

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

**QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934**

For the quarter ended September 30, 2016

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
(Address of principal executive offices)

16066-5207
(Zip Code)

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

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

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

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

As of October 24, 2016, 37,590,566 shares of common stock, of the registrant were outstanding.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

MSA SAFETY INCORPORATED
CONDENSED CONSOLIDATED STATEMENT OF INCOME

Unaudited

(In thousands, except per share amounts)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net sales	\$ 278,233	\$ 273,746	\$ 853,499	\$ 817,465
Cost of products sold	149,471	153,965	468,177	450,372
Gross profit	128,762	119,781	385,322	367,093
Selling, general and administrative	72,945	72,727	227,856	231,683
Research and development	13,116	12,532	34,623	36,430
Restructuring and other charges (Note 4)	1,889	3,740	3,697	4,698
Currency exchange losses, net	790	4,327	2,498	3,336
Operating income	40,022	26,455	116,648	90,946
Interest expense	4,412	2,827	12,515	7,802
Other (income), net	(2,041)	(431)	(3,704)	(1,166)
Total other expense, net	2,371	2,396	8,811	6,636
Income from continuing operations before income taxes	37,651	24,059	107,837	84,310
Provision for income taxes (Note 10)	11,329	8,935	38,866	36,669
Income from continuing operations	26,322	15,124	68,971	47,641
(Loss) income from discontinued operations (Note 19)	(1,300)	462	55	1,240
Net income	25,022	15,586	69,026	48,881
Net (income) loss attributable to noncontrolling interests	(836)	390	(2,006)	1,075
Net income attributable to MSA Safety Incorporated	\$ 24,186	\$ 15,976	\$ 67,020	\$ 49,956
Amounts attributable to MSA Safety Incorporated common shareholders:				
Income from continuing operations	\$ 25,486	\$ 15,712	\$ 67,475	\$ 48,750
(Loss) income from discontinued operations (Note 19)	(1,300)	264	(455)	1,206
Net income	\$ 24,186	\$ 15,976	\$ 67,020	\$ 49,956
Earnings per share attributable to MSA Safety Incorporated common shareholders:				
Basic				
Income from continuing operations	\$ 0.68	\$ 0.42	\$ 1.80	\$ 1.30
(Loss) income from discontinued operations (Note 19)	\$ (0.04)	\$ 0.01	\$ (0.01)	\$ 0.03
Net income	\$ 0.64	\$ 0.43	\$ 1.79	\$ 1.33
Diluted				
Income from continuing operations	\$ 0.67	\$ 0.41	\$ 1.77	\$ 1.29
(Loss) income from discontinued operations (Note 19)	\$ (0.04)	\$ 0.01	\$ (0.01)	\$ 0.03
Net income	\$ 0.63	\$ 0.42	\$ 1.76	\$ 1.32
Dividends per common share	\$ 0.33	\$ 0.32	\$ 0.98	\$ 0.95

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

MSA SAFETY INCORPORATED
CONDENSED CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Unaudited

(In thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net income	\$ 25,022	\$ 15,586	\$ 69,026	\$ 48,881
Foreign currency translation adjustments	(2,411)	(13,701)	(3,519)	(33,860)
Reclassification from accumulated other comprehensive (loss) into earnings	—	—	4,125	—
Pension and post-retirement plan adjustments, net of tax	1,893	2,294	5,679	7,446
Total other comprehensive (loss) income, net of tax	(518)	(11,407)	6,285	(26,414)
Comprehensive income	24,504	4,179	75,311	22,467
Comprehensive (income) loss attributable to noncontrolling interests	(1,021)	960	(3,271)	2,099
Comprehensive income attributable to MSA Safety Incorporated	\$ 23,483	\$ 5,139	\$ 72,040	\$ 24,566

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

MSA SAFETY INCORPORATED
CONDENSED CONSOLIDATED BALANCE SHEET

Unaudited

(In thousands)	September 30, 2016	December 31, 2015
Assets		
Cash and cash equivalents	\$ 106,033	\$ 105,925
Trade receivables, less allowance for doubtful accounts of \$7,402 and \$8,189	211,987	232,862
Inventories (Note 3)	132,542	125,849
Prepaid income taxes	13,373	8,745
Notes receivable, insurance companies	40,482	6,746
Prepaid expenses and other current assets	26,497	24,485
Total current assets	<u>530,914</u>	<u>504,612</u>
Property, plant and equipment, net (Note 5)	149,939	155,839
Prepaid pension cost	69,300	62,072
Deferred tax assets (Note 10)	25,661	26,455
Goodwill (Note 13)	340,533	340,338
Intangible assets (Note 13)	81,776	90,068
Notes receivable, insurance companies, noncurrent	63,072	1,944
Insurance receivable and other noncurrent assets	166,751	241,535
Total assets	<u>\$ 1,427,946</u>	<u>\$ 1,422,863</u>
Liabilities		
Notes payable and current portion of long-term debt, net (Note 12)	\$ 6,738	\$ 6,650
Accounts payable	56,367	68,206
Employees' compensation	35,187	37,642
Insurance and product liability	19,188	57,718
Tax liabilities	12,341	11,658
Other current liabilities	63,467	70,013
Total current liabilities	<u>193,288</u>	<u>251,887</u>
Long-term debt, net (Note 12)	464,600	458,022
Pensions and other employee benefits	162,362	156,160
Deferred tax liabilities (Note 10)	26,255	24,872
Other noncurrent liabilities	14,508	14,794
Total liabilities	<u>\$ 861,013</u>	<u>\$ 905,735</u>
Commitments and contingencies (Note 18)		
Equity		
Preferred stock, 4 1/2% cumulative, \$50 par value (Note 7)	3,569	3,569
Common stock, no par value (Note 7)	166,147	157,643
Treasury shares, at cost (Note 7)	(291,242)	(295,070)
Accumulated other comprehensive loss	(203,179)	(208,199)
Retained earnings	888,898	858,553
Total MSA Safety Incorporated shareholders' equity	<u>564,193</u>	<u>516,496</u>
Noncontrolling interests	2,740	632
Total shareholders' equity	<u>566,933</u>	<u>517,128</u>
Total liabilities and shareholders' equity	<u>\$ 1,427,946</u>	<u>\$ 1,422,863</u>

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

MSA SAFETY INCORPORATED
CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS
Unaudited

(In thousands)	Nine Months Ended September 30,	
	2016	2015
Operating Activities		
Net income	\$ 69,026	\$ 48,881
Depreciation and amortization	26,651	22,646
Pensions (Note 15)	5,094	8,817
Net (gain) from disposal of assets	(1,512)	(1,958)
Stock-based compensation (Note 11)	8,292	6,931
Asset impairment charges	—	2,630
Deferred income tax (benefit) provision	(184)	449
Other noncurrent assets and liabilities	(209)	(38,995)
Currency exchange losses, net	2,516	3,649
Excess tax provision (benefit) related to stock plans	434	(896)
Other, net	—	(6,686)
Operating cash flow before changes in certain working capital items	110,108	45,468
Decrease (increase) in trade receivables	16,215	(11,230)
(Increase) in inventories (Note 3)	(9,961)	(39,793)
(Increase) in income taxes receivable, prepaid expenses and other current assets	(2,635)	(12,003)
(Decrease) increase in accounts payable and accrued liabilities	(82,290)	27,388
(Increase) in certain working capital items	(78,671)	(35,638)
Cash Flow From Operating Activities	31,437	9,830
Investing Activities		
Capital expenditures	(16,146)	(25,148)
Acquisition, net of cash acquired (Note 14)	(18,261)	—
Property disposals and other investing (Note 19)	17,932	7,969
Cash Flow (Used in) Investing Activities	(16,475)	(17,179)
Financing Activities		
Proceeds from short-term debt, net	75	142
Proceeds from long-term debt (Note 12)	332,664	368,000
(Payments on) long-term debt (Note 12)	(316,656)	(225,000)
Restricted cash	1,304	278
Cash dividends paid	(36,675)	(35,448)
Distributions to noncontrolling interests	(1,008)	—
Company stock purchases	(1,881)	(10,230)
Exercise of stock options	6,105	1,331
Employee stock purchase plan	252	230
Excess tax (provision) benefit related to stock plans	(434)	896
Cash Flow (Used in) From Financing Activities	(16,254)	100,199
Effect of exchange rate changes on cash and cash equivalents	1,400	(9,505)
Increase in cash and cash equivalents	108	83,345
Beginning cash and cash equivalents	105,925	105,998
Ending cash and cash equivalents	\$ 106,033	\$ 189,343

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

MSA SAFETY INCORPORATED
CONSOLIDATED STATEMENT OF CHANGES IN RETAINED EARNINGS AND
ACCUMULATED OTHER COMPREHENSIVE LOSS

Unaudited

(In thousands)	Retained Earnings	Accumulated Other Comprehensive (Loss)
Balances June 30, 2015	\$ 845,584	\$ (181,283)
Net income	15,586	—
Foreign currency translation adjustments	—	(13,701)
Pension and post-retirement plan adjustments, net of tax of \$1,267	—	2,294
Loss attributable to noncontrolling interests	390	570
Common dividends	(11,916)	—
Preferred dividends	(10)	—
Balances September 30, 2015	849,634	(192,120)
Balances June 30, 2016	877,103	(202,476)
Net income	25,022	—
Foreign currency translation adjustments	—	(2,411)
Pension and post-retirement plan adjustments, net of tax of \$1,046	—	1,893
(Income) attributable to noncontrolling interests	(836)	(185)
Common dividends	(12,381)	—
Preferred dividends	(10)	—
Balances September 30, 2016	\$ 888,898	\$ (203,179)
Balances December 31, 2014	\$ 835,126	\$ (166,730)
Net income	48,881	—
Foreign currency translation adjustments	—	(33,860)
Pension and post-retirement plan adjustments, net of tax of \$4,161	—	7,446
Loss attributable to noncontrolling interests	1,075	1,024
Common dividends	(35,418)	—
Preferred dividends	(30)	—
Balances September 30, 2015	849,634	(192,120)
Balances December 31, 2015	858,553	(208,199)
Net income	69,026	—
Foreign currency translation adjustments	—	(3,519)
Pension and post-retirement plan adjustments, net of tax of \$3,132	—	5,679
(Income) attributable to noncontrolling interests	(2,006)	(1,265)
Reclassification from accumulated other comprehensive (loss) into earnings	—	4,125
Common dividends	(36,645)	—
Preferred dividends	(30)	—
Balances September 30, 2016	\$ 888,898	\$ (203,179)

The accompanying notes are an integral part of the 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 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 Condensed Consolidated Financial Statements are not necessarily indicative of the results that may be expected for the entire year. The December 31, 2015 condensed consolidated balance sheet data was derived from the audited consolidated balance sheet but does not include all disclosures required by generally accepted accounting principles (GAAP). This Form 10-Q report should be read in conjunction with MSA's Form 10-K for the year ended December 31, 2015, which includes all disclosures required by GAAP.

Certain segment results in previously issued financial statements were recast to conform to the current period presentation in Note 4, Note 8 and Note 12. Additionally, we have reclassified \$6.7 million from Prepaid expenses and other current assets to Notes receivable, insurance companies and \$1.9 million from Other noncurrent assets to Notes receivable, insurance companies, non-current, on the December 31, 2015 Condensed Consolidated Balance Sheet to conform with current period presentation.

During the second quarter of 2016, the Company corrected its gain calculation on the disposition of the South African personal protective equipment distribution business and its Zambian operations. This resulted in a gain of approximately \$2.5 million being recorded during the second quarter in discontinued operations that should have been recorded in the first quarter of 2016. The Company evaluated materiality in accordance with SEC Staff Accounting Bulletins Topics 1.M and 1.N and considered relevant qualitative and quantitative factors. The Company concluded that this modification was not material to the first quarter of 2016 or the trend in earnings over the affected periods. The modification had no effect on cash flows or debt covenant compliance.

Note 2— Recently Adopted and Recently Issued Accounting Standards

In May 2014, the FASB issued ASU 2014-09, *Revenue with Contracts from Customers*. This ASU clarifies the principles for recognizing revenue such that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In August 2015, the FASB issued ASU 2015-15, *Revenue with Contracts from Customers*. This ASU defers the effective date of the standard until January 1, 2018. In March 2016, the FASB issued ASU 2016-08, *Principal versus Agent Considerations*. This ASU clarifies the implementation guidance on principal versus agent considerations. In March 2016, the FASB issued ASU 2016-10, *Identifying Performance Obligations and Licensing*. This ASU clarifies the means by which a company should recognize revenue for goods and services provided. In May 2016, the FASB issued ASU 2016-11, *Rescission of SEC Guidance Because of Accounting Standards Updates 2014-09 and 2014-16 Pursuant to Staff Announcements at the March 3, 2016 EITF Meeting*. This ASU rescinds previous revenue recognition guidance upon the adoption of ASU 2014-09. In May 2016, the FASB issued ASU 2016-12, *Revenue with Contracts from Customers*. This ASU clarifies narrow aspects of the new revenue recognition model, including the collectibility criterion, the presentation of sales taxes and other taxes collected from customers, and non-cash consideration. Additionally, this ASU provides guidance on contract modifications at transition and completed contracts at transition. The Company is currently evaluating the impact that the adoption of these ASUs will have on the consolidated financial statements. We have conducted a risk assessment and are working with outside consultants to develop a transition plan that will enable us to meet the implementation requirement.

In June 2014, the FASB issued ASU 2014-12, *Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could be Achieved after the Requisite Service Period*. This ASU clarifies the accounting treatment for share based payment awards that contain performance targets. This ASU was adopted on January 1, 2016. The adoption of this ASU did not have a material effect on our consolidated financial statements.

In August 2014, the FASB issued ASU 2014-15, *Presentation of Financial Statements - Going Concern*. This ASU clarifies management's responsibility to evaluate whether there is a substantial doubt about the entity's ability to continue as a going concern and provides guidance for related footnote disclosures. This ASU will be effective for the annual period ending December 31, 2016. The adoption of this ASU is not expected to have a material effect on our consolidated financial statements.

In January 2015, the FASB issued ASU 2015-01, *Income Statement - Extraordinary and Unusual Items*. This ASU eliminates the requirement to separately present and disclose extraordinary and unusual items in the financial statements. This ASU was adopted on January 1, 2016. The adoption of this ASU did not have a material effect on our consolidated financial statements.

In February 2015, the FASB issued ASU 2015-02, *Amendments to the Consolidation Analysis*. This ASU changes the analysis that an entity must perform to determine whether it should consolidate certain types of legal entities. This ASU was adopted on January 1, 2016. The adoption of this ASU did not have a material effect on our consolidated financial statements.

In April 2015, the FASB issued ASU 2015-03, *Imputation of Interest - Simplifying the Presentation of Debt Issuance Costs*. This ASU simplifies the presentation of debt issuance costs and requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability. In August 2015, the FASB issued ASU 2015-15, *Imputation of Interest - Simplifying the Presentation of Debt Issuance Costs*. This ASU simplifies the presentation of debt issuance costs for line of credit arrangements. These ASUs were adopted on January 1, 2016. The Consolidated Balance Sheet as of December 31, 2015 has been adjusted to apply the change in accounting principle retrospectively, which resulted in a decrease in Prepaid expenses and other current assets of \$0.4 million, a decrease in Other noncurrent assets of \$1.5 million, a decrease in the current portion of long-term debt, net of \$17 thousand, and a decrease in long-term debt of \$1.9 million as of December 31, 2015. There was no impact to the Statements of Consolidated Income as a result of the change in accounting principle. Prior year balances in Note 12 were also adjusted to conform with current year presentation.

In April 2015, the FASB issued ASU 2015-04, *Retirement Benefits - Practical Expedient for the Measurement Date of an Employer's Defined Benefit Obligation and Plan Assets*. This ASU allows entities with a fiscal year end that does not coincide with a month end to use the closest month end for measurement purposes. This ASU also allows entities that have a significant event in an interim period that calls for a remeasurement of defined benefit plan assets and obligations to use the month end date that is closest to the date of the significant event. This ASU was adopted on January 1, 2016. The adoption of this ASU did not have a material effect on our consolidated financial statements.

In April 2015, the FASB issued ASU 2015-05, *Goodwill and Other Internal Use Software - Customer's Accounting for Fees Paid in a Cloud Computing Arrangement*. This ASU clarifies when entities should account for fees paid in a cloud computing arrangement as a software license or service contract. This ASU was adopted on January 1, 2016 and was implemented on a prospective basis. The adoption of this ASU did not have a material effect on our consolidated financial statements.

In July 2015, the FASB issued ASU 2015-11, *Simplifying the Measurement of Inventory*. This ASU requires inventory to be measured at the lower of cost and net realizable value. This ASU applies to inventory measured using the first-in, first-out (FIFO) or average cost methods only. This ASU will be effective beginning in 2017. The adoption of this ASU is not expected to have a material effect on our consolidated financial statements.

In July 2015, the FASB issued ASU 2015-12, *Plan Accounting: Defined Benefit Pension Plans (Topic 960), Defined Contribution Pension Plans (Topic 962), Health and Welfare Benefit Plans (Topic 965)*. This ASU simplifies complexities within employee benefit plan accounting including Fully Benefit-Responsive Investment Contracts, Plan Investment Disclosures, and the Measurement Date Practical Expedient. This ASU was adopted on January 1, 2016. The adoption of this ASU did not have a material effect on our consolidated financial statements.

In September 2015, the FASB issued ASU 2015-16, *Simplifying the Accounting for Measurement-Period Adjustments*. This ASU simplifies the accounting for adjustments made to provisional amounts recognized in a business combination. The amendments in this Update eliminate the requirement to retrospectively account for those adjustments. MSA elected to early adopt this standard for the period ended December 31, 2015. The adoption of this ASU could have a material effect on our consolidated financial statements to the extent that measurement-period adjustments for business combinations are identified.

In November 2015, the FASB issued ASU 2015-17, *Balance Sheet Classification of Deferred Taxes*. This ASU simplifies the presentation of deferred income taxes. The amendments in this Update require that deferred tax liabilities and assets be classified as noncurrent in a classified statement of financial position. This ASU is effective for financial statements issued for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted. MSA elected to early adopt this standard for the period ended December 31, 2015. We elected to apply the amendments in this update retrospectively.

In February 2016, the FASB issued ASU 2016-02, *Leases*. This ASU requires lessees to record a right of use asset and a liability for virtually all leases. This ASU will be effective beginning in 2019. The Company continues to evaluate the impact that the adoption of this ASU will have on the consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, *Improvements to Employee Share-Based Payment Accounting*. This ASU simplifies the accounting for many aspects associated with share-based payment accounting including income taxes and the use of forfeiture rates. This ASU will be effective beginning in 2017. The Company is currently evaluating the impact that the adoption of these ASU will have on the consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Allowance for Loan and Lease Losses*. This ASU introduces an approach based on expected losses to estimate credit losses on certain types of financial instruments including loans, held-to-maturity debt securities, loan commitments, financial guarantees and net investments in leases as well as reinsurance and trade receivables. This ASU will be effective beginning in 2020. The Company is currently evaluating the impact that the adoption of these ASU will have on the consolidated financial statements and expects that adoption will result in increased disclosure.

In August 2016, the FASB issued ASU 2016-15, *Classification of Certain Cash Payments and Cash Receipts*. This ASU clarifies how certain cash receipts and cash payments are presented and classified in the statement of cash flows. This ASU will be effective beginning in 2018. The Company is currently evaluating the impact that the adoption of these ASU will have on the consolidated financial statements.

Note 3—Inventories

The following table sets forth the components of inventory:

(In thousands)	September 30, 2016	December 31, 2015
Finished products	\$ 70,531	\$ 74,929
Work in process	7,117	8,979
Raw materials and supplies	98,596	85,643
Inventories at current cost	176,244	169,551
Less: LIFO valuation	(43,702)	(43,702)
Total inventories	\$ 132,542	\$ 125,849

Note 4—Restructuring and Other Charges

During the three and nine months ended September 30, 2016, we recorded restructuring charges, net of adjustments, of \$1.9 million and \$3.7 million, respectively. International segment restructuring charges of \$3.4 million during the nine months ended September 30, 2016 were related to severance costs for staff reductions associated with ongoing initiatives to right size our operations in Europe and Japan. Americas segment restructuring charges of \$1.2 million during the nine months ended September 30, 2016 related primarily to severance from staff reductions in Latin America. Favorable adjustments for changes in estimates on employee restructuring reserves of \$1.1 million were made during the nine months ended September 30, 2016.

In September 2016, certain employees in the Americas segment were offered a voluntary retirement incentive package (“VRIP”). The election window for participation closed on October 17, 2016. The employees will be required to render service through January 31, 2017 to receive the VRIP and have until February 6, 2017 to revoke their election. 83 employees have made the revocable election to retire under the terms of the plan. Non-cash special termination benefit expense of approximately \$10.0 million is expected to be incurred in the first quarter of 2017 related to these elections. All benefits will be paid from our over funded North America pension plan.

During the three and nine months ended September 30, 2015, we recorded restructuring charges of \$3.7 million and \$4.7 million, respectively. International segment charges of \$2.5 million for the nine months months ended September 30, 2015 were related to a one-time benefit for employees impacted by our European Principal Operating Company and severance costs for staff reductions associated with ongoing initiatives to right size our operations in China, Australia, and within International segment management. Americas segment restructuring charges of \$2.0 million during the nine months ended September 30, 2015 related primarily to severance from staff reductions in North America and Brazil.

Activity and reserve balances for restructuring charges by segment were as follows:

(in millions)	Americas	International	Corporate	Total
Reserve balances at December 31, 2014	\$ 0.2	\$ 2.6	\$ —	\$ 2.8
Restructuring charges	3.3	7.4	1.6	12.3
Cash payments	(1.9)	(4.6)	(0.5)	(7.0)
Reserve balances at December 31, 2015	\$ 1.6	\$ 5.4	\$ 1.1	\$ 8.1
Restructuring charges	1.2	3.4	0.2	4.8
Adjustments and other	(0.5)	(0.1)	(0.5)	(1.1)
Cash payments	(1.6)	(5.1)	(0.4)	(7.1)
Reserve balances at September 30, 2016	\$ 0.7	\$ 3.6	\$ 0.4	\$ 4.7

Note 5—Property, Plant and Equipment

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

(In thousands)	September 30, 2016	December 31, 2015
Land	\$ 2,774	\$ 2,929
Buildings	113,141	114,324
Machinery and equipment	363,290	345,064
Construction in progress	9,452	12,451
Total	488,657	474,768
Less: accumulated depreciation	(338,718)	(318,929)
Net property, plant and equipment	\$ 149,939	\$ 155,839

Note 6—Reclassifications Out of Accumulated Other Comprehensive Loss

The changes in Accumulated Other Comprehensive Loss by component were as follows:

(In thousands)	MSA Safety Incorporated		Noncontrolling Interests	
	Three months ended September 30,		Three months ended September 30,	
	2016	2015	2016	2015
Pension and other postretirement benefits				
Balance at beginning of period	\$ (115,603)	\$ (120,418)	\$ —	\$ —
Amounts reclassified from Accumulated other comprehensive loss:				
Amortization of prior service cost	(88)	(235)	—	—
Recognized net actuarial losses	3,027	3,796	—	—
Tax benefit	(1,046)	(1,267)	—	—
Total amount reclassified from Accumulated other comprehensive loss, net of tax	1,893	2,294	—	—
Balance at end of period	\$ (113,710)	\$ (118,124)	\$ —	\$ —
Foreign Currency Translation				
Balance at beginning of period	\$ (86,873)	\$ (60,865)	\$ (2,536)	\$ (2,653)
Foreign currency translation adjustments	(2,596)	(13,131)	185	(570)
Balance at end of period	\$ (89,469)	\$ (73,996)	\$ (2,351)	\$ (3,223)

(In thousands)	MSA Safety Incorporated		Noncontrolling Interests	
	Nine months ended September 30,		Nine months ended September 30,	
	2016	2015	2016	2015
Pension and other postretirement benefits				
Balance at beginning of period	\$ (119,389)	\$ (125,570)	\$ —	\$ —
Amounts reclassified from Accumulated other comprehensive loss:				
Amortization of prior service cost	(268)	(201)	—	—
Recognized net actuarial losses	9,079	11,808	—	—
Tax benefit	(3,132)	(4,161)	—	—
Total amount reclassified from Accumulated other comprehensive loss, net of tax	5,679	7,446	—	—
Balance at end of period	\$ (113,710)	\$ (118,124)	\$ —	\$ —
Foreign Currency Translation				
Balance at beginning of period	\$ (88,810)	\$ (41,160)	\$ (3,616)	\$ (2,199)
Reclassification into earnings	3,355	—	770	—
Foreign currency translation adjustments	(4,014)	(32,836)	495	(1,024)
Balance at end of period	\$ (89,469)	\$ (73,996)	\$ (2,351)	\$ (3,223)

The reclassifications out of accumulated other comprehensive loss are included in the computation of net periodic pension and other post-retirement benefit costs (see Note 15—Pensions and Other Post-Retirement Benefits).

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 are 71,340 shares issued and 52,878 shares held in treasury at September 30, 2016. There were no treasury purchases of preferred stock during the nine months ended September 30, 2016. 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, 2016.

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 December 31, 2015. No new shares have been issued in 2016. There were 37,553,077 and 37,372,474 shares outstanding at September 30, 2016 and December 31, 2015, respectively.

Treasury Shares - In 2015, the Board of Directors adopted a stock repurchase program. The program authorizes up to \$100.0 million to repurchase MSA common stock in the open market and in private transactions. The share purchase program has no expiration date. The maximum shares that may be purchased is calculated based on the dollars remaining under the program and the respective month-end closing share price. No shares were repurchased during the nine months ended September 30, 2016. We do not have any other share purchase programs. There were 24,528,314 and 24,708,917 Treasury Shares at September 30, 2016 and December 31, 2015, respectively.

The Company issues Treasury Shares for all share based benefit plans. Shares are issued from Treasury at the average Treasury Share cost on the date of the transaction. There were 223,025 Treasury Shares issued for these purposes during the nine months ended September 30, 2016.

Note 8—Segment Information

We are organized into six geographic operating segments based on management responsibilities. 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 and International segments were established on January 1, 2016. The Americas segment is comprised of our operations in North America and Latin America geographies. The International segment is comprised of our operations of all geographies outside of the Americas. Certain global expenses are now allocated to each segment in a manner consistent with where the benefits from the expenses are derived. The 2015 segment results have been recast to conform with current period presentation.

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

Adjusted operating income (loss) and adjusted operating 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 from continuing operations excluding restructuring charges and currency exchange gains (losses). Adjusted operating margin is defined as adjusted operating income (loss) divided by segment sales to external customers. Adjusted operating income (loss) and adjusted operating margin are not recognized terms under GAAP and therefore do not purport to be alternatives to operating income or operating margin from continuing operations as a measure of operating performance. Further, the Company's measure of adjusted operating income and adjusted operating margin may not be comparable to similarly titled measures of other companies. Adjusted operating income on a consolidated basis is presented in the following table to reconcile the segment operating performance measure to operating income as presented on the condensed consolidated statement of income.

Reportable segment information is presented in the following table:

(In thousands)	Americas	International	Corporate	Reconciling Items ₁	Consolidated Totals
Three Months Ended September 30, 2016					
Sales to external customers	\$ 165,359	\$ 112,874	\$ —	\$ —	\$ 278,233
Intercompany sales	28,324	65,098	—	(93,422)	—
Adjusted operating income (loss)	41,458	10,511	(9,268)	—	42,701
Adjusted operating margin %	25.1%	9.3%			
Restructuring and other charges					(1,889)
Currency exchange (losses), net					(790)
Operating income					\$ 40,022
Total Assets	\$ 885,416	\$ 533,868	\$ 3,829	\$ 4,833	\$ 1,427,946
Nine Months Ended September 30, 2016					
Sales to external customers	\$ 510,324	\$ 343,175	\$ —	\$ —	\$ 853,499
Intercompany sales	86,194	195,435	—	(281,629)	—
Adjusted operating income (loss)	117,475	31,659	(26,291)	—	122,843
Adjusted operating margin %	23.0%	9.2%			
Restructuring and other charges					(3,697)
Currency exchange (losses), net					(2,498)
Operating income					\$ 116,648
Total Assets	\$ 885,416	\$ 533,868	\$ 3,829	\$ 4,833	\$ 1,427,946

(In thousands)	Americas	International	Corporate	Reconciling Items ₁	Consolidated Totals
Three Months Ended September 30, 2015					
Sales to external customers	\$ 181,283	\$ 92,463	\$ —	\$ —	\$ 273,746
Intercompany sales	30,625	48,022	—	(78,647)	—
Adjusted operating income (loss)	40,470	1,408	(7,356)	—	34,522
Adjusted operating margin %	22.3%	1.5%			
Restructuring and other charges					(3,740)
Currency exchange (losses), net					(4,327)
Operating income					\$ 26,455
Total Assets	\$ 918,685	\$ 325,756	\$ 100,418	\$ 30,984	\$ 1,375,843
Nine Months Ended September 30, 2015					
Sales to external customers	\$ 519,350	\$ 298,115	\$ —	\$ —	\$ 817,465
Intercompany sales	102,043	160,196	—	(262,239)	—
Adjusted operating income (loss)	101,833	19,869	(22,722)	—	98,980
Adjusted operating margin %	19.6%	6.7%			
Restructuring and other charges					(4,698)
Currency exchange (losses), net					(3,336)
Operating income					\$ 90,946
Total Assets	\$ 918,685	\$ 325,756	\$ 100,418	\$ 30,984	\$ 1,375,843

¹Reconciling items consist primarily of intercompany eliminations and items not directly attributable to operating segments.

The percentage of total sales by product group were as follows:

Three Months Ended September 30,	2016	2015
Total net sales	100%	100%
Breathing Apparatus	24%	30%
Fixed Gas & Flame Detection	22%	20%
Portable Gas Detection	13%	12%
Industrial Head Protection	11%	12%
Fall Protection	9%	4%
Fire & Rescue Helmets	4%	5%
Other	17%	17%
Nine Months Ended September 30,	2016	2015
Total net sales	100%	100%
Breathing Apparatus	26%	25%
Fixed Gas & Flame Detection	20%	22%
Portable Gas Detection	13%	13%
Industrial Head Protection	10%	12%
Fall Protection	9%	4%
Fire & Rescue Helmets	5%	5%
Other	17%	19%

Note 9—Earnings per Share

Basic earnings per share attributable to MSA Safety Incorporated common shareholders 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 per share attributable to MSA Safety Incorporated common shareholders 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 payment awards that contain nonforfeitable rights to dividends.

Amounts attributable to MSA Safety Incorporated common shareholders: (In thousands, except per share amounts)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net income attributable to continuing operations	\$ 25,486	\$ 15,712	\$ 67,475	\$ 48,750
Preferred stock dividends	(11)	(10)	(29)	(30)
Income from continuing operations available to common equity	25,475	15,702	67,446	48,720
Dividends and undistributed earnings allocated to participating securities	(38)	(45)	(105)	(141)
Income from continuing operations available to common shareholders	25,437	15,657	67,341	48,579
Net (loss) income attributable to discontinued operations	\$ (1,300)	\$ 264	\$ (455)	\$ 1,206
Preferred stock dividends	1	—	(1)	—
(Loss) income from discontinued operations available to common equity	(1,299)	264	(456)	1,206
Dividends and undistributed earnings allocated to participating securities	2	(1)	1	(3)
(Loss) income from discontinued operations available to common shareholders	(1,297)	263	(455)	1,203
Basic weighted-average shares outstanding	37,487	37,252	37,407	37,301
Stock options and other stock compensation	625	457	501	475
Diluted weighted-average shares outstanding	38,112	37,709	37,908	37,776
Antidilutive stock options	—	467	—	467
Earnings per share attributable to continuing operations:				
Basic	\$ 0.68	\$ 0.42	\$ 1.80	\$ 1.30
Diluted	\$ 0.67	\$ 0.41	\$ 1.77	\$ 1.29
(Loss) earnings per share attributable to discontinued operations:				
Basic	\$ (0.04)	\$ 0.01	\$ (0.01)	\$ 0.03
Diluted	\$ (0.04)	\$ 0.01	\$ (0.01)	\$ 0.03

Note 10—Income Taxes

The Company's effective tax rate for the third quarter of 2016 and 2015 was 30.1% and 37.1%, respectively. The 30.1% tax rate from the third quarter of 2016 differs from the U.S. federal statutory rate of 35% primarily due to a favorable mix of income sourced from lower tax jurisdictions and benefits associated with U.S. tax credits for research and development and the manufacturing deduction. The 37.1% rate for the third quarter of 2015 differs from the U.S. federal statutory rate of 35% primarily due to non-deductible losses in certain foreign jurisdictions and other non-deductible expenses, offset partially by income sourced from lower tax jurisdictions.

The effective tax rate for the nine month period of 2016 was 36.0%, inclusive of 3.3% associated with exit taxes related to our European reorganization. The 36.0% rate for the nine month period of 2016 differs from the U.S. federal statutory rate of 35% primarily due to exit taxes, partially offset by a favorable mix of income sourced from lower tax jurisdictions and benefits associated with U.S. tax credits for research and development and the manufacturing deduction. The effective tax rate for the nine month period of 2015 was 43.5%, inclusive of 9.0% associated with exit taxes related to our European reorganization. The 43.5% rate for the nine month period of 2015 differs from the U.S. federal statutory rate of 35% primarily due to exit taxes, partially offset by income sourced from lower tax jurisdictions.

At September 30, 2016, the Company had a gross liability for unrecognized tax benefits of \$13.0 million. The Company has recognized tax benefits associated with these liabilities of \$2.4 million at September 30, 2016. The gross liability includes amounts associated with prior period foreign tax exposure.

The Company recognizes interest related to unrecognized tax benefits in interest expense and penalties in operating expenses. The Company's liability for accrued interest and penalties related to uncertain tax positions was \$1.4 million at September 30, 2016.

Note 11—Stock Plans

The 2008 Management Equity Incentive Plan provides for various forms of stock-based compensation for eligible employees through May 2018. Management stock-based compensation includes stock options, restricted stock, restricted stock units, and performance stock units. The 2008 Non-Employee Directors' Equity Incentive Plan provides for grants of stock options and restricted stock to non-employee directors through May 2018. We issue treasury shares for stock option exercises, restricted stock grants, restricted stock unit grants, and performance stock unit grants. Please refer to Note 7 for further information regarding stock compensation share issuance.

Stock compensation expense is as follows:

(In thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Stock compensation expense	\$ 1,341	\$ 144	\$ 8,292	\$ 6,931
Income tax benefit	515	51	3,210	2,647
Stock compensation expense, net of income tax benefit	\$ 826	\$ 93	\$ 5,082	\$ 4,284

Stock options are granted at market value and expire after ten years. Stock options are exercisable beginning three years after the grant date. Stock option expense is based on the fair value of stock option grants estimated on the grant dates using the Black-Scholes option pricing model and the following weighted average assumptions for options granted in 2016.

Fair value per option	\$11.69
Risk-free interest rate	1.64%
Expected dividend yield	2.81%
Expected volatility	33.71%
Expected life (years)	7.01

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 1 year average closing share price. Expected volatility is based on the historical volatility using daily stock prices. Expected life is based on historical stock option exercise data.

A summary of stock option activity for the nine months ended September 30, 2016 follows:

	Shares	Weighted Average Exercise Price
Outstanding at January 1, 2016	1,694,675	\$ 36.69
Granted	235,233	44.50
Exercised	(156,979)	38.89
Forfeited	(6,173)	46.95
Outstanding at September 30, 2016	1,766,756	37.49
Exercisable at September 30, 2016	1,282,699	\$ 33.75

Restricted stock and restricted stock units are valued at the market value of the stock on the grant date. A summary of restricted stock and unit activity for the nine months ended September 30, 2016 follows:

	Shares	Weighted Average Grant Date Fair Value
Unvested at January 1, 2016	217,709	\$ 49.70
Granted	81,843	45.35
Vested	(74,030)	49.15
Forfeited	(8,991)	48.71
Unvested at September 30, 2016	216,531	\$ 48.17

Performance stock units have a market condition modifier and are valued on the grant date using a Monte Carlo valuation model to determine fair value. The final number of shares to be issued for performance stock units may range from zero to 200% of the target award based on achieving the specified performance targets over the performance period. The following weighted average assumptions were used in the Monte Carlo model for units granted in 2016 with a market condition modifier.

Fair value per unit	\$43.77
Risk-free interest rate	0.96%
Expected dividend yield	2.81%
Expected volatility	29.00%
MSA stock beta	1.202

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 1 year average closing share price. Expected volatility is based on the historical volatility using daily stock prices. Stock beta is calculated with three years of daily price data.

A summary of performance stock unit activity for the nine months ended September 30, 2016 follows:

	Shares	Weighted Average Grant Date Fair Value
Unvested at January 1, 2016	171,644	\$ 50.24
Granted	64,800	44.08
Performance adjustments	(15,594)	58.54
Vested	(31,181)	58.54
Forfeited	(1,903)	46.67
Unvested at September 30, 2016	187,766	\$ 46.08

The performance adjustments above relate to the final number of shares issued for the 2013 Management Performance Units, which were 66.6% of the target award based on Total Shareholder Return during the three year performance period, and vested in the first quarter of 2016.

Note 12—Long-Term Debt

On January 1, 2016, the Company adopted ASU 2015-03 *Imputation of Interest - Simplifying the Presentation of Debt Issuance Costs* and ASU 2015-15 *Imputation of Interest - Simplifying the Presentation of Debt Issuance Costs*. As a result of the adoption of these ASUs, our debt balances are now reported net of debt issuance costs. December 31, 2015 debt balances have been adjusted to conform with current year presentation.

(In thousands)	September 30, 2016	December 31, 2015
2006 Senior Notes payable through 2021, 5.41%, net of debt issuance costs	\$ 40,000	\$ 39,999
2010 Senior Notes payable through 2021, 4.00%, net of debt issuance costs	100,000	100,000
2016 Senior Notes payable through 2031, 3.40%, net of debt issuance costs	71,190	—
Senior revolving credit facility maturing in 2020, net of debt issuance costs	260,072	324,673
Total	471,262	464,672
Amounts due within one year, net of debt issuance costs	6,662	6,650
Long-term debt, net of debt issuance costs	\$ 464,600	\$ 458,022

Under the 2015 Amended and Restated Credit Agreement associated with our senior revolving credit facility, 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) the Prime Rate, (ii) the Federal Funds Open Rate plus one half of one percent (0.5%) or (iii) 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 2.03% as of September 30, 2016. At September 30, 2016, \$309.5 million of the existing \$575.0 million senior revolving credit facility was unused including letters of credit.

On January 22, 2016, the Company entered into a multi-currency note purchase and private shelf agreement, pursuant to which MSA issued notes in an aggregate original principal amount of £54.9 million (approximately \$80.0 million). The notes are repayable in annual installments of £6.1 million (approximately \$8.9 million), commencing January 22, 2023, with a final payment of any remaining amount outstanding on January 22, 2031. The interest rate on these notes is fixed at 3.4%. The note purchase agreement requires MSA 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 3.25 to 1.00; in each case calculated on the basis of the trailing four fiscal quarters. In addition, the note purchase agreement contains negative covenants limiting the ability of MSA 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 MSA's or its subsidiaries' business.

The revolving credit facilities and note purchase agreements require the Company to comply with specified financial covenants. In addition, the credit facilities and the note purchase agreements contain negative covenants limiting the ability of the Company and its subsidiaries to enter into specified transactions. The Company was in compliance with all covenants at September 30, 2016.

The Company had outstanding bank guarantees and standby letters of credit with banks as of September 30, 2016 totaling \$7.7 million, of which \$3.7 million relate to the senior revolving credit facility. The letters of credit serve to cover customer requirements in connection with certain sales orders and insurance companies. No amounts were drawn on these arrangements at September 30, 2016. The Company is also required to provide cash collateral in connection with certain arrangements. At September 30, 2016, the Company has \$1.4 million of restricted cash in support of these arrangements.

Note 13—Goodwill and Intangible Assets

Changes in goodwill during the nine months ended September 30, 2016 are as follows:

(In thousands)	Goodwill	
Balance at January 1, 2016	\$	340,338
Additions from acquisition		10,182
Disposal		(338)
Currency translation		(9,649)
Balance at September 30, 2016	\$	340,533

At September 30, 2016, the Company had goodwill of \$198.8 million and \$141.7 million related to the Americas and International reportable segments, respectively.

During the 2016 first quarter, we sold 100% of the stock of associated with our South African personal protective equipment distribution business and our Zambian operations, as disclosed in Note 19. This transaction resulted in a \$0.2 million disposal of goodwill.

Changes in intangible assets, net of accumulated amortization during the nine months ended September 30, 2016 are as follows:

(In thousands)	Intangible Assets
Net balance at January 1, 2016	\$ 90,068
Additions from acquisition	4,480
Amortization expense	(5,842)
Currency translation	(6,930)
Net balance at September 30, 2016	\$ 81,776

Note 14—Acquisitions

Acquisition of Senscient, Inc.

On September 19, 2016, we acquired 100% of the common stock of Senscient, Inc. ("Senscient") for \$19.1 million in cash. There is no contingent consideration. Senscient, which is headquartered in the UK, is a leader in laser-based gas detection technology. The acquisition of Senscient expands and enhances MSA's technology offerings in the global market for fixed gas and flame detection systems, as the Company continues to execute its core product growth strategy. The acquisition was funded through borrowings on our unsecured senior revolving credit facility.

Goodwill related to the Senscient acquisition, which is included in the European operating segment, is currently being evaluated to determine deductibility for tax purposes.

Our results for the three and nine months ended September 30, 2016 include transaction and integration costs of \$0.3 million related to the acquisition. These costs are reported in selling, general and administrative expenses.

Senscient operating results will be included in our consolidated financial statements from the acquisition date. The acquisition qualifies as a business combination and will be accounted for using the acquisition method of accounting.

At the date of issuance of these condensed consolidated financial statements, the initial purchase accounting was not complete. We expect to finalize this information in our Annual Report on Form 10-K for the year ended December 31, 2016.

Acquisition of Latchways

On October 21, 2015, MSA Safety Incorporated acquired Latchways plc and its affiliated companies, Latchways Australia Pty Limited ("LA"), Latchways Inc. ("LI"), HCL Group Plc ("HCL"), Height Solutions Limited ("HSL"), and Sigma 6 d.o.o. ("Sigma 6"), collectively referred to as ("Latchways"), for \$190.9 million. There is no contingent consideration.

The acquisition was funded through cash on hand and borrowings on our \$125.0 million unsecured senior revolving credit facility, which was subsequently repaid in December 2015.

Latchways is a global provider of innovative fall protection systems based in the United Kingdom. Latchways solutions are found throughout the aerospace, power transmission, utility and telecommunication sectors, and Latchways products are integrated with major roofing and tower systems. In addition to providing us with greater access to the fall protection market, we believe that the acquisition significantly enhances our long-term corporate strategy in fall protection by providing us with world-class research and development talent and an industry-leading product line. While Latchways products are sold globally, its operations most significantly impact our International reportable segment.

The following table summarizes the fair values of the Latchways assets acquired and liabilities assumed at the date of acquisition:

(In millions)	October 21, 2015
Current assets (including cash of \$10.6 million)	\$ 35.7
Property, plant and equipment	9.5
Trade name and acquired technology	14.6
Customer-related intangibles	53.0
Goodwill	98.0
Total assets acquired	210.8
Total liabilities assumed	19.9
Net assets acquired	\$ 190.9

The purchase price allocation was finalized in the 2016 third quarter and did not result in any adjustments to the preliminary fair values.

Assets acquired and liabilities assumed in connection with the acquisition have been recorded at their fair values. Fair values were determined by management, based, in part on an independent valuation performed by a third party valuation specialist. The valuation methods used to determine the fair value of intangible assets included the excess earnings approach for customer relationships and technology related intangible assets; the relief from royalty method for trade name; and the cost method for assembled workforce which is included in goodwill. A number of significant assumptions and estimates were involved in the application of these valuation methods, including sales volumes and prices, costs to produce, tax rates, capital spending, discount rates, and working capital changes. Cash flow forecasts were generally based on Latchways pre-acquisition forecasts coupled with estimated MSA sales synergies. Identifiable intangible assets with finite lives are subject to amortization over their estimated useful lives. The identifiable intangible assets acquired in the Latchways transaction will be amortized over an estimated amortization period of 15 years. Estimated future amortization expense related to these identifiable intangible assets is approximately \$4.5 million in each of the next five years. The step up to fair value of acquired inventory as part of the purchase price allocation totaled \$1.6 million. We amortized \$0.9 million of this step up in inventory value in 2015, and have amortized \$0.5 million during the nine months ended September 30, 2016. Estimated future depreciation expense related to Latchways property, plant and equipment is approximately \$0.9 million in each of the next five years.

Goodwill is calculated as the excess of the purchase price over the fair value of net assets acquired and represents the future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. Among the factors that contributed to a purchase price in excess of the fair value of the net tangible and intangible assets acquired were the acquisition of an assembled workforce, the expected synergies and other benefits that we believe will result from combining the operations of Latchways with our operations. Goodwill related to the Latchways acquisition has been recorded in our reportable segments as follows: \$96.6 million in the International segment and \$1.4 million in Americas segment. Goodwill associated with the acquisition is not tax deductible.

Our results for the nine months ended September 30, 2016 include integration costs of \$0.5 million (\$0.4 million after tax). These costs are reported in selling, general and administrative expenses in the accompanying condensed consolidated statement of income.

The operating results of Latchways have been included in our consolidated financial statements from the acquisition date. Our results for the three and nine months ended September 30, 2016 include Latchways sales of \$14.0 million and \$42.9 million, respectively. Our results for the three and nine months ended September 30, 2016 include Latchways net income of \$1.2 million and \$2.4 million, respectively. Latchways net income for the three and nine months ended September 30, 2016 includes an increase in cost of sales of \$0.1 million (\$0.1 million after tax) and \$0.5 million (\$0.3 million after tax), respectively, related to the turn of the fair value step-up of inventories acquired as well as interest expense incurred by MSA associated with debt used to fund the acquisition.

The following unaudited pro forma information presents our combined results as if the acquisition had occurred at the beginning of 2015. The unaudited pro forma financial information was prepared to give effect to events that are (1) directly attributable to the acquisition; (2) factually supportable; and (3) expected to have a continuing impact on the combined company's results. There were no material transactions between us and Latchways during the periods presented that are required to be eliminated. Transactions between Latchways companies during the periods presented have been eliminated in the unaudited pro forma condensed combined financial information. The unaudited pro forma financial information does not reflect any cost savings, operating synergies or revenue enhancements that the combined company may achieve as a result of the acquisition or the costs to integrate the operations or the costs necessary to achieve cost savings, operating synergies or revenue enhancements.

Pro forma financial information (Unaudited)

(In millions, except per share amounts)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net sales	\$ 278.2	\$ 288.6	\$ 853.5	\$ 856.9
Income from continuing operations	25.5	17.8	67.5	53.5
Basic earnings per share from continuing operations	0.68	0.48	1.80	1.44
Diluted earnings per share from continuing operations	0.67	0.47	1.77	1.42

The unaudited pro forma condensed combined financial information is presented for information purposes only and is not intended to represent or be indicative of the combined results of operations or financial position that we would have reported had the acquisitions been completed as of the date and for the periods presented, and should not be taken as representative of our consolidated results of operations or financial condition following the acquisition. In addition, the unaudited proforma condensed combined financial information is not intended to project the future financial position or results of operations of the combined company.

Note 15—Pensions and Other Postretirement Benefits

Components of net periodic benefit cost consisted of the following:

(In thousands)	Pension Benefits		Other Benefits	
	2016	2015	2016	2015
Three Months Ended September 30,				
Service cost	\$ 2,634	\$ 2,904	\$ 106	\$ 111
Interest cost	4,702	4,593	237	216
Expected return on plan assets	(8,682)	(8,537)	—	—
Amortization of prior service cost	17	17	(105)	(84)
Recognized net actuarial losses	3,010	3,929	17	7
Settlements	17	33	—	—
Net periodic benefit cost	\$ 1,698	\$ 2,939	\$ 255	\$ 250
Nine Months Ended September 30,				
Service cost	\$ 7,902	\$ 8,712	\$ 318	\$ 333
Interest cost	14,106	13,779	711	648
Expected return on plan assets	(26,046)	(25,611)	—	—
Amortization of prior service cost	47	51	(315)	(252)
Recognized net actuarial losses	9,028	11,787	51	21
Settlements	57	99	—	—
Net periodic benefit cost	\$ 5,094	\$ 8,817	\$ 765	\$ 750

We made contributions of \$4.7 million to our pension plans during the nine months ended September 30, 2016. We expect to make total contributions of approximately \$6.2 million to our pension plans in 2016 which are primarily associated with our International segment.

Note 16—Derivative Financial Instruments

As part of our currency exchange rate risk management strategy, we may enter into certain derivative foreign currency forward contracts that do not meet the U.S. GAAP criteria for hedge accounting, but which have the impact of partially offsetting certain foreign currency exposures. We account for these forward contracts at fair value and report the related gains or losses in currency exchange gains or losses in the condensed consolidated statement of income. The notional amount of open forward contracts was \$78.4 million and \$58.6 million at September 30, 2016 and December 31, 2015, respectively.

The following table presents the balance sheet location and fair value of assets associated with derivative financial instruments:

(In thousands)	September 30, 2016	December 31, 2015
Derivatives not designated as hedging instruments:		
Foreign exchange contracts: other current liabilities	\$ 102	\$ 581
Foreign exchange contracts: other current assets	318	401

The following table presents the statement of income location and impact of derivative financial instruments:

(In thousands)	Statement of Income Location	Loss Recognized in Income	
		Nine Months Ended September 30, 2016	2015
Derivatives not designated as hedging instruments:			
Foreign exchange contracts	Currency exchange losses	\$ 2,158	\$ 1,607

Note 17—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 were limited to the derivative financial instruments described in Note 16. 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 fixed rate long-term debt, we believe that the reported carrying amounts of our financial assets and liabilities approximate their fair values. The reported carrying amount of our fixed rate long-term debt (including the current portion) was \$211.3 million and \$146.7 million at September 30, 2016 and 2015, respectively. The fair value of this debt was \$236.8 million and \$153.5 million at September 30, 2016 and 2015, respectively. The fair value of this debt was determined by evaluating like rated companies with publicly traded bonds and recent market transactions. The fair value of this debt was determined using Level 2 inputs as described above.

Note 18—Contingencies

Product Liability

The Company categorizes the product liability claims of its subsidiary MSA LLC into two main categories: single incident and cumulative trauma.

Single incident product liability claims involve discrete incidents that are typically known to us when they occur and involve observable injuries, which provide an objective basis for quantifying damages. MSA LLC estimates its liability for single incident product liability claims based on expected settlement costs for reported claims and an estimate of costs for unreported claims (claims incurred but not reported or IBNR). The estimate for IBNR claims is based on experience, sales volumes, and other relevant information. The reserve for single incident product liability claims, which includes reported and IBNR claims, was \$3.3 million at September 30, 2016 and \$3.5 million at December 31, 2015. Single incident product liability expense was \$0.5 million during the nine months ended September 30, 2016 and \$0.7 million during the nine months ended September 30, 2015. Single incident product liability exposures are evaluated on an ongoing basis and adjustments are made to the reserve as appropriate.

Cumulative trauma product liability claims involve exposures to harmful substances (e.g., silica, asbestos and coal dust) that occurred many years ago and may have developed over long periods of time into diseases such as silicosis, asbestosis, or coal worker’s pneumoconiosis. MSA LLC is presently named as a defendant in 1,928 lawsuits, some of which involve multiple plaintiffs, in which plaintiffs allege to have contracted certain cumulative trauma diseases. These lawsuits mainly involve respiratory protection products allegedly manufactured and sold by MSA LLC or its predecessors. The products at issue were manufactured many years ago and are not currently offered by MSA LLC. Although there is year over year variability in the number and quality of claims defended and resolved, MSA LLC’s aggregate total for cumulative trauma product liability claims (inclusive of settlements and defense costs) for the three years ended December 31, 2015, totaled approximately \$156.1 million, substantially all of which was recorded as insurance receivables because the amounts are believed to be recoverable under insurance.

A summary of cumulative trauma product liability lawsuit activity follows:

	Nine Months Ended September 30, 2016	Year Ended December 31, 2015
Open lawsuits, beginning of period	1,988	2,326
New lawsuits	279	340
Settled and dismissed lawsuits	(339)	(678)
Open lawsuits, end of period	1,928	1,988

More than half of the open lawsuits at September 30, 2016 have had a de minimis level of activity over the last 5 years. It is possible that these cases could become active again at any point due to changes in circumstances.

Cumulative trauma product liability litigation is inherently unpredictable. It has typically not been until very late in the legal process that it can be reasonably determined whether it is probable that any particular case will ultimately result in a liability. This uncertainty is caused by many factors. Complaints generally do not provide information sufficient to determine if a lawsuit will develop into an actively litigated case. Even when a case is actively litigated, it is often difficult to determine if the lawsuit will be dismissed or otherwise resolved until late in the lawsuit. Moreover, even if it is probable that such a lawsuit will result in a loss; it is often difficult to estimate the amount of actual loss that will be incurred. These actual loss amounts are highly variable and turn on a case-by-case analysis of the relevant facts, which are often not learned until late in the lawsuit. In addition, there are uncertainties concerning the impact of bankruptcies of other companies that are co-defendants in claims, uncertainties surrounding the litigation process from jurisdiction to jurisdiction and from case to case, and uncertainties regarding the impact of potential changes in legislative or judicial standards.

The uncertainties noted above relating to cumulative trauma product liability litigation are particularly acute in the case of incurred but not reported claims (“IBNR” claims), which by definition are potential claims that have not yet been filed. Management, after consultation with its valuation consultant and outside legal counsel, continues to be unable to reasonably estimate, and therefore has not recorded any liability for, MSA LLC’s cumulative trauma IBNR claims.

However, in 2015 Management worked with its outside valuation consultant and outside legal counsel to develop a method to provide a reasonable estimate for certain reported claims by using appropriate assumptions based on MSA LLC's particular circumstances. For those reported claims where MSA LLC believes a loss is probable, and it can make a reasonable estimate of such loss, it recorded a liability of \$7.1 million as of December 31, 2015. This reserve amount pertains to certain reported claims where MSA LLC's claims experience allowed it to make an estimate of potential liability, but does not take into account all the claims currently pending against MSA LLC. The change in ability to estimate in 2015 was driven by the maturation of MSA LLC's defense efforts and additional claims experience. Certain groups of claims have not been included in the reserve due to a lack of claims experience with the applicable plaintiffs' counsel, low volume of resolution, or lack of confidence in the consistency of claims composition, or other factors which rendered us unable to make a reasonable estimate. Therefore, while this reserve amount covers a substantial portion of MSA LLC's currently reported claims, it does not purport to cover all of MSA LLC's reported claims as discussed above. In addition, the reserve does not include amounts which will be spent to defend these claims.

To arrive at the estimate, it was necessary to employ significant assumptions. In light of these significant assumptions, and all of the uncertainties inherent in cumulative trauma product liability litigation noted above, there can be no assurance that future experience with reported claims will follow MSA LLC's past experience. Because litigation is subject to inherent uncertainties, and unfavorable rulings or developments could occur, there can be no certainty that MSA LLC may not ultimately incur charges in excess of presently recorded liabilities or that costs related to claims not included in the reserve will be consistent either with those for which MSA LLC has been able to make an estimate, and to reserve, or past outcomes. Actual liabilities could vary greatly and we will need to adjust the estimate from time to time based on relevant facts and circumstances. If actual experience is worse than projected, the estimate would increase, and these increases could potentially be material over time.

At December 31, 2015, MSA LLC established a \$7.1 million cumulative trauma product liability reserve for reported claims. In the second quarter of 2016, we reduced this reserve by \$2.3 million for payments made and the reserve remains at \$4.8 million as of September 30, 2016. The total cumulative trauma product liability reserve including the estimated reserve for reported claims and settlements that have not yet been paid totaled \$9.0 million at September 30, 2016. This reserve is recorded in the insurance and product liability line within other current liabilities section of the condensed consolidated balance sheet.

On February 26, 2016, a Kentucky state court jury in the James Couch claim rendered a verdict against MSA LLC of \$7.2 million dollars (comprised of \$3.2 million of an apportioned share of compensatory damages and \$4.0 million in punitive damages). The Couch claim is a product liability lawsuit involving cumulative trauma exposure to coal dust. Management believes that the verdict against MSA LLC is contrary to Kentucky law and is appealing the verdict. The Company and its outside legal counsel have concluded that, based on their assessment of the appellate issues, a reversal of the adverse judgment is reasonably possible and, consequently, a loss contingency is not probable at this time and is not included in the \$4.8 million product liability reserve. In the future, if the Company determines that losses with respect to this matter are probable, MSA LLC, consistent with its existing practices, will record an accrual and/or provide appropriate disclosures as required by ASC 450-20-50, Contingencies. In the event that MSA LLC's appeal of the adverse verdict is unsuccessful or not fully successful, the loss could total the full amount of the verdict, plus additional amounts for post-judgment interest. If so, the \$3.2 million compensatory portion of the verdict (and associated interest) would be added to the product liability reserve and the insurance receivable in the consolidated balance sheet. The \$4.0 million punitive portion of the verdict (and associated interest) would be expensed because we do not have insurance to cover punitive damages in this case.

Insurance Receivable and Notes Receivable, Insurance Companies

MSA LLC purchased insurance policies for the policy years from 1952-1986 from over 20 different insurance carriers that, subject to some common contract exclusions, provide coverage for cumulative trauma product liability losses and, in many instances, related defense costs (the "Occurrence-Based Policies"). The available limits of these policies exceed the recorded insurance receivable balance. After 1986, MSA LLC's insurance policies have significant per claim deductibles. Based on this, the Company does not expect to be materially reimbursed for any claims alleging exposures that occurred entirely after this date.

In the normal course of business, MSA LLC makes payments to settle product liability claims and for related defense costs and records receivables for the amounts that are covered by insurance. Various factors could affect the timing and amount of recovery of the insurance receivable, including the outcome of negotiations with insurers, the outcome of the coverage litigation, and the extent to which insurers may become insolvent in the future.

Insurance receivables at September 30, 2016 totaled \$154.5 million, of which, \$2.0 million is reported in prepaid expenses and other current assets and \$152.5 million is reported in insurance receivable and other non-current assets. Insurance receivables at December 31, 2015 totaled \$229.5 million, of which \$2.0 million is reported in Prepaid expenses and other current assets and \$227.5 million is reported in insurance receivable and other non-current assets.

A summary of insurance receivable balances and activity related to cumulative trauma product liability losses follows:

(In millions)	Nine Months Ended September 30, 2016	Year Ended December 31, 2015
Balance beginning of period	\$ 229.5	\$ 220.5
Additions	24.8	17.3
Collections and settlements converted to notes receivable	(99.8)	(8.3)
Balance end of period	\$ 154.5	\$ 229.5

Additions to insurance receivables in the above table represent insured cumulative trauma product liability losses and related defense costs. There were no uninsured cumulative trauma product liability losses during the three months ended September 30, 2016 and September 30, 2015. Collections and settlements primarily represent agreements with insurance companies to pay amounts due that are applicable to cumulative trauma claims. When there are contingencies embedded in these agreements, we apply payments to the undiscounted receivable in the period when the contingency is met.

In some cases, settlements are converted to formal notes receivable from insurance companies. The notes receivable are recorded as a transfer from the insurance receivable balance to the note receivable, insurance companies (current and noncurrent) in the condensed consolidated balance sheet. In cases where the payment stream covers multiple years and there are no contingencies, the present value of the payments is recorded as a transfer from the insurance receivable balance to the note receivable, insurance companies (current and long-term) in the condensed consolidated balance sheet. Provided the remaining insurance receivable is recoverable through the insurance carriers, no gain or loss is recognized at the time of transfer from insurance receivable to notes receivable from insurance companies.

Notes receivable from insurance companies at September 30, 2016 totaled \$103.6 million, of which \$40.5 million is reported in Notes receivable, insurance companies, current and \$63.1 million is reported in Notes receivable, insurance companies, noncurrent. Notes receivable from insurance companies at December 31, 2015 totaled \$8.7 million, of which \$6.7 million is reported in Notes receivable, insurance companies, current and \$1.9 million is reported in Notes receivable, insurance companies, noncurrent.

A summary of notes receivable balances from insurance companies is as follows:

(In millions)	Nine Months Ended September 30, 2016	Year Ended December 31, 2015
Balance beginning of period	\$ 8.7	\$ 16.2
Additions	94.9	0.5
Collections	—	(8.0)
Balance end of period	\$ 103.6	\$ 8.7

The collectability of MSA LLC's insurance receivables is regularly evaluated and we believe that the amounts recorded are probable of collection. These conclusions are based on analysis of the terms of the underlying insurance policies, experience in successfully recovering cumulative trauma product liability claims from our insurers under other policies, the financial ability of the insurance carriers to pay the claims, understanding and interpretation of the relevant facts and applicable law and the advice of MSA LLC's outside legal counsel. We believe that successful resolution of insurance litigation with various insurance carriers over the years, as well as the recent trial verdict favorable outcome, demonstrate that we have strong legal positions concerning MSA LLC's rights to coverage. The trial verdict is described below.

Insurance Litigation

MSA LLC is currently involved in insurance coverage litigation with a number of its insurance carriers regarding its Occurrence-Based Policies.

In 2009, MSA LLC (as Mine Safety Appliances Company) sued The North River Insurance Company (North River) in the United States District Court for the Western District of Pennsylvania, alleging that North River breached one of its insurance policies by failing to pay amounts owed to MSA LLC and that it engaged in bad-faith claims handling. MSA LLC believes that North River's refusal to indemnify it under the policy for product liability losses and legal fees paid by MSA LLC is wholly contrary to Pennsylvania law and MSA LLC is vigorously pursuing the legal actions necessary to collect all due amounts. A trial date has not yet been scheduled.

In 2010, North River sued MSA LLC (as Mine Safety Appliances Company) in the Court of Common Pleas of Allegheny County, Pennsylvania seeking a declaratory judgment concerning their responsibilities under three additional policies. MSA LLC asserted claims against North River for breaches of contract for failures to pay amounts owed to MSA LLC. MSA LLC also alleged that North River engaged in bad-faith claims handling.

On October 6, 2016, a Pennsylvania state court jury found that North River breached the three contracts at issue in the case, and that North River also violated common law standards of bad faith in handling MSA LLC's claims. As a result of the jury's findings, the court entered a verdict in favor of MSA LLC and against North River for \$10.9 million dollars, the full amount of the contractual damages at issue in the case. The \$10.9 million, which is comprised of previously recorded payments to settle product liability claims and related defense costs, is part of MSA LLC's insurance receivable. In addition to the claims decided by the jury, MSA LLC also presented a claim under Pennsylvania's bad faith statute, which is decided by the court. Following the jury verdict, the court also issued a verdict with respect to the statutory bad faith claim, finding that North River had acted in statutory bad faith. A hearing to determine the damages to be awarded as a result of the statutory bad faith violation is scheduled for December 2016. We believe the outcome of this proceeding in our favor demonstrates that we have strong legal positions concerning MSA LLC's rights to coverage.

In July 2010, MSA LLC (as Mine Safety Appliances Company) filed a lawsuit in the Superior Court of the State of Delaware seeking declaratory and other relief from the majority of its excess insurance carriers concerning the future rights and obligations of MSA LLC and its excess insurance carriers under various insurance policies. The reason for this insurance coverage action is to secure a comprehensive resolution of its rights under the insurance policies issued by the insurers. Trial is scheduled for April 2017.

Through negotiated settlements, MSA LLC has resolved claims against certain of its insurance carriers on certain policies. When a settlement is reached, MSA LLC dismisses the settling carrier from the relevant above noted lawsuit(s). Assuming satisfactory resolution, once disputes are resolved with each of the remaining carriers, MSA LLC anticipates having commitments to provide future payment streams which should be sufficient to satisfy its presently recorded insurance receivables due from insurance carriers.

During September 2016, we resolved coverage litigation with AIG International ("AIG"), through a negotiated settlement. AIG has agreed to make various payments over a period of years. These payments may be applied to satisfy amounts which had previously been recorded as part of the insurance receivable. As part of this settlement, we dismissed all claims against AIG in the above-referenced coverage litigation in the Superior Court of the State of Delaware. The settlement was recorded as a reduction from the insurance receivable and did not have an impact on our operating results for the three or nine months ended September 30, 2016.

During September 2016, we resolved coverage litigation with Transport ("Transport"), through a negotiated settlement. Transport has agreed to make various payments over a period of years. These payments may be applied to satisfy amounts which had previously been recorded as part of the insurance receivable. As part of this settlement, we dismissed all claims against Transport in the above-referenced coverage litigation in the Superior Court of the State of Delaware. The settlement was recorded as a reduction from the insurance receivable and did not have an impact on our operating results for the three or nine months ended September 30, 2016.

We estimate that within the next 6 - 18 months, even if insurance coverage litigation is generally successful, MSA LLC will become largely self-insured for costs associated with cumulative trauma product liability claims. The exact point when this transition will happen is difficult to predict and subject to a number of variables, including the pace at which future cumulative trauma product liability costs are incurred and the results of litigation and negotiations with insurance carriers. After it becomes largely self-insured, MSA LLC may still obtain some insurance reimbursement from negotiated coverage-in-place agreements (although that coverage may not be immediately triggered or accessible) or from other sources of coverage. The precise amount of insurance reimbursement available at that time cannot be determined with specificity at this time.

Note 19—Discontinued Operations

On February 29, 2016, the Company sold 100% of the stock associated with its South African personal protective equipment distribution business and its Zambian operations. The Company received \$15.9 million from the closing of this transaction and recorded a loss of approximately \$0.3 million during the first quarter of 2016.

During the second quarter of 2016, the Company corrected its gain calculation on the disposition of the South African personal protective equipment distribution business and its Zambian operations. This resulted in a gain of approximately \$2.5 million being recorded during the second quarter in discontinued operations that should have been recorded in the first quarter of 2016. The Company evaluated materiality in accordance with SEC Staff Accounting Bulletins Topics 1.M and 1.N and considered relevant qualitative and quantitative factors. The Company concluded that this modification was not material to the first quarter of 2016 or the trend in earnings over the affected periods. The modification had no effect on cash flows or debt covenant compliance.

The operations of this business qualify as a component of an entity under FASB ASC 205-20 "Presentation of Financial Statements - Discontinued Operations", and thus the operations have been reclassified as discontinued operations and prior periods have been reclassified to conform to this presentation.

Summarized financial information for discontinued operations is as follows:

(In thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Discontinued Operations				
Net sales	\$ —	\$ 11,648	\$ 5,261	\$ 34,189
Other (loss) income, net	(1,300)	257	896	430
Cost and expenses:				
Cost of products sold	—	9,478	4,819	27,526
Selling, general and administrative	—	1,751	937	5,035
Currency exchange losses, net	—	105	18	313
(Loss) income from discontinued operations before income taxes	(1,300)	571	383	1,745
Provision for income taxes	—	109	328	505
(Loss) income from discontinued operations, net of tax	\$ (1,300)	\$ 462	\$ 55	\$ 1,240

Certain balance sheet items that are related to the Company's South African personal protective equipment distribution business and its Zambian operations are reported as discontinued operations. These items are reported in the following consolidated balance sheet lines:

(In thousands)	September 30, 2016	December 31, 2015
Discontinued Operations assets and liabilities		
Trade receivables, less allowance for doubtful accounts	\$ —	\$ 4,832
Inventories	—	8,499
Net property	—	449
Other assets	—	791
Total assets	—	14,571
Accounts payable	—	2,745
Accrued and other liabilities	686	748
Total liabilities	686	3,493
Net assets	\$ (686)	\$ 11,078

The following summary provides financial information for discontinued operations related to the net (income) loss attributable to noncontrolling interests:

(In thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net (income) loss attributable to noncontrolling interests				
(Income) loss from continuing operations	\$ (836)	\$ 588	\$ (1,496)	\$ 1,109
(Income) loss from discontinued operations	—	(198)	(510)	(34)
Net (income) loss	\$ (836)	\$ 390	\$ (2,006)	\$ 1,075

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 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."

The Americas and International segments were established on January 1, 2016. The Americas segment is comprised of our operations in North America and Latin America geographies. The International segment is comprised of our operations of all geographies outside of the Americas. Certain global expenses are now allocated to each segment in a manner consistent with where the benefits from the expenses are derived. The 2015 segment results have been recast to conform with current period presentation. Please refer to Note 8 Segment Information, for further information.

MSA's South African personal protective equipment distribution business and MSA's Zambian operations had historically been part of the International reportable segment. The results of these operations are excluded from continuing operations and are presented as discontinued operations in all periods presented. Please refer to Note 19 Discontinued Operations, for further commentary on these discontinued operations.

BUSINESS OVERVIEW

We are a global leader in the development, manufacture and supply of products that protect people and facility infrastructures. Our safety products typically integrate any combination of electronics, mechanical systems and advanced materials to protect users against hazardous or life threatening situations. Our comprehensive lines of safety products are used by workers around the world in a broad range of markets including the oil and gas, fire service, mining and construction industries, as well as the military. 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.

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 six geographical operating segments that are aggregated into three reportable geographic segments: Americas, International and Corporate. Each segment includes a number of operating segments. In 2015, 62% and 38% of our net sales were made by our Americas and International segments, respectively.

Americas. Our largest manufacturing and research and development facilities are located in the United States. We serve our North American markets with sales and distribution functions in the U.S., Canada and Mexico. We also have manufacturing facilities in Mexico and Brazil to service our markets across the Americas.

International. Our International segment includes companies in most Western European countries, a number of Eastern European countries, locations in the Middle East, Russia, Africa and the Asia Pacific region, some of which are in developing regions of the world. In our largest European companies, Germany and France, we develop, manufacture and sell a wide variety of products. The technology associated with the development of our products in these countries is owned by our European Principal Operating company which is located in Rapperswil-Jona, Switzerland. Manufacturing operations are also located in China, the U.K., Ireland, and Sweden. These manufacturing entities manufacture products that are sold primarily in each company's home country as well as regional markets. Operations in other International segment countries focus primarily on sales and distribution in their respective home country markets. While some of these companies may perform limited production, most of their sales are of products manufactured in our other plants 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, which have leading market positions and a competitive advantage. Core products include fixed gas and flame detection systems, breathing apparatus where SCBA is the principal product, portable gas detection instruments, industrial head protection products, fire and rescue helmets and fall protection devices. These products receive the highest levels of investment and resources as they typically realize a higher gross profit margin and provide higher levels of return on investment than non-core products. Core products comprised approximately 82% of sales in 2016 for the nine months ended September 30, 2016.

MSA maintains a portfolio of non-core products, which include both adjacent and peripheral offerings. Adjacent products reinforce and extend the core, drawing upon our customer relationships, distribution channels, geographical presence and technical experience. These products are complementary to the core offerings and have their roots within the core product value chain. Key adjacent products include respirators, eye and face protection, thermal imaging cameras, and gas masks. Gas masks and ballistic helmet sales are the primary purchases from our military customers and were approximately \$42.0 million globally during the first nine months of 2016. Peripheral products are primarily sold to the mining industry and reflect a small portion of consolidated sales.

A detailed listing of our significant product offerings in the aforementioned product groups above is included in the MSA's Annual Report on Form 10-K for the year ended December 31, 2015.

RESULTS OF OPERATIONS

Three Months Ended September 30, 2016 Compared to Three Months Ended September 30, 2015

Net sales. Net sales for the three months ended September 30, 2016 were \$278.2 million, an increase of \$4.5 million, or 2%, compared with \$273.7 million for the three months ended September 30, 2015. Organic constant currency sales decreased by 3% for the three months ended September 30, 2016. Please refer to the Net Sales from Continuing Operations table for a reconciliation of the quarter over quarter sales change.

Net Sales (In millions)	Three Months Ended September 30,		Dollar Increase (Decrease)	Percent Increase (Decrease)
	2016	2015		
Consolidated Continuing Operations	\$278.2	\$273.7	\$4.5	2%
Americas	165.4	181.3	(15.9)	(9)%
International	112.9	92.5	20.4	22%

Net Sales from Continuing Operations (Percent Change)	Three Months Ended September 30, 2016 versus September 30, 2015		
	Americas	International	Consolidated Continuing Operations
GAAP reported sales change	(8.8)%	22.1%	1.6%
Plus: currency translation effects	0.9%	0.8%	0.8%
Constant currency sales change	(7.9)%	22.9%	2.4%
Less: acquisitions	1.1%	12.9%	5.1%
Organic constant currency change	(9.0)%	10.0%	(2.7)%

Note: Organic 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. Organic constant currency sales change is calculated by deducting the percentage impact from acquisitions and currency translation effects from the overall percentage change in net sales.

Net sales for the Americas segment were \$165.4 million in the third quarter of 2016, a decrease of \$15.9 million, or 9%, compared to \$181.3 million in the third quarter of 2015. Currency translation effects decreased Americas segment sales by 1%, reflecting a weaker Mexican Peso. During the quarter, organic constant currency sales in the Americas segment decreased 9% over the prior year period on a lower level of shipments of the G1 self-contained breathing apparatus ("SCBA") across the segment, partially offset by growth in portable gas instruments, industrial head protection, and fixed gas and flame detection. Acquisitions provided 1% of sales growth.

Net sales for the International segment were \$112.9 million in the third quarter of 2016, an increase of \$20.4 million, or 22%, compared to \$92.5 million for the third quarter of 2015. Currency translation effects decreased International segment net sales by 1%, reflecting a weaker British pound and Chinese yuan renminbi. Organic constant currency sales in the International segment provided 10% growth during the third quarter, driven by increased shipments of ballistic helmets in Western Europe, fixed gas and flame detection projects in the Middle East, and breathing apparatus growth in emerging markets like China and the Middle East. Acquisitions provided an additional 13% of sales growth in the segment on a higher level of fall protection shipments.

Gross profit. Gross profit for the third quarter of 2016 was \$128.8 million, an increase of \$9.0 million, or 8%, compared to \$119.8 million for the third quarter of 2015. The ratio of gross profit to net sales was 46.3% in the third quarter of 2016 compared to 43.8% in the same quarter last year. The higher gross profit ratio during the current quarter is attributable to a favorable product mix and improved G1 SCBA margins associated with our value engineering initiatives.

Selling, general and administrative expenses. Selling, general and administrative expenses were \$72.9 million during the third quarter of 2016, an increase of \$0.2 million, compared to \$72.7 million in the third quarter of 2015. Selling, general and administrative expenses were 26.2% of net sales in the third quarter of 2016, compared to 26.6% of net sales in the third quarter of 2015. Organic constant currency selling, general, and administrative expense decreased 2% during the quarter, as the Company realizes benefits from the execution of our global cost reduction program. Please refer to the Selling, general and administrative expenses table for a reconciliation of the quarter over quarter expense change.

Selling, general, and administrative expenses (Percent Change)	Three Months Ended September 30, 2016 versus September 30, 2015 Consolidated Continuing Operations
GAAP reported change	0.3%
Plus: currency translation effects	1.7%
Constant currency change	2.0%
Less: acquisitions	4.3%
Organic constant currency change	(2.3)%

Note: Organic constant currency change is a non-GAAP financial measure provided by the Company to give a better understanding of the Company's underlying business performance. Organic constant currency change in selling, general, and administrative expenses is calculated by deducting the percentage impact from acquisitions and currency translation effects from the overall percentage change in GAAP selling, general, and administrative expense. Management believes excluding acquisitions and currency translation effects provide investors with a greater level of clarity into spending levels on a year-over-year basis.

Research and development expense. Research and development expense was \$13.1 million during the third quarter of 2016, an increase of \$0.6 million, or 5%, compared to \$12.5 million during the third quarter of 2015. Research and development expense was 4.7% of net sales in the third quarter of 2016, compared to 4.6% of net sales in the third quarter of 2015. The Company continues to focus on developing new and innovative technologies, closely aligned with our strategic goals, like our new fixed gas and flame detection platform. We expect research and development expense to range from 4.0% to 4.5% of sales for the full year ending December 31, 2016.

Restructuring, net of adjustments. During the three months ended September 30, 2016, the Company recorded restructuring, net of adjustments, of \$1.9 million, primarily related to severance costs for staff reductions associated with ongoing initiatives to right size our operations in Japan. We continue to evaluate additional restructuring activities to execute over the next several quarters.

In September 2016, certain employees in the Americas segment were offered a voluntary retirement incentive package ("VRIP"). The election window for participation closed on October 17, 2016. The employees will be required to render service through January 31, 2017 to receive the VRIP and have until February 6, 2017 to revoke their election. 83 employees have made the revocable election to retire under the terms of the plan. Non-cash special termination benefit expense of approximately \$10.0 million is expected to be incurred in the first quarter of 2017 related to these elections. All benefits will be paid from our over funded North America pension plan. Including our non-cash special termination benefit expense and additional initiatives across our International segment, we expect to incur between \$12.0 million and \$15.0 million in restructuring expense over the next several quarters, and anticipate savings in 2017 of approximately \$10.0 million related to these programs.

During the three months ended September 30, 2015, the Company recorded restructuring charges of \$3.7 million, primarily associated with headcount reductions across all segments and a one-time benefit for employees impacted by our European Principal Operating Company.

Currency exchange. Currency exchange losses were \$0.8 million in the third quarter of 2016, compared to losses of \$4.3 million in the third quarter of 2015. Currency exchange losses in the third quarter of 2016 were related to management of foreign currency exposure on unsettled inter-company balances. Refer to Note 16 to the Condensed Consolidated Financial Statements in Part I Item 1 of this Form 10-Q, for information regarding our currency exchange rate risk management strategy.

GAAP operating income. Consolidated operating income for the third quarter of 2016 was \$40.0 million, an increase of \$13.5 million, or 51%, compared to \$26.5 million in the third quarter of 2015. Improved operating income for the third quarter was driven by improvements in gross margin and lower selling, general and administrative costs stemming from our cost reduction programs.

Adjusted operating income. Americas adjusted operating income for the third quarter of 2016 was \$41.5 million, an increase of \$1.0 million, or 2%, compared to \$40.5 million in the third quarter of 2015. We continued to see strength in gross profit % during the third quarter from a favorable product mix and from improvements in G1 SCBA margins. Lower selling, general, and administrative costs also contributed to operating income results through effective cost management.

International adjusted operating income for the third quarter of 2016 was \$10.5 million, an increase of \$9.1 million, or 650%, compared to \$1.4 million in the prior year quarter. Strength in gross profit driven by increased revenues from the acquisition of Latchways as well as growth in both developed and emerging international markets contributed to growth over the prior year period. Lower selling, general, and administrative costs also contributed to operating income results through effective cost management.

Corporate segment adjusted operating loss for the third quarter of 2016 was \$9.3 million, an increase of \$1.9 million, or 26%, compared to an operating loss of \$7.4 million in the third quarter of 2015, reflecting higher stock compensation expense and legal expense.

The following table represents a reconciliation from GAAP operating income to adjusted operating income. Adjusted operating margin % is calculated as adjusted operating income divided by net sales.

Adjusted operating income

(In millions)	Americas	International	Corporate	Consolidated Continuing Operations
Net sales	\$165,359	\$112,874	\$—	\$278,233
Adjusted operating income	41,458	10,511	(9,268)	42,701
Adjusted operating margin %	25.1%	9.3%		
Restructuring and other charges				(1,889)
Currency exchange gains, net				(790)
GAAP operating income				\$40,022

Note: Adjusted operating income is a non-GAAP financial measure used by the chief operating decision maker to evaluate segment performance and allocate resources. Adjusted operating income is reconciled above to the nearest GAAP financial measure, Operating income.

Total other expense, net. Other expense for the quarter ended September 30, 2016 was \$2.4 million, compared to \$2.4 million for the same period in 2015.

Income taxes. The reported effective tax rate for the third quarter of 2016 and 2015 was 30.1% and 37.1%, respectively. The effective tax rate decrease was primarily due to a more favorable mix of income sourced from lower tax jurisdictions, reduced foreign entity losses in jurisdictions where the Company cannot record tax benefits and benefits associated with U.S. tax credits for research and development.

Net income from continuing operations attributable to MSA Safety Incorporated. Net income from continuing operations was \$25.5 million for the third quarter of 2016, or \$0.68 per basic share, an increase of \$9.8 million, or 62%, compared to \$15.7 million, or \$0.42 per basic share, for the same quarter last year.

Net (loss) income from discontinued operations attributable to MSA Safety Incorporated. Net loss from discontinued operations was \$1.3 million for the third quarter of 2016, or (\$0.04) per basic share, a decrease of \$1.6 million, or 533%, compared to net income of \$0.3 million, or \$0.01 per basic share, for the same quarter last year. Please refer to Note 19 to the unaudited condensed consolidated financial statements of this Form 10-Q.

Nine Months Ended September 30, 2016 Compared to Nine Months Ended September 30, 2015

Net sales. Net sales for the nine months ended September 30, 2016 were \$853.5 million, an increase of \$36.0 million, or 4%, compared with \$817.5 million for the nine months ended September 30, 2015. Organic constant currency sales increased by 1% for the nine months ended September 30, 2016. Please refer to the Net Sales from Continuing Operations table for a reconciliation of the year over year sales change.

Net Sales (In millions)	Nine Months Ended September 30,		Dollar Increase	Percent Increase
	2016	2015		
Consolidated Continuing Operations	\$853.5	\$817.5	\$36.0	4%
Americas	510.3	519.4	(9.1)	(2)%
International	343.2	298.1	45.1	15%

Net Sales from Continuing Operations (Percent Change)	Nine Months Ended September 30, 2016 versus September 30, 2015		
	Americas	International	Consolidated Continuing Operations
GAAP reported sales change	(1.7)%	15.1%	4.4%
Plus: currency translation effects	2.4%	2.0%	2.2%
Constant currency sales change	0.7%	17.1%	6.6%
Less: acquisitions	1.2%	12.4%	5.2%
Organic constant currency sales change	(0.5)%	4.7%	1.4%

Note: Organic 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. Organic constant currency sales change is calculated by deducting the percentage impact from acquisitions and currency translation effects from the overall percentage change in net sales.

Net sales for the Americas segment were \$510.3 million for the nine months ended September 30, 2016, a decrease of \$9.1 million, or 2%, compared to \$519.4 million for the same period in 2015. Currency translation effects decreased Americas segment sales by 2%, reflecting weakened currencies across Latin America. Organic constant currency sales in the Americas segment increased less than 1% over the prior year period. Strong growth in the fire service market from shipments of G1 SCBA and fire helmets offset lower demand to energy-related markets earlier in the year, notably in industrial helmets.

Net sales for the International segment were \$343.2 million during the nine months ended September 30, 2016, an increase of \$45.1 million, or 15%, compared to \$298.1 million for the same period in 2015. Currency translation effects decreased International segment sales by 2%, reflecting a weaker British pound and Chinese yuan renminbi. Organic constant currency sales in the International segment provided 5% growth during the period on increased shipments of breathing apparatus and ballistic helmets to government sectors in Western Europe and continued growth in breathing apparatus and fixed gas and flame detection in the Middle East. Acquisitions provided 12% growth in the segment on increased shipments of fall protection.

Gross profit. Gross profit for the nine months ended September 30, 2016 was \$385.3 million, an increase of \$18.2 million, or 5%, compared to \$367.1 million for the same period in 2015. The ratio of gross profit to net sales was 45.1% for the nine months ended September 30, 2016 compared to 44.9% during the same period last year. The higher gross profit ratio during the period was primarily related the higher volume of sales.

Selling, general and administrative expenses. Selling, general and administrative expenses were \$227.9 million during the nine months ended September 30, 2016, a decrease of \$3.8 million, or 2%, compared to \$231.7 million in the same period of 2015. Organic constant currency selling, general, and administrative expense decreased 4% during the period through headcount reduction and implementation of discretionary spending controls. Selling, general and administrative expenses were 26.7% of net sales in the nine months ended September 30, 2016, compared to 28.3% of net sales for the same period in 2015. Please refer to the Selling, general and administrative expenses table for a reconciliation of the year over year expense change.

Selling, general, and administrative expenses (Percent Change)	Nine Months Ended September 30, 2016 versus September 30, 2015 Consolidated Continuing Operations
GAAP reported change	(1.7)%
Plus: currency translation effects	2.4%
Constant currency change	0.7%
Less: acquisitions	(5.1)%
Organic constant currency change	(4.4)%

Note: Organic constant currency change is a non-GAAP financial measure provided by the Company to give a better understanding of the Company's underlying business performance. Organic constant currency change in selling, general, and administrative expenses is calculated by deducting the percentage impact from acquisitions and currency translation effects from the overall percentage change in selling, general, and administrative expense. Management believes excluding acquisitions and currency translation effects provide investors with a greater level of clarity into spending levels on a year-over-year basis.

Research and development expense. Research and development expense was \$34.6 million during the nine months ended September 30, 2016, a decrease of \$1.8 million, or 5%, compared to \$36.4 million for the same period in 2015. Research and development expense was 4.1% of net sales during the nine month period in 2016, compared to 4.5% of net sales for the same period in 2015. The Company continues to focus on developing new and innovative technologies, closely aligned with our strategic goals, and for a new fixed gas and flame detection platform. We expect research and development expense to range from 4.0% to 4.5% of sales for the full year ending December 31, 2016.

Restructuring, net of adjustments. During the nine months ended September 30, 2016, the Company recorded restructuring, net of adjustments, of \$3.7 million, primarily related to severance costs for staff reductions associated with ongoing initiatives to right size our operations in Europe, Latin America, and Asia. We continue to evaluate additional restructuring activities to execute over the next several quarters.

In September 2016, certain employees in the Americas segment were offered a voluntary retirement incentive package ("VRIP"). The election window for participation closed on October 17, 2016. The employees will be required to render service through January 31, 2017 to receive the VRIP and have until February 6, 2017 to revoke their election. 83 employees have made the revocable election to retire under the terms of the plan. Non-cash special termination benefit expense of approximately \$10.0 million is expected to be incurred in the first quarter of 2017 related to these elections. All benefits will be paid from our over funded North America pension plan. Including our non-cash special termination benefit expense and additional initiatives across our International segment, we expect to incur between \$12.0 million and \$15.0 million in restructuring expense over the next several quarters, and anticipate savings in 2017 of approximately \$10.0 million related to these programs.

During the nine months ended September 30, 2015, the Company recorded restructuring charges of \$4.7 million, primarily related to severance costs for staff reductions, as we closely manage headcount and right-size the Company cost structure, and a one-time benefit for employees impacted by our European Principal Operating Company.

Currency exchange. Currency exchange losses were \$2.5 million during the nine months ended September 30, 2016, compared to losses of 3.3 million for the same period in 2015. Currency exchange losses in the nine months ended 2016 and 2015 were related to management of foreign currency exposure on unsettled inter-company balances. Refer to Note 16 to the Condensed Consolidated Financial Statements in Part I Item I of this Form 10-Q, for information regarding our currency exchange rate risk management strategy.

GAAP operating income. Consolidated operating income for the nine months ended September 30, 2016 was \$116.6 million, an increase of \$25.7 million, or 28%, compared to \$90.9 million during the same period of 2015. Improved operating income for the nine month period was driven by improved gross margins and lower selling, general and administrative costs stemming from our cost reduction programs.

Adjusted operating income. Americas adjusted operating income for the nine months ended September 30, 2016 was \$117.5 million, an increase of \$15.7 million, or 15%, compared to \$101.8 million for the same period in 2015. Strong gross profit from improved gross margins and lower selling, general and administrative expense stemming from our cost reduction programs contributed to operating income growth during the current period.

International adjusted operating income for the nine months ended September 30, 2016 was \$31.7 million, an increase of \$11.8 million, or 59%, compared to \$19.9 million for the same period in 2015. Strong gross profit from higher revenues associated with acquisitions and growth in the Middle East and lower selling, general and administrative expense stemming from our cost reduction programs contributed to operating income growth during the current period.

Corporate adjusted operating loss for the nine months ended September 30, 2016 was \$26.3 million, an increase of \$3.6 million, or 16%, compared to an operating loss of \$22.7 million for the same period in 2015. The increase reflects higher compensation expense and higher legal spend.

The following table represents a reconciliation from GAAP operating income to adjusted operating income. Adjusted operating margin % is calculated as adjusted operating income divided by net sales.

Adjusted operating income

(In millions)	Americas	International	Corporate	Consolidated Continuing Operations
Net Sales	\$510,324	\$343,175	\$—	\$853,499
Adjusted operating income	117,475	31,659	(26,291)	122,843
Adjusted operating margin %	23.0%	9.2%		
Restructuring and other charges				(3,697)
Currency exchange (losses), net				(2,498)
GAAP operating income				\$116,648

Note: Adjusted operating income is a non-GAAP financial measure used by the chief operating decision maker to evaluate segment performance and allocate resources. Adjusted operating income is reconciled above to the nearest GAAP financial measure, Operating Income.

Total other expense, net. Other expense for the nine months ended September 30, 2016 was \$8.8 million, an increase of \$2.2 million, or 33%, compared to \$6.6 million for the same period in 2015. The increase reflects higher interest expense associated with the Latchways acquisition.

Income taxes. The reported effective tax rate for the nine months ended September 30, 2016 was 36.0%, inclusive of 3.3% associated with exit taxes related to our European reorganization. The reported effective tax rate for the nine months ended September 30, 2015 was 43.5%, inclusive of 9.0% associated with exit taxes related to our European reorganization. The effective tax rate decrease was primarily due to less exit taxes and non-deductible expenses in 2016 and greater benefits associated with U.S. tax credits for research and development.

During the first quarter of 2016, MSA recorded \$3.6 million of tax expense associated with exit taxes related to our European reorganization and anticipate incurring an additional \$3.0 - \$4.0 million in exit taxes during the fourth quarter as we integrate another European affiliate onto the Principal Operating Company model.

Net income from continuing operations attributable to MSA Safety Incorporated. Net income from continuing operations was \$67.5 million for the nine months ended September 30, 2016, or \$1.80 per basic share, an increase of \$18.7 million, or 38%, compared to \$48.8 million, or \$1.30 per basic share, for the same period last year.

Net (loss) income from discontinued operations attributable to MSA Safety Incorporated. Net loss from discontinued operations was \$0.5 million for the nine months ended September 30, 2016, or (\$0.01) per basic share, a decrease of \$1.7 million, or 142%, compared to net income of \$1.2 million, or \$0.03 per basic share, for the same period last year. Please refer to Note 19 to the unaudited condensed consolidated financial statements of this Form 10-Q.

Non-GAAP Financial Information

We may provide information regarding organic constant currency changes, financial measures excluding the impact of acquisitions, and adjusted operating income, which are not recognized terms under U.S. GAAP and do not purport to be alternatives to net sales, selling, general and administrative expense, operating income, or net income as a measure of operating performance. We believe that the use of these non-GAAP financial measures provide investors with additional useful information and provide a more complete understanding of the underlying results. Because not all companies use identical calculations, these presentations may not be comparable to similarly titled measures from other companies. For more information about these non-GAAP measures and a reconciliation to the nearest GAAP measure, please refer to the reconciliations referenced above in Management's Discussion & Analysis section and in Note 8 to the unaudited condensed consolidated financial statements of this Form 10-Q.

We also refer to certain financial measures on a constant currency basis, which is a non-GAAP financial measure. These references to a constant currency basis do not include operational impacts that could result from fluctuations in foreign currency rates, which are outside of management's control. To provide information on a constant currency basis, the applicable financial results are adjusted by translating current and prior period results in local currency to a fixed foreign exchange rate. This approach is used for countries where the functional currency is the local country currency. This information is provided so that certain financial results can be viewed without the impact of fluctuations in foreign currency rates, thereby facilitating period-to-period comparisons of business performance. Constant currency information is not recognized under U.S. GAAP, and it is not intended as an alternative to U.S. GAAP measures.

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, acquisitions and dividend payments. Approximately 45% of our long-term debt is at fixed interest rates with repayment schedules through 2031. The remainder of our long-term debt is at variable rates, primarily on our unsecured revolving credit facility that is due in 2020. At September 30, 2016, approximately 83% of our borrowings are denominated in US dollars, which limits our exposure to currency exchange rate fluctuations.

At September 30, 2016, we had cash and cash equivalents totaling \$106.0 million, of which \$99.8 million was held by our foreign subsidiaries. Cash and cash equivalents are held by our foreign subsidiaries whose earnings are considered indefinitely reinvested at September 30, 2016. These funds could be subject to additional income taxes if repatriated. It is not practicable to determine the potential income tax liability that we would incur if these funds were repatriated to the U.S. because the time and manner of repatriation is uncertain. We believe that domestic cash and cash equivalents, domestic cash flows from operations, annual repatriation of a portion of the current period's foreign earnings, and availability of our domestic line of credit continue to be sufficient to fund our domestic liquidity requirements.

Cash and cash equivalents increased \$0.1 million during the nine months ended September 30, 2016, compared to increasing \$83.3 million during the same period in 2015. The increase in cash in 2016 primarily relates to improved collections or trade receivables offset by cumulative trauma product liability payments, quarterly dividends, and the acquisition of Senscient.

On January 22, 2016, the Company entered into a multi-currency note purchase and private shelf agreement, by amending and drawing upon its existing shelf facility previously amended in 2014. MSA has issued notes in an aggregate principal amount of £54.9 million (approximately \$80.0 million). Proceeds from this facility were used to repay a portion of the existing revolver. The interest rate on these notes is fixed at 3.4%. Please refer to the Form 8-K filed on January 28, 2016 for additional details on the terms and conditions surrounding these notes.

The Company currently has access to approximately \$504.5 million of capital at September 30, 2016. Refer to Note 12 to the Condensed Consolidated Financial Statements in Part I Item 1 of this Form 10-Q.

Operating activities. Operating activities provided cash of \$31.4 million during the nine months ended September 30, 2016, compared to providing \$9.8 million during the same period in 2015. The increase in operating cash flow during the nine months of ended September 2016 was attributable to higher net income and continued focus on working capital including inventory and receivables. This was offset by \$58.4 million of cash settlements paid related to the cumulative trauma product liability during the nine months ended September 30, 2016. This compares to \$20.6 million of cash settlements paid related to the cumulative trauma product liability in the same period in 2015. Please refer to Note 18 to the Condensed Consolidated Financial Statements in Part I Item 1 of this Form 10-Q for further discussion on the Company's product liability and insurance and note receivable matters.

Investing activities. Investing activities used cash of \$16.5 million during the nine months ended September 30, 2016, compared to using \$17.2 million in the same period last year. The acquisition of Senscient drove cash outflows from investing activities during the nine months ended September 30, 2016. Refer to Note 14 to the Condensed Consolidated Financial Statements in Part I Item 1 of this Form 10-Q.

Financing activities. Financing activities used cash of \$16.3 million during the nine months ended September 30, 2016, compared to providing \$100.2 million during the same period in 2015. During the nine months ended September 30, 2016, we had net borrowings of \$16.1 million. This compared to net borrowings of \$143.1 million in the same period in 2015 primarily related to the financing of the Latchways acquisition. We paid cash dividends of \$36.7 million during the nine months ended September 30, 2016 compared to \$35.4 million in the same period last year.

CUMULATIVE TRANSLATION ADJUSTMENTS

The position of the U.S. dollar relative to international currencies at September 30, 2016 resulted in a translation loss of \$4.0 million being recorded to the cumulative translation adjustments shareholders' equity account during the nine months ended September 30, 2016, compared to a loss of \$32.8 million during the same period in 2015. The translation loss during the nine months of 2016 was primarily related to the strengthening of the U.S. dollar against the British pound. The translation loss during the nine months of 2015 was primarily related to the strengthening of the U.S. dollar against the euro, South African rand, and Brazilian real.

COMMITMENTS AND CONTINGENCIES

We made contributions of \$4.7 million to our pension plans during the nine months ended September 30, 2016. We expect to make total contributions of approximately \$6.2 million to our pension plans in 2016 which are primarily associated with our International segment.

The Company had outstanding bank guarantees and standby letters of credit with banks as of September 30, 2016 totaling \$7.7 million, of which \$3.7 million related to the senior revolving credit facility. These letters of credit serve to cover customer requirements in connection with certain sales orders and insurance companies. No amounts were drawn on these arrangements at September 30, 2016. The Company is also required to provide cash collateral in connection with certain arrangements. At September 30, 2016, the Company has \$1.4 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 18 to the Condensed Consolidated Financial Statements in Part I Item 1 of this Form 10-Q for further discussion on the Company's product liabilities.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

We prepare our consolidated financial statements in accordance with U.S. generally accepted accounting principles (GAAP). The preparation of these 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 consolidated financial statements.

The more critical judgments and estimates used in the preparation of our 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, 2015.

RECENTLY ADOPTED AND RECENTLY ISSUED ACCOUNTING STANDARDS

Please refer to Note 2 to the Condensed Consolidated Financial Statements in Part I Item 1 of this Form 10-Q.

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 \$13.0 million and \$1.7 million, respectively, for the three months ended September 30, 2016.

When appropriate, we may attempt to limit our transactional exposure to changes in currency exchange rates through contracts or other actions intended to reduce existing exposures by creating offsetting currency exposures. At September 30, 2016, we had open foreign currency forward contracts with a U.S. dollar notional value of \$78.4 million. A hypothetical 10%

increase in September 30, 2016 forward exchange rates would result in a \$7.8 million increase in the fair value of these contracts.

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. Because of the relatively short maturities of temporary investments, these financial instruments are reported at carrying values that approximate fair values.

At September 30, 2016, we had \$211.3 million of fixed rate debt which matures at various dates through 2031. 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 \$15.6 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, 2016, we had \$261.7 million of variable rate borrowings under our revolving credit facility. A 100 basis point increase or decrease in interest rates could impact our future 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 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 1A. Risk Factors

Product liability claims and the inability to collect related insurance receivables could have a materially adverse effect on our business, operating results, financial condition and liquidity.

MSA and its subsidiaries face an inherent business risk of exposure to product liability 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. Although we have not frequently experienced material uninsured losses due to product liability claims, it is possible that we could experience such losses in the future. In the event any of our products prove to be defective, we could be required to recall or redesign such products. In addition, we may voluntarily recall or redesign certain products that could potentially be harmful to end users. Any claim or product recall that results in significant expense or adverse publicity against us could have a materially adverse effect on our business, consolidated operating results, financial condition and liquidity, including any successful claim brought against us in excess or outside of available insurance coverage.

In the normal course of business, one of our subsidiaries, Mine Safety Appliances Company, LLC ("MSA LLC"), makes payments to settle product liability claims and for related defense costs, and records receivables for the amounts believed to be recoverable under insurance. MSA LLC has recorded insurance receivables totaling \$154.5 million at September 30, 2016. As described in greater detail in Note 18 to our unaudited condensed consolidated financial statements included in this report, MSA LLC is currently involved in insurance coverage litigation regarding the rights and obligations of numerous insurance policies, and for amounts recorded as insurance receivables. Various factors could affect the timing and amount of recovery of insurance receivables, including: the outcome of coverage litigation, the outcome of negotiations with insurers, and the extent to which insurers may become insolvent in the future. Failure to recover amounts due from MSA LLC's insurance carriers would result in it being unable to recover amounts already paid to resolve claims (and recorded as insurance receivables) and could have a materially adverse effect on our business, consolidated operating results, financial condition and liquidity.

We estimate that within the next 6 - 18 months, even if insurance coverage litigation is generally successful, MSA LLC will become largely self-insured for costs associated with cumulative trauma product liability claims. The exact point when this transition will happen is difficult to predict and subject to a number of variables, including the pace at which future cumulative trauma product liability costs are incurred and the results of litigation and negotiations with insurance carriers. After it becomes largely self-insured, MSA LLC may still obtain some insurance reimbursement from negotiated coverage-in-place agreements (although that coverage may not be immediately triggered or accessible) or from other sources of coverage. However, the precise amount of insurance reimbursement available at that time cannot be determined with specificity at this time.

As discussed in greater detail in Note 18 to our unaudited condensed consolidated financial statements included in this report, subsidiary MSA LLC recently had an adverse verdict entered against it in a product liability lawsuit involving cumulative trauma exposure to coal dust. MSA LLC is appealing the verdict. Companies faced with multiple mass tort lawsuits can experience an increase in newly filed claims, more aggressive demands from plaintiffs in settlement negotiations or a greater inclination by plaintiffs to pursue judicial trials of certain claims in periods immediately following the incurrence of an adverse verdict. Should MSA LLC have a similar experience, its product liability settlement and defense costs could increase in the future, and such events could also accelerate the point at which MSA LLC becomes self-insured for cumulative trauma product liability claims.

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 1 - July 31, 2016	1,446	\$ 55.91	—	1,662,427
August 1 - August 31, 2016	2,805	55.61	—	1,594,789
September 1 - September 30, 2016	—	—	—	1,600,559

In 2015, The Board of Directors adopted a stock repurchase program. The program authorizes up to \$100.0 million in repurchases of MSA common stock in the open market and in private transactions. The share purchase program has no expiration date. The maximum shares that may be purchased is calculated based on the dollars remaining under the program and the respective month-end closing share price.

Shares purchased during the quarter relate to stock compensation transactions.

We do not have any other share repurchase programs.

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 28, 2016

/s/ Kenneth D. Krause

Kenneth D. Krause

Vice President of Finance and Chief Financial Officer

Duly Authorized Officer and Principal Financial Officer

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

I, William M. Lambert, 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 28, 2016

/s/ William M. Lambert

William M. Lambert
Chief Executive Officer

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

I, Kenneth D. Krause 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 28, 2016

/s/ Kenneth D. Krause

Kenneth D. Krause
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, 2016 (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 28, 2016

/s/ William M. Lambert

William M. Lambert
Chief Executive Officer

/s/ Kenneth D. Krause

Kenneth D. Krause
Chief Financial Officer

