an increase of \$75.7 million, or 41.0%, compared to \$184.7 million in the prior year. The increase in adjusted operating income is primarily attributable to higher sales and gross margin, partially offset by higher SG&A expenses to support business growth.

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International adjusted operating income for the nine months ended September 30, 2023, was \$60.1 million, an increase of \$25.4 million, or 73.3%, compared to \$34.7 million in the prior year. The increase in adjusted operating income is primarily attributable to higher sales and gross margin.

Corporate segment adjusted operating loss for the nine months ended September 30, 2023, was \$38.1 million, an increase of \$13.3 million compared to an adjusted operating loss of \$24.8 million in the same period of 2022 driven by higher performance based compensation expense related to sales growth and improved results from prior year.

The following tables represent a reconciliation from GAAP operating income to adjusted operating income (loss) and adjusted EBITDA. Adjusted operating margin % is calculated as adjusted operating income (loss) divided by net sales and adjusted EBITDA margin % is calculated as adjusted EBITDA divided by net sales.

Adjusted operating income (loss) (In thousands)	Nine Months Ended September 30, 2023			
	Americas	International	Corporate	Consolidated
Net sales	\$ 902,918	\$ 389,372	\$ —	\$ 1,292,290
GAAP operating income				129,070
Restructuring charges (Note 3)				8,382
Currency exchange losses, net				8,781
Loss on divestiture of MSA LLC (Note 17)				129,211
Product liability expense (Note 17)				3
Amortization of acquisition-related intangible assets				6,936
Transaction costs ^(a)				78
Adjusted operating income (loss)	260,428	60,099	(38,066)	282,461
Adjusted operating margin %	28.8 %	15.4 %		
Depreciation and amortization ^(a)				38,029
Adjusted EBITDA	287,628	70,296	(37,434)	320,490
Adjusted EBITDA margin %	31.9 %	18.1 %		

Adjusted operating income (loss) (In thousands)	Nine Months Ended September 30, 2022			
	Americas	International	Corporate	Consolidated
Net sales	\$ 754,116	\$ 330,583	\$ —	\$ 1,084,699
GAAP operating income				168,517
Restructuring charges (Note 3)				3,146
Currency exchange losses, net				4,788
Product liability expense (Note 17)				9,733
Amortization of acquisition-related intangible assets				6,922
Transaction costs ^(a)				1,476
Adjusted operating income (loss)	184,664	34,674	(24,756)	194,582
Adjusted operating margin %	24.5 %	10.5 %		
Depreciation and amortization ^(a)				34,961
Adjusted EBITDA	210,201	43,708	(24,366)	229,543
Adjusted EBITDA margin %	27.9 %	13.2 %		

(a) Transaction costs include advisory, legal, accounting, valuation, and other professional or consulting fees incurred during acquisitions and divestitures. These costs are included in selling, general and administrative expense in the unaudited Condensed Consolidated Statements of Operations.

Note: Adjusted operating income (loss) and adjusted EBITDA are non-GAAP financial measures. Adjusted operating income (loss) is reconciled above to the nearest GAAP financial measure, Operating income (loss), and excludes restructuring, currency exchange, product liability expense, loss on divestiture of MSA LLC, transaction costs and acquisition-related amortization. Adjusted EBITDA is reconciled above to the nearest GAAP financial measure, Operating income (loss) and excludes depreciation and amortization expense.

Total other (expense) income, net. Total other expense, net, for the nine months ended September 30, 2023 was \$21.7 million, compared to total other income, net, of \$1.0 million for the same period in 2022 driven primarily by higher interest expense related to higher interest rates, increased debt balances and decreased pension income driven by a lower expected rate of return.

Income taxes. The reported effective tax rate for the nine months ended September 30, 2023 was 116.6% compared to 24.4% for the same period in 2022. This significant variance from the prior year is primarily due to the divestiture of MSA LLC and the non-deductible loss recorded on the derecognition of the product liability reserves and related assets. Refer to Note 17—Contingencies to the unaudited condensed consolidated financial statements in Part I Item 1 of this Form 10-Q for further information on this transaction.

We are subject to regular review and audit by both foreign and domestic tax authorities. While we believe our tax positions will be sustained, the final outcome of tax audits and related litigation may differ materially from the tax amounts recorded in our unaudited condensed consolidated financial statements.

Net (loss) income attributable to MSA Safety Incorporated. Net loss was \$17.8 million for the nine months ended September 30, 2023, or \$(0.46) per diluted share compared to net income of \$128.1 million, or \$3.25 per diluted share, for the same period last year.

LIQUIDITY AND CAPITAL RESOURCES

Our main source of liquidity is operating cash flows, supplemented by borrowings. Our principal liquidity requirements are for working capital, capital expenditures, principal and interest payments on debt, declared dividend payments and acquisitions. At September 30, 2023, approximately 42% of our long-term debt is at fixed interest rates with repayment schedules through 2036. The remainder of our long-term debt is at variable rates on an unsecured revolving credit facility and a term loan, both due in 2026. At September 30, 2023, approximately 87% of our borrowings are denominated in U.S. dollars, which limits our exposure to currency exchange rate fluctuations.

At September 30, 2023, the Company had cash and cash equivalents totaling \$164.5 million and access to sufficient capital, providing ample liquidity and flexibility to continue to maintain our balanced capital allocation strategy that prioritizes growth investments, funding our dividends and servicing debt obligations. Cash, cash equivalents and restricted cash increased \$2.0 million during the nine months ended September 30, 2023. The cash flow activity reflects strong operating results and working capital performance being mostly offset by the MSA LLC divestiture as discussed below. This compared to cash increasing \$19.8 million during the same period in 2022. We believe MSA's healthy balance sheet and access to significant capital at September 30, 2023, positions us well to navigate through challenging business conditions and supply chain constraints or other unexpected events.

Operating activities. Operating activities used cash of \$66.1 million during the nine months ended September 30, 2023, compared to providing \$103.9 million during the same period in 2022. The decreased operating cash flow as compared to the same period in 2022 was primarily related to the contribution of \$341.2 million in the divestiture of MSA LLC. Refer to Note 17—Contingencies to the unaudited condensed consolidated financial statements in Part I Item 1 of this Form 10-Q for further information. This decrease was partially offset by working capital improvements, notably for inventories, and improved operating results.

Investing activities. Investing activities used cash of \$28.3 million during the nine months ended September 30, 2023, compared to using \$4.4 million during the same period in 2022. The increase in cash used in investing activities as compared to the same period in 2022 was primarily related to the absence of short-term investment activity. Our investments in available-for-sale marketable securities, primarily fixed income, were transferred to Sag Main Holdings, LLC, as part of our MSA LLC divestiture as described in Note 17—Contingencies to the unaudited condensed consolidated financial statements in Part I Item 1 of this Form 10-Q. We remain committed to evaluating additional acquisition opportunities that will allow us to continue to grow in key end markets and geographies.

Financing activities. Financing activities provided cash of \$110.5 million during the nine months ended September 30, 2023, compared to using cash of \$56.2 million during the same period in 2022. During the nine months ended September 30, 2023, we had net proceeds from long-term debt of \$168.6 million to fund the MSA LLC divestiture as compared to net proceeds from long-term debt of \$27.0 million during the same period in 2022. Since the MSA LLC divestiture in January 2023, we have paid down \$146 million of our outstanding borrowings. We paid cash dividends of \$55.0 million during the nine months ended September 30, 2023, compared to \$53.4 million in the same period in 2022. We used cash of \$3.9 million during the nine months ended September 30, 2023 to repurchase shares related to our employee stock compensation transactions. We used cash of \$34.4 million during the nine months ended September 30, 2022, including \$30.4 million related to our share repurchase program with the remainder related to employee stock compensation transactions.

CUMULATIVE TRANSLATION ADJUSTMENTS

The position of the U.S. dollar relative to international currencies, primarily the euro, British pound and Mexican peso, at September 30, 2023, resulted in a translation loss of \$2.5 million being recorded to the cumulative translation adjustments shareholders' equity account during the nine months ended September 30, 2023, compared to a \$58.1 million translation loss being recorded to the cumulative translation adjustments shareholders' equity account during the same period in 2022.

COMMITMENTS AND CONTINGENCIES

We made contributions of \$4.3 million to our pension plans during the nine months ended September 30, 2023. We expect to make total contributions of approximately \$5.7 million to our pension plans in 2023 primarily associated with statutorily required plans in the International segment.

The Company had outstanding bank guarantees and standby letters of credit with banks as of September 30, 2023, totaling \$9.2 million, of which \$1.5 million relate to the senior revolving credit facility. These letters of credit serve to cover customer requirements in connection with certain sales orders and insurance companies. The Company is also required to provide cash collateral in connection with certain arrangements. At September 30, 2023, the Company has \$1.9 million of restricted cash in support of these arrangements.

We have purchase commitments for materials, supplies, services, and property, plant and equipment as part of our ordinary conduct of business.

Please refer to Note 17—Contingencies to the unaudited condensed consolidated financial statements in Part I Item 1 of this Form 10-Q for further discussion on the Company's single incident and cumulative trauma product liabilities.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

We prepare our unaudited condensed consolidated financial statements in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"). The preparation of these unaudited condensed consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and the related disclosures. We evaluate these estimates and judgments on an on-going basis based on historical experience and various assumptions that we believe to be reasonable under the circumstances. However, different amounts could be reported if we had used different assumptions and in light of different facts and circumstances. Actual amounts could differ from the estimates and judgments reflected in our unaudited condensed consolidated financial statements.

The more critical judgments and estimates used in the preparation of our unaudited condensed consolidated financial statements are discussed in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in our Annual Report on Form 10-K for the year ended December 31, 2022.

RECENTLY ADOPTED AND RECENTLY ISSUED ACCOUNTING STANDARDS

None.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Market risk represents the risk of adverse changes in the value of a financial instrument caused by changes in currency exchange rates, interest rates and equity prices. We are exposed to market risks related to currency exchange rates and interest rates.

Currency exchange rate sensitivity. We are subject to the effects of fluctuations in currency exchange rates on various transactions and on the translation of the reported financial position and operating results of our non-U.S. companies from local currencies to U.S. dollars. A hypothetical 10% strengthening or weakening of the U.S. dollar would decrease or increase our reported sales and net income by approximately \$17.3 million or 3.9% and \$0.6 million or 0.9%, respectively, for the three months ended September 30, 2023.

When appropriate, we may attempt to limit our transactional exposure to changes in currency exchange rates through forward contracts or other actions intended to reduce existing exposures by creating offsetting currency exposures. At September 30, 2023, we had open foreign currency forward contracts with a U.S. dollar notional value of \$106.4 million. A hypothetical 10% strengthening or weakening of the U.S. dollar would result in a \$10.6 million increase or decrease in the fair value of these contracts at September 30, 2023.

Interest rates. We are exposed to changes in interest rates primarily as a result of borrowing and investing activities used to maintain liquidity and fund business operations.

At September 30, 2023, we had \$309.6 million of fixed rate debt which matures at various dates through 2036. The incremental increase in the fair value of fixed rate long-term debt resulting from a hypothetical 10% decrease in interest rates would be approximately \$10.0 million. However, our sensitivity to interest rate declines and the corresponding increase in the fair value of our debt portfolio would unfavorably affect earnings and cash flows only to the extent that we elected to repurchase or retire all or a portion of our fixed rate debt portfolio at prices above carrying values.

At September 30, 2023, we had \$435.2 million of variable rate borrowings. A 100 basis point increase or decrease in interest rates would have a \$4.6 million impact on future annual earnings under our current capital structure.

Item 4. Controls and Procedures

- (a) *Evaluation of disclosure controls and procedures.* Based on their evaluation as of the end of the period covered by this Form 10-Q, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act")) are effective to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms and (ii) accumulated and communicated to our management, including the principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.
- (b) *Changes in internal control.* There were no changes in the Company's internal control over financial reporting that occurred during the most recent fiscal quarter that have materially affected, or are 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) Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased As Part of Publicly Announced Plans or Programs	Maximum Number of Shares That May Yet Be Purchased Under the Plans or Programs
July 2023	63	\$ 157.39	—	164,334
August 2023	332	177.63	—	149,329
September 2023	—	—	—	173,038

The share repurchase program authorizes up to \$100.0 million in repurchases of MSA common stock in the open market and in private transactions. The share repurchase program has no expiration date. The maximum number of shares that may be purchased is calculated based on the dollars remaining under the program and the respective month-end closing share price. There were no shares repurchased during the quarter ended September 30, 2023, under this program. We do not have any other share repurchase programs.

The above shares purchased during the quarter are related to stock-based compensation transactions.

Item 6. Exhibits

(a) Exhibits

31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a)
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a)
32	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. (S)1350
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

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.

MSA SAFETY INCORPORATED

October 25, 2023

/s/ Lee B. McChesney

Lee B. McChesney

Senior Vice President and Chief Financial Officer

/s/ Jonathan D. Buck

Jonathan D. Buck

Chief Accounting Officer and Controller (Principal Accounting Officer)

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO RULE 13a-14(a)

I, Nishan J. Vartanian, certify that:

1. I have reviewed this quarterly report on Form 10-Q of MSA Safety Incorporated;
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.

October 25, 2023

/s/ Nishan J. Vartanian

Nishan J. Vartanian

Chief Executive Officer

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO RULE 13a-14(a)

I, Lee B. McChesney certify that:

1. I have reviewed this quarterly report on Form 10-Q of MSA Safety Incorporated;
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.

October 25, 2023

/s/ Lee B. McChesney

Lee B. McChesney

Senior Vice President and Chief Financial Officer

CERTIFICATION

Pursuant to 18 U.S.C. (S) 1350, the undersigned officers of MSA Safety Incorporated (the “Company”), hereby certify, to the best of their knowledge, that the Company’s Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, (the “Report”) fully complies with the requirements of Section 13 (a) or 15 (d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

October 25, 2023

/s/ Nishan J. Vartanian

Nishan J. Vartanian
Chief Executive Officer

/s/ Lee B. McChesney

Lee B. McChesney
Senior Vice President and Chief Financial Officer