

# ARMSTRONG WORLD INDUSTRIES INC

## FORM 10-Q (Quarterly Report)

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Address	2500 COLUMBIA AVE LANCASTER, PA 17603
Telephone	7173970611
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Industry	Construction Materials
Sector	Basic Materials
Fiscal Year	12/31

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**FORM 10-Q**

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( Mark One )

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

For the quarterly period ended March 31, 2017

OR

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number 1-2116

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**ARMSTRONG WORLD INDUSTRIES, INC.**

(Exact name of registrant as specified in its charter)

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**Pennsylvania**  
(State or other jurisdiction of  
incorporation or organization)

**2500 Columbia Avenue, Lancaster, Pennsylvania**  
(Address of principal executive offices)

**23-0366390**  
(I.R.S. Employer  
Identification No.)

**17603**  
(Zip Code)

**Registrant's telephone number, including area code (717) 397-0611**

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter time 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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company   
Emerging growth company

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

Number of shares of Armstrong World Industries, Inc.'s common stock outstanding as of April 24, 2017 – 53,193,852.

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When we refer to “AWI,” the “Company,” “we,” “our” or “us,” we are referring to Armstrong World Industries, Inc. and its subsidiaries.

### CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this Quarterly Report on Form 10-Q and the documents incorporated by reference herein may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Those forward-looking statements are subject to various risks and uncertainties and include all statements that are not historical statements of fact and those regarding our intent, belief or expectations, including, but not limited to, our expectations concerning our residential and commercial markets and their effect on our operating results; our expectations regarding the payment of dividends; and our ability to increase revenues, earnings and EBITDA (as such terms are defined by documents incorporated by reference herein). Words such as “anticipate,” “expect,” “intend,” “plan,” “target,” “project,” “predict,” “believe,” “may,” “will,” “would,” “could,” “should,” “seek,” “estimate” and similar expressions are intended to identify such forward-looking statements. These statements are based on management’s current expectations and beliefs and are subject to a number of factors that could lead to actual results materially different from those described in the forward-looking statements. Although we believe that the assumptions underlying the forward-looking statements are reasonable, we can give no assurance that our expectations will be attained. Factors that could have a material adverse effect on our financial condition, liquidity, results of operations or future prospects or which could cause actual results to differ materially from our expectations include, but are not limited to:

- global and domestic economic conditions;
- construction activity;
- the tax consequences of the separation of the flooring business from our ceilings (building products) business;
- competition;
- key customers;
- availability and costs of raw materials and energy;
- international operations;
- Worthington Armstrong Venture (“WAVE”), our joint venture with Worthington Industries, Inc.;
- environmental matters;
- covenants in our debt agreements;
- our indebtedness;
- our liquidity;
- strategic transactions;
- negative tax consequences;
- defined benefit plan obligations;
- claims and litigation;
- labor;
- intellectual property rights;
- costs savings and productivity initiatives; and
- other risks detailed from time to time in our filings with the Securities and Exchange Commission (the “SEC”), press releases and other communications, including those set forth under “Risk Factors” included in our Annual Report on Form 10-K and in the documents incorporated by reference.

Such forward-looking statements speak only as of the date they are made. We expressly disclaim any obligation to release publicly any updates or revisions to any forward-looking statements to reflect any change in our expectations with regard thereto or change in events, conditions or circumstances on which any forward-looking statement is based.

PART I - FINANCIAL INFORMATION

**ITEM 1. FINANCIAL STATEMENTS**

Armstrong World Industries, Inc., and Subsidiaries  
Condensed Consolidated Statements of Operations and Comprehensive Income  
(amounts in millions, except per share data)  
Unaudited

	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016
Net sales	\$ 315.4	\$ 287.4
Cost of goods sold	216.1	203.1
Gross profit	99.3	84.3
Selling, general and administrative expenses	54.6	53.7
Separation costs	-	27.1
Equity earnings from joint venture	(18.3)	(18.1)
Operating income	63.0	21.6
Interest expense	9.2	21.9
Other non-operating expense	1.8	-
Other non-operating (income)	(3.4)	(5.2)
Earnings from continuing operations before income taxes	55.4	4.9
Income tax expense	24.6	12.0
Earnings (loss) from continuing operations	30.8	(7.1)
Net (loss) from discontinued operations, net of tax expense of \$ -, and \$ 0.1	-	(4.5)
(Loss) gain from disposal of discontinued business, net of tax expense (benefit) of \$0.3 and (\$1.8)	(0.4)	1.7
Net (loss) from discontinued operations	(0.4)	(2.8)
Net earnings (loss)	\$ 30.4	\$ (9.9)
Other comprehensive income, net of tax:		
Foreign currency translation adjustments	11.1	1.4
Derivative gain	0.1	1.6
Pension and postretirement adjustments	2.5	7.8
Total other comprehensive income	13.7	10.8
Total comprehensive income	\$ 44.1	\$ 0.9
Earnings (loss) per share of common stock, continuing operations:		
Basic	\$ 0.57	\$ (0.13)
Diluted	\$ 0.56	\$ (0.13)
(Loss) per share of common stock, discontinued operations:		
Basic	\$ (0.01)	\$ (0.05)
Diluted	\$ (0.01)	\$ (0.05)
Net earnings (loss) per share of common stock:		
Basic	\$ 0.56	\$ (0.18)
Diluted	\$ 0.56	\$ (0.18)
Average number of common shares outstanding:		
Basic	54.1	55.6
Diluted	54.5	55.6

*See accompanying notes to Condensed Consolidated Financial Statements beginning on page 8.*

Armstrong World Industries, Inc., and Subsidiaries  
Condensed Consolidated Balance Sheets  
(amounts in millions, except share data)

	Unaudited March 31, 2017	December 31, 2016
<u>Assets</u>		
Current assets:		
Cash and cash equivalents	\$ 81.0	\$ 141.9
Accounts and notes receivable, net	127.2	108.3
Inventories, net	116.1	109.0
Income tax receivable	10.0	26.2
Other current assets	19.2	20.8
Total current assets	<u>353.5</u>	<u>406.2</u>
Property, plant, and equipment, less accumulated depreciation and amortization of \$469.6 and \$445.5, respectively	689.2	669.6
Prepaid pension costs	68.1	56.6
Investment in joint venture	105.3	106.2
Goodwill and intangible assets, net	456.8	434.5
Deferred income taxes	13.9	15.4
Income taxes receivable	6.5	5.7
Other non-current assets	64.5	63.8
Total assets	<u>\$ 1,757.8</u>	<u>\$ 1,758.0</u>
<u>Liabilities and Shareholders' Equity</u>		
Current liabilities:		
Short-term debt	\$ 15.0	\$ -
Current installments of long-term debt	32.5	25.0
Accounts payable and accrued expenses	172.4	197.1
Income tax payable	1.2	2.0
Total current liabilities	<u>221.1</u>	<u>224.1</u>
Long-term debt, less current installments	840.5	848.6
Postretirement benefit liabilities	83.9	84.8
Pension benefit liabilities	87.6	86.3
Other long-term liabilities	29.4	29.1
Income taxes payable	54.9	62.2
Deferred income taxes	169.2	156.5
Total non-current liabilities	<u>1,265.5</u>	<u>1,267.5</u>
Shareholders' equity:		
Common stock, \$0.01 par value per share, 200 million shares authorized, 60,675,542 shares issued and 53,316,614 shares outstanding as of March 31, 2017 and 60,597,140 shares issued and 54,428,233 shares outstanding as of December 31, 2016	0.6	0.6
Additional paid-in capital	506.9	504.9
Retained earnings	509.0	469.9
Treasury stock, at cost, 7,358,928 shares as of March 31, 2017 and 6,168,907 shares as of December 31, 2016	(355.2)	(305.2)
Accumulated other comprehensive (loss)	(390.1)	(403.8)
Total shareholders' equity	<u>271.2</u>	<u>266.4</u>
Total liabilities and shareholders' equity	<u>\$ 1,757.8</u>	<u>\$ 1,758.0</u>

*See accompanying notes to Condensed Consolidated Financial Statements beginning on page 8.*

Armstrong World Industries, Inc., and Subsidiaries  
Condensed Consolidated Statements of Shareholders' Equity  
(amounts in millions, except share data)  
Unaudited

	Three Months Ended March 31, 2017							
	Common Stock		Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount			Shares	Amount		
Balance at beginning of period	54,428,233	\$ 0.6	\$ 504.9	\$ 469.9	6,168,907	\$ (305.2)	\$ (403.8)	\$ 266.4
Cumulative effect impact of ASU 2016-09 adoption				8.7				8.7
Stock issuance	78,402							
Share-based employee compensation			1.1					1.1
Net earnings				30.4				30.4
Separation of AFI			0.9					0.9
Other comprehensive income							13.7	13.7
Acquisition of treasury stock	(1,190,021)				1,190,021	(50.0)		(50.0)
Balance at end of period	<u>53,316,614</u>	<u>\$ 0.6</u>	<u>\$ 506.9</u>	<u>\$ 509.0</u>	<u>7,358,928</u>	<u>\$ (355.2)</u>	<u>\$ (390.1)</u>	<u>\$ 271.2</u>

	Three Months Ended March 31, 2016							
	Common Stock		Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount			Shares	Amount		
Balance at beginning of period	55,359,064	\$ 0.6	\$ 1,151.8	\$ 365.2	5,057,382	\$ (261.4)	\$ (487.4)	\$ 768.8
Stock issuance	118,493							
Share-based employee compensation			0.6					0.6
Net (loss)				(9.9)				(9.9)
Other comprehensive income							10.8	10.8
Balance at end of period	<u>55,477,557</u>	<u>\$ 0.6</u>	<u>\$ 1,152.4</u>	<u>\$ 355.3</u>	<u>5,057,382</u>	<u>\$ (261.4)</u>	<u>\$ (476.6)</u>	<u>\$ 770.3</u>

*See accompanying notes to Condensed Consolidated Financial Statements beginning on page 8.*

Armstrong World Industries, Inc., and Subsidiaries  
Condensed Consolidated Statements of Cash Flows  
(amounts in millions)  
Unaudited

	Three Months Ended March 31,	
	2017	2016
<b>Cash flows from operating activities:</b>		
Net earnings (loss)	\$ 30.4	\$ (9.9)
<b>Adjustments to reconcile net earnings (loss) to net cash provided by (used for) operating activities:</b>		
Depreciation and amortization	18.9	30.2
Deferred income taxes	27.4	(1.5)
Share-based compensation	2.5	2.6
Equity earnings from joint venture	(18.3)	(18.1)
Separation costs	-	27.1
Loss on interest rate swap	-	10.7
U.S. pension (credit) expense	(6.2)	5.4
Other non-cash adjustments, net	(0.3)	(3.0)
<b>Changes in operating assets and liabilities:</b>		
Receivables	(15.3)	(27.5)
Inventories	(2.3)	0.3
Other current assets	1.8	(8.9)
Other non-current assets	(0.6)	(4.6)
Accounts payable and accrued expenses	(28.3)	(68.2)
Income taxes payable	3.8	7.3
Other long-term liabilities	(1.5)	(4.6)
Other, net	(1.4)	(2.3)
<b>Net cash provided by (used for) operating activities</b>	<b>10.6</b>	<b>(65.0)</b>
<b>Cash flows from investing activities:</b>		
Purchases of property, plant and equipment	(25.3)	(28.5)
Return of investment from joint venture	19.2	17.9
Cash paid for acquisition	(31.4)	-
Other investing activities	-	0.3
<b>Net cash (used for) investing activities</b>	<b>(37.5)</b>	<b>(10.3)</b>
<b>Cash flows from financing activities:</b>		
Proceeds from revolving credit facility and other short-term debt	25.0	40.0
Payments of revolving credit facility and other short-term debt	(10.0)	(40.0)
Payments of long-term debt	(0.6)	(20.7)
Financing costs	(0.6)	-
Proceeds from exercised stock options	0.1	-
Excess tax benefit from share-based awards	-	0.6
Payment for treasury stock acquired	(50.0)	-
<b>Net cash (used for) financing activities</b>	<b>(36.1)</b>	<b>(20.1)</b>
<b>Effect of exchange rate changes on cash and cash equivalents</b>	<b>2.1</b>	<b>0.4</b>
<b>Net (decrease) in cash and cash equivalents</b>	<b>(60.9)</b>	<b>(95.0)</b>
Cash and cash equivalents at beginning of year	141.9	244.8
Cash and cash equivalents at end of period	81.0	149.8
Cash and cash equivalents at end of period of discontinued operations	-	9.1
Cash and cash equivalents at end of period of continuing operations	\$ 81.0	\$ 140.7
<b>Supplemental Cash Flow Disclosures:</b>		
Interest paid	\$ 7.7	\$ 10.1
Income tax (refunds) payments, net	(6.2)	3.9
Amounts in accounts payable for capital expenditures	2.4	8.3

*See accompanying notes to Condensed Consolidated Financial Statements beginning on page 8.*

Armstrong World Industries, Inc., and Subsidiaries  
Notes to Condensed Consolidated Financial Statements (unaudited)  
(dollar amounts in millions, except share data)

NOTE 1. BUSINESS AND BASIS OF PRESENTATION

Armstrong World Industries, Inc. (“AWI”) is a Pennsylvania corporation incorporated in 1891. When we refer to “AWI,” the “Company,” “we,” “our” or “us” in these notes, we are referring to AWI and its subsidiaries.

The accounting policies used in preparing the Condensed Consolidated Financial Statements in this Form 10-Q are the same as those used in preparing the Consolidated Financial Statements for the year ended December 31, 2016. These statements should therefore be read in conjunction with the Consolidated Financial Statements and notes that are included in the Form 10-K for the fiscal year ended December 31, 2016. In the opinion of management, all adjustments of a normal recurring nature have been included to provide a fair statement of the results for the reporting periods presented. Operating results for the first quarter of 2017 and 2016 included in this report are unaudited. Quarterly results are not necessarily indicative of annual earnings, primarily due to the different level of sales in each quarter of the year and the possibility of changes in general economic conditions.

On April 1, 2016, we completed our separation of Armstrong Flooring, Inc. (“AFI”). AFI’s historical financial results have been reflected in AWI’s Consolidated Financial Statements as a discontinued operation for all periods presented. Separation costs for the first three months of 2016 were \$27.1 million and recorded within the Unallocated Corporate segment. Separation costs primarily related to outside professional services and employee compensation, retention and severance accruals.

On January 13, 2017, we acquired the business and assets of Tectum, Inc. (“Tectum”), based in Newark, Ohio. Tectum is a manufacturer of acoustical ceiling, wall and structural solutions for commercial building applications with two manufacturing facilities. Tectum’s operations from the date of acquisition, and its assets and liabilities as of March 31, 2017, have been included as a component of our Americas segment. See Note 3 for additional information.

These Condensed Consolidated Financial Statements are prepared in accordance with U.S. generally accepted accounting principles (“U.S. GAAP”). The statements include management estimates and judgments, where appropriate. Management utilizes estimates to record many items including certain asset values, allowances for bad debts, inventory obsolescence and lower of cost and net realizable value charges, warranty reserves, workers’ compensation, general liability and environmental claims, and income taxes. When preparing an estimate, management determines the amount based upon the consideration of relevant information. Management may confer with outside parties, including outside counsel. Actual results may differ from these estimates.

Certain amounts in the prior year’s Condensed Consolidated Financial Statements have been recast to conform to the 2017 presentation.

Recently Adopted Accounting Standards

In July 2015, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2015-11, “*Simplifying the Measurement of Inventory*,” which requires inventory that is measured on a first-in, first-out or average cost basis to be measured at lower of cost and net realizable value, as opposed to the lower of cost or market. For inventory that is measured under the last-in, first-out (“LIFO”) basis or the retail recovery method, there is no change to current measurement requirements. The adoption of this standard on January 1, 2017 did not impact on our financial condition, results of operations or cash flows.

In March 2016, the FASB issued ASU 2016-09, “*Improvements to Employee Share-Based Payment Accounting*.” This new guidance simplifies accounting for share-based payments, most notably by requiring all excess tax benefits and tax deficiencies to be recorded as income tax benefits or expense in the income statement and by allowing entities to recognize forfeitures of awards when they occur. Effective January 1, 2017, we adopted the provisions of ASU 2016-09. Upon adoption, we have elected to continue to estimate the impact of forfeitures when determining share-based compensation cost. We prospectively adopted the provisions of this new guidance related to the recognition of excess tax benefits and deficiencies through income tax expense, the presentation of excess tax benefits from share-based compensation as operating cash outflows, and changes to diluted earnings per share computations, the impact of which were not material to our Condensed Consolidated Statements of Operations or Condensed Consolidated Statements of Cash Flows. Finally, as required by ASU 2016-09, effective January 1, 2017, we recorded an \$8.7 million cumulative-effect increase to Retained earnings and Deferred income taxes (assets), representing prior years’ tax benefits that were not previously recognized because the related tax deductions had not reduced income taxes payable.

Recently Issued Accounting Standards

In May 2014, the FASB issued ASU 2014-09, “*Revenue from Contracts with Customers*.” The guidance requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to a customer. The

Armstrong World Industries, Inc., and Subsidiaries  
Notes to Condensed Consolidated Financial Statements (unaudited)  
(dollar amounts in millions, except share data)

ASU will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. In March 2016, the FASB issued ASU 2016-08, “*Principal versus Agent Considerations (Reporting Gross versus Net)*,” which clarifies the implementation guidance relating to principle versus agent considerations. In April 2016, the FASB issued ASU 2016-10, “*Identifying Performance Obligations and Licensing*,” which clarifies the implementation guidance relating to the identification of performance obligations in a contract, including how entities should account for shipping and handling services it provides after control of goods transfers to a customer. In May 2016, the FASB issued ASU 2016-12, “*Narrow-Scope Improvements and Practical Expedients*,” which clarifies the guidance related to the presentation of sales taxes, noncash consideration, and completed contracts and contract modifications. In December 2016, the FASB issued ASU 2016-20, “*Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*,” which clarifies the scope and application of the adoption of the new revenue recognition standard.

Collectively, the revenue recognition ASC updates are effective for annual reporting periods beginning after December 15, 2017, but early adoption is permitted. We intend to adopt these standards effective January 1, 2018 on a modified retrospective transition method and also intend on applying all practical expedients related to completed contracts upon adoption. We are still evaluating the impact the adoption of these ASC updates will have on our financial condition, results of operations and cash flows. Our final evaluation of the impact of adopting these ASC updates is expected to be completed during the third quarter of 2017.

In January 2016, the FASB issued ASU 2016-01, “*Recognition and Measurement of Financial Assets and Financial Liabilities*,” which addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. Most notably, this new guidance requires equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. This new guidance is effective for annual reporting periods beginning after December 15, 2017. We do not believe the adoption of this standard will have a material impact on our financial condition, results of operations and cash flows.

In February 2016, the FASB issued ASU 2016-02, “*Leases*,” which amends accounting for leases, most notably by requiring a lessee to recognize the assets and liabilities that arise from a lease agreement. Specifically, this new guidance will require lessees to recognize a liability to make lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term, with limited exceptions. The accounting applied by a lessor is largely unchanged from that applied under existing U.S. GAAP. This new guidance is effective for annual reporting periods beginning after December 15, 2018 and must be adopted under a modified retrospective basis. We are currently evaluating the impact the adoption of this standard would have on our financial condition, results of operations and cash flows.

In August 2016, the FASB issued ASU 2016-15, “*Classification of Certain Cash Receipts and Cash Payments*.” This guidance clarifies how entities should classify certain cash receipts and cash payments on the statement of cash flows. This new guidance is effective for annual periods beginning after December 15, 2017. We are currently evaluating the impact the adoption of this standard would have on our cash flows.

In March 2017, the FASB issued ASU 2017-07, “*Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*,” which requires companies to report the service cost component of net benefit cost in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit cost are required to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations, if one is presented. This new guidance is effective for annual periods beginning after December 15, 2018 and will have an impact on the classification of net benefit costs, which are currently included as a component of Costs of goods sold and Selling, general and administrative (“SG&A”) expenses, on our Condensed Consolidated Statements of Operations. See Note 13 for details related to our components of net benefit costs.

**NOTE 2. SEGMENT RESULTS**

	Three Months Ended March 31,	
	2017	2016
<b>Net sales to external customers</b>		
Americas	\$ 219.8	\$ 200.1
EMEA	66.6	59.6
Pacific Rim	29.0	27.7
<b>Total net sales to external customers</b>	<b>\$ 315.4</b>	<b>\$ 287.4</b>

Armstrong World Industries, Inc., and Subsidiaries  
Notes to Condensed Consolidated Financial Statements (unaudited)  
(dollar amounts in millions, except share data)

	Three Months Ended March 31,	
	2017	2016
<b>Segment operating income (loss)</b>		
Americas	\$ 67.2	\$ 56.1
EMEA	(3.1)	(4.0)
Pacific Rim	(1.1)	(1.3)
Unallocated Corporate	-	(29.2)
Total consolidated operating income	<u>\$ 63.0</u>	<u>\$ 21.6</u>

	Three Months Ended March 31,	
	2017	2016
Total consolidated operating income	\$ 63.0	\$ 21.6
Interest expense	9.2	21.9
Other non-operating expense	1.8	-
Other non-operating (income)	(3.4)	(5.2)
Earnings from continuing operations before income taxes	<u>\$ 55.4</u>	<u>\$ 4.9</u>

	March 31, 2017	December 31, 2016
	<b>Segment assets</b>	
Americas	\$ 1,232.1	\$ 1,186.7
EMEA	289.1	275.5
Pacific Rim	145.3	145.0
Unallocated Corporate	91.3	150.8
Total consolidated assets	<u>\$ 1,757.8</u>	<u>\$ 1,758.0</u>

Impairment testing of our tangible assets occurs whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable.

### NOTE 3. ACQUISITION AND DISCONTINUED OPERATIONS

#### Acquisition of Tectum, Inc.

On January 13, 2017, in connection with the acquisition of Tectum, the \$31.4 million purchase price for Tectum was allocated to the tangible and intangible assets acquired and the liabilities assumed based on their estimated fair values, with the remaining unallocated amount recorded as goodwill. The total fair value of tangible assets acquired, less liabilities assumed, in connection with the Tectum acquisition was \$5.9 million. The total fair value of intangible assets acquired, comprised of amortizable customer relationships and non-amortizing brand names, was \$16.5 million, resulting in \$9.0 million of goodwill.

#### Separation and Distribution of AFI

On April 1, 2016, in connection with the separation and distribution of AFI, we entered into several agreements with AFI that, together with a plan of division, provide for the separation and allocation between AWI and AFI of the flooring assets, employees, liabilities and obligations of AWI and its subsidiaries attributable to periods prior to, at and after AFI's separation from AWI, and govern the relationship between AWI and AFI subsequent to the completion of the separation and distribution. These agreements include a Transition Services Agreement, a Tax Matters Agreement, an Employee Matters Agreement, a Trademark License Agreement, a Transition Trademark License Agreement and a Campus Lease Agreement. Under the Transition Services Agreement, AWI and AFI will provide various services to each other during a transition period expiring no later than December 31, 2017. We do not expect to extend the Transition Services Agreement beyond December 31, 2017.

Armstrong World Industries, Inc., and Subsidiaries  
Notes to Condensed Consolidated Financial Statements (unaudited)  
(dollar amounts in millions, except share data)

The following is a summary of the results of operations related to AFI, our former Resilient Flooring and Wood Flooring segments, which are presented as discontinued operations.

	Three Months Ended March 31, 2016	
Net sales	\$	284.4
Cost of goods sold		237.2
Gross profit		47.2
Selling, general and administrative expenses		50.5
Operating (loss)		(3.3)
Other non-operating expense, net		1.1
(Loss) from discontinued operations before income taxes		(4.4)
Income tax expense		0.1
(Loss) from discontinued operations	\$	(4.5)

The following is a summary of total depreciation and amortization and capital expenditures related to AFI which are presented as discontinued operations and included as components of operating and investing cash flows on our consolidated statements of cash flows:

	Three Months Ended March 31, 2016	
Depreciation and amortization	\$	11.4
Purchases of property, plant and equipment		(8.0)

European Resilient Flooring

On December 4, 2014, our Board of Directors approved the cessation of funding to our DLW subsidiary, which at that time was our European flooring business. As a result, DLW management filed for insolvency in Germany on December 11, 2014. The German insolvency court subsequently appointed an administrator (the "Administrator") to oversee DLW operations.

As of December 4, 2014, DLW had a net liability of \$12.9 million, representing assets of \$151.9 million and liabilities of \$164.8 million, which were removed from our balance sheet. This net liability was recognized as a contingent liability on our consolidated balance sheet pending the closure of the insolvency proceeding. The net liability, included within Accounts payable and accrued expenses on our Condensed Consolidated Balance Sheets, was \$11.9 million as of March 31, 2017. In April 2017, we entered into a settlement agreement and mutual release with the Administrator on behalf of the DLW estate to settle all claims of the Administrator related to the insolvency for a cash payment of \$11.8 million. DLW was previously shown within our Resilient Flooring reporting segment.

The following is a summary of the results related to the flooring businesses which are included in discontinued operations.

	Three Months Ended March 31,	
	2017	2016
(Loss) on disposal of discontinued business before income tax	\$ (0.1)	\$ (0.1)
Income tax expense (benefit)	0.3	(1.8)
Net (loss) gain on disposal of discontinued business	\$ (0.4)	\$ 1.7

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NOTE 4. ACCOUNTS AND NOTES RECEIVABLE

	March 31, 2017	December 31, 2016
Customer receivables	\$ 126.2	\$ 106.9
Customer notes	1.2	1.5
Miscellaneous receivables	6.0	6.0
Less allowance for warranties, discounts and losses	(6.2)	(6.1)
Accounts and notes receivable, net	<u>\$ 127.2</u>	<u>\$ 108.3</u>

Generally, we sell our products to select, pre-approved customers whose businesses are affected by changes in economic and market conditions. We consider these factors and the financial condition of each customer when establishing our allowance for losses from doubtful accounts.

NOTE 5. INVENTORIES

	March 31, 2017	December 31, 2016
Finished goods	\$ 84.4	\$ 80.5
Goods in process	4.4	3.3
Raw materials and supplies	34.8	32.4
Less LIFO and other reserves	(7.5)	(7.2)
Total inventories, net	<u>\$ 116.1</u>	<u>\$ 109.0</u>

NOTE 6. OTHER CURRENT ASSETS

	March 31, 2017	December 31, 2016
Prepaid expenses	\$ 16.5	\$ 15.0
Fair value of derivative assets	1.1	2.4
Other	1.6	3.4
Total other current assets	<u>\$ 19.2</u>	<u>\$ 20.8</u>

NOTE 7. EQUITY INVESTMENT

Investment in joint venture as of March 31, 2017 reflected our 50% equity interest in WAVE. Condensed income statement data for WAVE is summarized below. Segment results relating to WAVE, however, consist primarily of equity earnings, as we do not consolidate the sales, profit or earnings of WAVE in our results.

	Three Months Ended	
	March 31,	
	2017	2016
Net sales	\$ 101.8	\$ 93.9
Gross profit	52.2	50.3
Net earnings	39.6	39.2

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**NOTE 8. GOODWILL AND INTANGIBLE ASSETS**

The following table details amounts related to our intangible assets as of March 31, 2017 and December 31, 2016.

	Estimated Useful Life	March 31, 2017		December 31, 2016	
		Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
<b>Amortizing intangible assets</b>					
Customer relationships	20 years	\$ 176.8	\$ 87.1	\$ 165.3	\$ 84.9
Developed technology	15 years	83.0	56.8	82.8	55.4
Other	Various	13.4	2.1	13.2	2.0
<b>Total</b>		<b>\$ 273.2</b>	<b>\$ 146.0</b>	<b>\$ 261.3</b>	<b>\$ 142.3</b>
<b>Goodwill and non-amortizing intangible assets</b>					
Trademarks and brand names	Indefinite	319.5		314.4	
Goodwill	Indefinite	10.1		1.1	
<b>Total goodwill and intangible assets</b>		<b>\$ 602.8</b>		<b>\$ 576.8</b>	

	Three Months Ended March 31,	
	2017	2016
Amortization expense	\$ 3.6	\$ 3.5

**NOTE 9. ACCOUNTS PAYABLE AND ACCRUED EXPENSES**

	March 31, 2017	December 31, 2016
Payables, trade and other	\$ 102.2	\$ 108.6
Employment costs	20.9	33.7
Current portion of pension and postretirement liabilities	12.9	12.7
Contingent liability related to discontinued operations	11.9	11.9
Other	24.5	30.2
<b>Total accounts payable and accrued expenses</b>	<b>\$ 172.4</b>	<b>\$ 197.1</b>

**NOTE 10. SEVERANCE AND RELATED COSTS**

During the first quarter of 2016, we recorded \$2.4 million in Unallocated Corporate for severance and related costs (including for our former Chief Executive Officer) as a result of the separation of AFI. These costs are reflected within Separation costs on the Condensed Consolidated Statements of Operations.

**NOTE 11. INCOME TAX EXPENSE**

	Three Months Ended March 31,	
	2017	2016
Earnings from continuing operations before income taxes	\$ 55.4	\$ 4.9
Income tax expense	24.6	12.0
Effective tax rate	44.4%	244.9%

Excluding the impact of the increase in pre-tax income, the effective rate for the first quarter of 2017 was lower in comparison to the same period in 2016 as income tax expense in the first quarter of 2016 was negatively impacted by the separation of AFI.

We do not expect to record any further material changes during 2017 to unrecognized tax benefits that were claimed on tax returns covering tax years ended on or before December 31, 2016.

As of March 31, 2017, we consider foreign unremitted earnings to be permanently reinvested.

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NOTE 12. DEBT

As of March 31, 2017 and December 31, 2016, our long-term debt included borrowings outstanding under our \$1,050.0 million credit facility which is comprised of a \$200.0 million revolving credit facility (with a \$150.0 million sublimit for letters of credit), a \$600.0 million Term Loan A and a \$250.0 million Term Loan B. We also have a \$25.0 million letter of credit facility with the Bank of Nova Scotia, also known as our bi-lateral facility.

As of March 31, 2017 and December 31, 2016, our outstanding long-term debt included a \$35.0 million variable rate, tax-exempt industrial development bond that financed the construction of a U.S. plant in prior years.

We utilize lines of credit and other commercial commitments in order to ensure that adequate funds are available to meet operating requirements. Letters of credit are currently arranged through our revolving credit facility, our bi-lateral facility and our securitization facility. In addition, our foreign subsidiaries' available lines of credit are available for letters of credit and guarantees. Letters of credit are issued to third party suppliers, insurance institutions and financial institutions and typically can only be drawn upon in the event of AWI's failure to pay its obligations to the beneficiary. The following table presents details related to our letters of credit:

Financing Arrangements	As of March 31, 2017		
	Limit	Used	Available
Revolving credit facility	\$ 150.0	\$ -	\$ 150.0
Bi-lateral facility	25.0	19.2	5.8
Accounts receivable securitization facility	33.2	36.2	(3.0)
Foreign lines of credit	0.2	-	0.2
<b>Total</b>	<b>\$ 208.4</b>	<b>\$ 55.4</b>	<b>\$ 153.0</b>

As of March 31, 2017 and December 31, 2016, \$3.0 million and \$4.0 million, respectively, of letters of credits issued under our accounts receivable securitization facility in excess of our maximum limit were classified as restricted cash and reported as a component of Cash and cash equivalents on our Condensed Consolidated Balance Sheets. The restriction as of March 31, 2017 will lapse upon replacement of collateral with accounts receivables and/or upon a change in the letter of credit limit as a result of higher securitized accounts receivable balances.

In February 2017, we repriced the interest rate on our Term Loan B borrowing, resulting in a lower LIBOR spread (2.75% vs. 3.25%). The maturity date and all other terms and conditions remained unchanged. In connection with the refinancing, we paid \$0.6 million of bank, legal and other fees, the majority of which were capitalized.

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**NOTE 13 . PENSIONS AND OTHER BENEFIT PROGRAMS**

Following are the components of net periodic benefit (credits) costs:

	Three Months Ended March 31,	
	2017	2016
<b>U.S. defined-benefit plans:</b>		
<b>Pension benefits</b>		
Service cost of benefits earned during the period	\$ 2.1	\$ 3.6
Interest cost on projected benefit obligation	12.5	20.4
Expected return on plan assets	(24.8)	(32.0)
Amortization of prior service cost	0.4	0.5
Amortization of net actuarial loss	4.2	14.0
Net periodic pension (credit) cost	\$ (5.6)	\$ 6.5
Less: Discontinued operations	-	2.2
Net periodic pension (credit) cost, continuing operations	\$ (5.6)	\$ 4.3
<b>Retiree health and life insurance benefits</b>		
Service cost of benefits earned during the period	\$ 0.1	\$ 0.1
Interest cost on projected benefit obligation	0.7	1.8
Amortization of prior service credit	-	(0.1)
Amortization of net actuarial gain	(0.9)	(2.3)
Net periodic postretirement (credit)	\$ (0.1)	\$ (0.5)
Less: Discontinued operations	-	(0.2)
Net periodic postretirement (credit), continuing operations	\$ (0.1)	\$ (0.3)
<b>Non-U.S. defined-benefit pension plans:</b>		
Service cost of benefits earned during the period	\$ 0.5	\$ 0.5
Interest cost on projected benefit obligation	1.3	1.9
Expected return on plan assets	(1.6)	(2.2)
Amortization of net actuarial loss	0.3	0.4
Net periodic pension cost	\$ 0.5	\$ 0.6

The change in net periodic pension (credit) cost for the three months ended March 31, 2017 in comparison to the same period in 2016 was primarily due to a decrease in amortization of net actuarial losses resulting from a reduction in active plan participants due to the separation of AFI. During 2016, actuarial gains and losses were amortized into future earnings over the expected remaining service period of plan participants, which was approximately eight years for our U.S. defined-benefit pension plans. For 2017, actuarial gains and losses are amortized over the remaining life expectancy of plan participants, which are approximately 20 years for our U.S. defined-benefit pension plans.

Our U.S. defined benefit Retirement Income Plan ("RIP") was amended to freeze accruals for salaried non-production employees, effective December 31, 2017. The impact of this amendment resulted in a reduction to our December 31, 2016 projected benefit obligation with a corresponding increase to unrecognized loss, resulting in no curtailment gain or loss. The impact of this amendment has been reflected in the net periodic pension credit for 2017.

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**NOTE 14. FINANCIAL INSTRUMENTS**

We do not hold or issue financial instruments for trading purposes. The estimated fair values of our financial instruments are as follows:

	March 31, 2017		December 31, 2016	
	Carrying amount	Estimated fair value	Carrying amount	Estimated fair value
<b>Assets/(Liabilities), net:</b>				
Total long-term debt, including current portion	\$ (873.0)	\$ (869.7)	\$ (873.6)	\$ (873.7)
Foreign currency contracts	0.3	0.3	1.6	1.6
Natural gas contracts	0.4	0.4	1.0	1.0
Interest rate swap contracts	8.4	8.4	6.9	6.9

The carrying amounts of cash and cash equivalents, receivables, accounts payable, accrued expenses, and short-term debt approximate fair value because of the short-term maturity of these instruments. The fair value estimates of long-term debt were based upon quotes from a major financial institution of recently observed trading levels of our Term Loan A and Term Loan B debt, respectively. The fair value estimates of foreign currency contract obligations are estimated from market quotes provided by a well-recognized national market data provider. The fair value estimates of natural gas contracts are estimated using internal valuation models with verification by obtaining quotes from major financial institutions. For natural gas swap transactions, fair value is calculated using NYMEX market quotes provided by a well-recognized national market data provider. For natural gas option based strategies, fair value is calculated using an industry standard Black-Scholes model with market based inputs, including but not limited to, underlying asset price, strike price, implied volatility, discounted risk free rate, and time to expiration, and is provided by a well-recognized national market data provider. The fair value estimates for interest rate swap contracts are estimated by obtaining quotes from major financial institutions with verification by internal valuation models.

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. Three levels of inputs may be used to measure fair value:

Level 1 — Quoted prices in active markets for identical assets or liabilities;

Level 2 — Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data; or

Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

The fair value measurement of assets and liabilities measured at fair value on a recurring basis and reported on the consolidated balance sheets is summarized below:

	March 31, 2017		December 31, 2016	
	Fair value based on		Fair value based on	
	Quoted, active markets	Other observable inputs	Quoted, active markets	Other observable inputs
	Level 1	Level 2	Level 1	Level 2
<b>Assets, net:</b>				
Foreign currency contracts	\$ 0.3	\$ -	\$ 1.6	\$ -
Natural gas contracts	-	0.4	-	1.0
Interest rate swap contracts	-	8.4	-	6.9

We do not have any financial assets or liabilities that are valued using Level 3 (unobservable) inputs.

#### NOTE 15. DERIVATIVE FINANCIAL INSTRUMENTS

We are exposed to market risk from changes in foreign exchange rates, interest rates and commodity prices that could impact our results of operations, cash flows and financial condition. We use forward swaps and option contracts to hedge these exposures. Exposure to individual counterparties is controlled and derivative financial instruments are entered into with a diversified group of major financial institutions. Forward swaps and option contracts are entered into for periods consistent with underlying exposure and do not constitute positions independent of those exposures. At inception, hedges that we designate as hedging instruments are formally documented as either (1) a hedge of a forecasted transaction or “cash flow” hedge, or (2) a hedge of the fair value of a recognized liability or asset or “fair value” hedge. We also formally assess, both at inception and at least quarterly thereafter, whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in either the fair value or cash flows of the hedged item. If it is determined that a derivative ceases to be a highly effective hedge, or if the anticipated transaction is no longer probable of occurring, we discontinue hedge accounting and any future mark-to-market adjustments are recognized in earnings. We use derivative financial instruments as risk management tools and not for speculative trading purposes.

##### Counterparty Risk

We only enter into derivative transactions with established counterparties having an investment-grade credit rating. We monitor counterparty credit default swap levels and credit ratings on a regular basis. All of our derivative transactions with counterparties are governed by master International Swap and Derivatives Association agreements (“ISDAs”) with netting arrangements. These agreements can limit our exposure in situations where we have gain and loss positions outstanding with a single counterparty. We do not post nor do we receive cash collateral with any counterparty for our derivative transactions. These ISDAs do not have any credit contingent features; however, a default under our bank credit facility would trigger a default under these agreements. Exposure to individual counterparties is controlled, and thus we consider the risk of counterparty default to be negligible.

##### Commodity Price Risk

We purchase natural gas for use in the manufacturing process and to heat many of our facilities. As a result, we are exposed to fluctuations in the price of natural gas. We have a policy to reduce cost volatility for North American natural gas purchases by purchasing natural gas forward contracts and swaps, purchased call options, and zero-cost collars up to 24 months forward. The contracts are based on forecasted usage of natural gas measured in mmBtu’s. There is a high correlation between the hedged item and the hedge instrument. The gains and losses on these instruments offset gains and losses on the transactions being hedged. These instruments are designated as cash flow hedges. As of March 31, 2017 and December 31, 2016, the notional amount of these hedges was \$10.8 million and \$7.4 million, respectively. The mark-to-market gain or loss on qualifying hedges is included in other comprehensive income to the extent effective, and reclassified into cost of goods sold in the period during which the underlying gas is consumed. The mark-to-market gains or losses on ineffective portions of hedges are recognized in cost of goods sold immediately. The earnings impact of the ineffective portion of these hedges was not material for the three months ended March 31, 2017 and 2016.

##### Currency Rate Risk – Sales and Purchases

We manufacture and sell our products in a number of countries throughout the world and, as a result, we are exposed to movements in foreign currency exchange rates. To a large extent, our global manufacturing and sales provide a natural hedge of foreign currency exchange rate movement, as foreign currency expenses generally offset foreign currency revenues. We manage our cash flow exposures on a net basis and use derivatives to hedge the majority of our unmatched foreign currency cash inflows and outflows. Our major foreign currency exposures as of March 31, 2017, based on operating profits by currency, are to the Russian ruble, Canadian dollar and Chinese renminbi.

We use foreign currency forward exchange contracts to reduce our exposure to the risk that the eventual net cash inflows and outflows resulting from the sale of products to foreign customers and purchases from foreign suppliers will be adversely affected by changes in exchange rates. These derivative instruments are used for forecasted transactions and are classified as cash flow hedges. Cash flow hedges are executed quarterly, generally up to 15 months forward, and allow us to further reduce our overall exposure to exchange rate movements, since gains and losses on these contracts offset gains and losses on the transactions being hedged. The notional amount of these hedges was \$34.6 million as of March 31, 2017 and December 31, 2016. Gains and losses on these instruments are recorded in other comprehensive income, to the extent effective, until the underlying transaction is recognized in earnings. The earnings impact of the ineffective portion of these hedges was not material for the three months ended March 31, 2017 and 2016.

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Currency Rate Risk - Intercompany Loans and Dividends

Where efficient, reliable and liquid markets exist we may utilize foreign currency forward exchange contracts to hedge exposures created by cross-currency intercompany loans and dividends. The translation adjustments related to these loans and any offsetting gains or losses on the related derivative contracts are recorded in other non-operating income or expense. We did not have any open hedges related to intercompany loans and dividends as of March 31, 2017 or December 31, 2016.

Interest Rate Risk

We utilize interest rate swaps to minimize the fluctuations in earnings caused by interest rate volatility. Interest expense on variable-rate liabilities increases or decreases as a result of interest rate fluctuations. The following table summarizes our interest rate swaps as of March 31, 2017:

Trade Date	Notional Amount	Coverage Period	Risk Coverage
November 13, 2016	\$ 250.0	November 2016 to March 2018	Term Loan A
November 13, 2016	\$ 200.0	November 2016 to March 2021	Term Loan A
April 1, 2016	\$ 100.0	April 2016 to March 2023	Term Loan B

In connection with the refinancing of our credit facilities in April 2016, \$450.0 million of notional amount Term Loan B swaps with a trade date of March 27, 2012 were settled and \$10.7 million of losses recorded as a component of accumulated other comprehensive income were reclassified to interest expense during the three months ended March 31, 2016, with the cash payment for the settlement of this swap occurring during the second quarter of 2016.

Under the terms of the Term Loan A swap with trade dates of November 13, 2016, we receive 1-month LIBOR and pay a fixed rate over the hedged period. Under the terms of our Term Loan B swap with a trade date of April 1, 2016, we receive the greater of 3-month LIBOR or a 0.75% LIBOR Floor and pay a fixed rate over the hedged period. These swaps are designated as cash flow hedges against changes in LIBOR for a portion of our variable rate debt. Gains and losses on these instruments are recorded in other comprehensive income, to the extent effective, until the underlying transaction is recognized in earnings. The mark-to-market gains or losses on the ineffective portion of hedges are recognized in interest expense. There was no earnings impact of the ineffective portion of these hedges for the three months ended March 31, 2017 and 2016.

Financial Statement Impacts

The following tables detail amounts related to our derivatives as of March 31, 2017 and December 31, 2016. We had no derivative assets or liabilities not designated as hedging instruments as of March 31, 2017 or December 31, 2016. The derivative asset and liability amounts below are shown in gross amounts; we have not netted assets with liabilities.

	Derivative Assets			Derivative Liabilities		
	Balance Sheet Location	Fair Value		Balance Sheet Location	Fair Value	
		March 31, 2017	December 31, 2016		March 31, 2017	December 31, 2016
<u>Derivatives designated as hedging instruments</u>						
Natural gas commodity contracts	Other current assets	\$ 0.5	\$ 1.0	Accounts payable and accrued expenses	\$ 0.1	\$ -
Foreign exchange contracts	Other current assets	0.5	1.4	Accounts payable and accrued expenses	0.2	-
Foreign exchange contracts	Other non-current assets	-	0.2	Other long-term liabilities	-	-
Interest rate swap contracts	Other current assets	0.1	-	Accounts payable and accrued expenses	-	-
Interest rate swap contracts	Other non-current assets	8.3	7.4	Other long-term liabilities	-	0.5
Total derivatives designated as hedging instruments		<u>\$ 9.4</u>	<u>\$ 10.0</u>		<u>\$ 0.3</u>	<u>\$ 0.5</u>

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	Amount of Gain (Loss) Recognized in Accumulated Other Comprehensive Income ("AOCI") (Effective Portion)		Location of (Loss) Gain Reclassified from AOCI into Income (Effective Portion)	Gain (Loss) Reclassified from AOCI into Income (Effective Portion)	
	Three Months Ended March 31,			Three Months Ended March 31,	
	2017	2016		2017	2016
<b>Derivatives in cash flow hedging relationships</b>					
Natural gas commodity contracts	\$ (0.5)	\$ (0.6)	Cost of goods sold	\$ 0.1	\$ (0.8)
Foreign exchange contracts – purchases	(0.5)	(0.4)	Cost of goods sold	-	0.5
Foreign exchange contracts – sales	(0.2)	(3.4)	Net sales	0.2	0.8
Interest rate swap contracts	1.5	(3.1)	Interest expense	-	(10.7)
Total	<u>\$ 0.3</u>	<u>\$ (7.5)</u>		<u>\$ 0.3</u>	<u>\$ (10.2)</u>

As of March 31, 2017, the amount of existing gains in AOCI expected to be recognized in earnings over the next twelve months is \$1.0 million.

There was no pre-tax gain or loss recognized in income for derivative instruments not designated as hedging instruments for the three months ended March 31, 2017 and 2016.

**NOTE 16. COMMON STOCK REPURCHASE PLAN**

On July 29, 2016, we announced that our Board of Directors had approved a share repurchase program pursuant to which we are authorized to repurchase up to \$150.0 million of our outstanding shares of common stock through July 31, 2018 (the "Program"). Repurchases under the Program may be made through open market, block and privately-negotiated transactions, including Rule 10b5-1 plans, at such times and in such amounts as management deems appropriate, subject to market and business conditions, regulatory requirements and other factors. The Program does not obligate us to repurchase any particular amount of common stock and may be suspended or discontinued at any time without notice. During the three months ended March 31, 2017, we repurchased 1.2 million shares under the Program for a total cost of \$50.0 million, or an average price of \$41.90 per share. Since inception of the Program, we have repurchased 2.3 million shares under the Program for a total cost of \$93.8 million, or an average price of \$40.72 per share.

**NOTE 17. ACCUMULATED OTHER COMPREHENSIVE (LOSS)**

	Foreign Currency Translation Adjustments <sup>(1)</sup>	Derivative Gain (Loss) <sup>(1)</sup>	Pension and Postretirement Adjustments <sup>(1)</sup>	Total Accumulated Other Comprehensive (Loss) <sup>(1)</sup>
Balance, December 31, 2016	\$ (71.6)	\$ 3.8	\$ (336.0)	\$ (403.8)
Other comprehensive income (loss) before reclassifications, net of tax (benefit) expense of \$ -, \$-, \$-, and \$-	11.1	0.3	(0.1)	11.3
Amounts reclassified from accumulated other comprehensive (loss)	-	(0.2)	2.6	2.4
Net current period other comprehensive income	11.1	0.1	2.5	13.7
Balance at March 31, 2017	<u>\$ (60.5)</u>	<u>\$ 3.9</u>	<u>\$ (333.5)</u>	<u>\$ (390.1)</u>

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	Foreign Currency Translation Adjustments <sup>(1)</sup>	Derivative Gain (Loss) <sup>(1)</sup>	Pension and Postretirement Adjustments <sup>(1)</sup>	Total Accumulated Other Comprehensive (Loss) <sup>(1)</sup>
Balance, December 31, 2015	\$ (33.8)	\$ (3.3)	\$ (450.3)	\$ (487.4)
Other comprehensive income (loss) before reclassifications, net of tax expense (benefit) of \$ -, \$2.2, (\$0.4), and \$1.8	1.4	(4.4)	(0.3)	(3.3)
Amounts reclassified from accumulated other comprehensive (loss)	-	6.0	8.1	14.1
Net current period other comprehensive income	1.4	1.6	7.8	10.8
Balance at March 31, 2016	<u>\$ (32.4)</u>	<u>\$ (1.7)</u>	<u>\$ (442.5)</u>	<u>\$ (476.6)</u>

(1) Amounts are net of tax

	Amounts Reclassified from Accumulated Other Comprehensive Loss		Affected Line Item in the Condensed Consolidated Statement of Operations and Comprehensive Income
	Three Months Ended March 31,		
	2017	2016	
<b>Derivative Adjustments:</b>			
Natural gas commodity contracts	\$ (0.1)	\$ 0.8	Cost of goods sold
Foreign exchange contracts - purchases	-	(0.5)	Cost of goods sold
Foreign exchange contracts - sales	(0.2)	(0.8)	Net sales
Interest rate swap contracts	-	10.7	Interest expense
Total (income) loss from continuing operations, before tax	(0.3)	10.2	
Tax impact	0.1	(3.6)	Income tax expense
Total (income) loss from continuing operations, net of tax	(0.2)	6.6	
Total (income) loss from discontinued operations, net of tax benefit of \$ - and (\$0.3)	-	(0.6)	
Total (income) loss, net of tax	(0.2)	6.0	
<b>Pension and Postretirement Adjustments:</b>			
Prior service cost amortization	0.2	0.1	Cost of goods sold
Prior service cost amortization	0.2	0.1	SG&A expense
Amortization of net actuarial loss	1.8	4.6	Cost of goods sold
Amortization of net actuarial loss	1.8	3.1	SG&A expense
Total expense from continuing operations, before tax	4.0	7.9	
Tax impact	(1.4)	(2.7)	Income tax expense
Total expense from continuing operations, net of tax	2.6	5.2	
Total expense from discontinued operations, net of tax benefit of \$ - and (\$1.5)	-	2.9	
Total expense, net of tax	2.6	8.1	
Total reclassifications for the period	<u>\$ 2.4</u>	<u>\$ 14.1</u>	

**NOTE 18. LITIGATION AND RELATED MATTERS**

**ENVIRONMENTAL MATTERS**

**Environmental Compliance**

Our manufacturing and research facilities are affected by various federal, state and local requirements relating to the discharge of materials and the protection of the environment. We make expenditures necessary for compliance with applicable environmental requirements at each of our operating facilities. These regulatory requirements continually change, therefore we cannot predict with certainty future expenditures associated with compliance with environmental requirements.

## Environmental Sites

### Summary

We are actively involved in the investigation, closure and/or remediation of existing or potential environmental contamination under the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”) and state Superfund and similar environmental laws at several domestically owned, formerly owned and non-owned locations allegedly resulting from past industrial activity.

In a few cases, we are one of several potentially responsible parties and have agreed to jointly fund the required investigation and remediation, while preserving our defenses to the liability. We may also have rights of contribution or reimbursement from other parties or coverage under applicable insurance policies. We are currently pursuing coverage and recoveries under those policies with respect to certain of the sites, including the St. Helens, OR site, the Macon, GA site and the Elizabeth City, NC site, each of which is summarized below. These efforts include two active and independent litigation matters against legacy primary and excess policy insurance carriers for recovery of fees and costs incurred by us in connection with our investigation and remediation activities for such sites. We are unable to predict the outcome of these matters or the timing of any recoveries, whether through settlement or otherwise. We are also unable to predict the extent to which any recoveries might cover our final share of investigation and remediation costs for these sites. Our final share of investigation and remediation costs may exceed any such recoveries, and such amounts net of insurance recoveries may be material. We currently anticipate that we may enter into settlement agreements in 2017 with several, but not all, insurers and obtain partial reimbursement for legacy environmental site expenses.

Estimates of our future liability at the environmental sites are based on evaluations of currently available facts regarding each individual site. We consider factors such as our activities associated with the site, existing technology, presently enacted laws and regulations and prior company experience in remediating contaminated sites. Although current law imposes joint and several liability on all parties at Superfund sites, our contribution to the remediation of these sites is expected to be limited by the number of other companies potentially liable for site remediation. As a result, our estimated liability reflects only our expected share. In determining the probability of contribution, we consider the solvency of other parties, the site activities of other parties, whether liability is being disputed, the terms of any existing agreements and experience with similar matters, and the effect of our October 2006 Chapter 11 reorganization upon the validity of the claim.

### Specific Material Events

#### St Helens, OR

In August 2010, we entered into a Consent Order (the “Consent Order”) with the Oregon Department of Environmental Quality (“ODEQ”), along with Kaiser Gypsum Company, Inc. (“Kaiser”), and Owens Corning Sales LLC (“OC”), with respect to our St. Helens, OR facility, which was previously owned by Kaiser and then OC. The Consent Order requires that we and Kaiser complete a remedial investigation and feasibility study (“RI/FS”) on the portion of the site owned by us (“Owned Property”), which is comprised of Upland and Lowland areas. The Consent Order further requires us, Kaiser and OC to conduct an RI/FS in the In-Water area of the adjacent Scappoose Bay. Costs and responsibilities for investigation, including the current RI/FS, for the Owned Property have been shared with Kaiser pursuant to a cost sharing agreement with Kaiser. Costs and responsibilities for the investigation with respect to the in-water areas that we do not own have been shared with Kaiser and OC pursuant to a cost sharing agreement with Kaiser and OC.

On September 14, 2016, the parties submitted a Feasibility Study to the ODEQ proposing remedial action options for the Upland area. We have participated in the investigation phase for the Lowland area of the Owned Property and the Scappoose Bay and have been working with the ODEQ, Kaiser and OC to finalize the reports to move to the Feasibility Study phase. We have determined that it is probable that remedial action for certain portions of the Lowland area of the Owned Property will be required. The current estimate of our future liability at the site includes any remaining known investigation work required by the Consent Order and the current projected cost of remedial actions in the Upland area. At this time, we are unable to reasonably estimate any remediation costs that we may ultimately incur with respect to the Lowland portion of the Owned Property or the Scappoose Bay or whether the projected costs for the areas we have included in our current estimate will increase. Additional investigative or remedial action required by the ODEQ could result in additional costs greater than the amounts currently estimated. As discussed above, we are currently unable to predict the outcome or the timing of our insurance recovery proceedings. Accordingly, additional estimated costs for this matter may be incurred without regard for, and prior to, the resolution of our insurance recovery proceedings.

On September 30, 2016, Kaiser filed a voluntary petition for relief under Chapter 11 of the Bankruptcy Code in the U.S. Bankruptcy Court for the Western District of North Carolina (Case No. 16-31602). AWI, OC and the ODEQ have all been included on the master list of potential creditors filed with the Bankruptcy Court for notice purposes. By order dated October 14, 2016, the Bankruptcy Court

formed a statutory committee of unsecured creditors, to which we were appointed to serve, along with OC and The Boeing Company. The Committee is charged with, among other things, maximizing recovery of all unsecured creditor claims, including claims of Kaiser and ODEQ. The Chapter 11 case may impact Kaiser's ongoing participation in the RI/FS process, as well as the ODEQ consent order and cost sharing agreements. It may also delay implementation of remedial actions for the Upland area, as well as completion of the investigation phase for the Lowland area of the Owned Property and the Scappoose Bay. At this time, we are unable to predict whether and to what extent Kaiser intends to satisfy its environmental remediation obligations and liability to ODEQ. Specifically, we are unable to predict whether Kaiser intends to negotiate a settlement that would discharge its liability for the site, or whether it has sufficient insurance or other assets to cover its anticipated share of any site liability. Kaiser's shares under cost sharing agreements were being funded by certain insurance policies, which comprised substantially all of Kaiser's assets. If Kaiser, whether as a result of bankruptcy or otherwise, or OC are unwilling or unable to fulfill their obligations under the cost sharing agreements, or seek to contest or challenge the allocations, or if Kaiser's insurance policies are unable to fund Kaiser's share of environmental liability, it could result in additional cost to us greater than the amounts currently estimated and those costs may be material.

#### Macon, GA

The U.S. Environmental Protection Agency ("EPA") has listed two landfills located on a portion of our Building Products facility in Macon, GA, along with the former Macon Naval Ordnance Plant landfill adjacent to our property, portions of Rocky Creek, and certain tributaries leading to Rocky Creek (collectively, the "Macon Site") as a Superfund site on the National Priorities List due to the presence of contaminants, most notably polychlorinated biphenyls ("PCBs").

In September 2010, we entered into an Administrative Order on Consent for a Removal Action with the EPA to investigate PCB contamination in one of the landfills on our property, the Wastewater Treatment Plant Landfill (the "WWTP Landfill," also known as "Operable Unit 1"). We concluded the investigative phase of the Removal Action for the WWTP Landfill and submitted our final Engineering Evaluation/Cost Analysis ("EE/CA") to the EPA in 2013. The EPA subsequently approved the EE/CA and issued an Action Memorandum in July 2013 selecting our recommended remedy for the Removal Action. In July 2014, we entered into an Administrative Order on Consent for Removal Action with the EPA for the WWTP Landfill. The EPA approved the Removal Action Work Plan on March 30, 2015 and the removal work commenced in the third quarter of 2015. The Operable Unit 1 response action for the WWTP Landfill is complete and the final report was submitted to the EPA on October 11, 2016. The EPA approved the final report on November 28, 2016, and a Post-Removal Control Plan (the "Plan") was submitted to the EPA on March 28, 2017. We will implement the Plan once it is approved. That Plan will monitor the effectiveness of the WWTP Landfill response action and our estimate of future liabilities includes these tasks.

It is probable that we will incur field investigation, engineering and oversight costs associated with a RI/FS with respect to the remainder of the Superfund site, which includes the other landfill on our property, as well as areas on and adjacent to AWI's property and Rocky Creek (the "Remaining Site," also known as "Operable Unit 2"). On September 25, 2015, AWI and six other Potentially Responsible Parties ("PRPs") received a Special Notice Letter from the EPA under CERCLA inviting AWI and the PRPs to enter into the negotiation of a Settlement Agreement (formerly known as an Administrative Order on Consent) to conduct an RI/FS of Operable Unit 2. We, along with the other PRPs, submitted a good faith offer to the EPA in response to the Special Notice Letter to conduct RI/FS. We have not received a response to our good faith offer and have not yet entered into an Order with the EPA for Operable Unit 2. We have not yet commenced an investigation of this portion of the site. We anticipate that the EPA will require significant investigative work for Operable Unit 2 and that we may ultimately incur costs in remediating any contamination discovered during the RI/FS. The current estimate of future liability at this site includes only our estimated share of the costs of the investigative work that, at this time, we anticipate the EPA will require the PRPs to perform. We are unable to reasonably estimate AWI's final share of the costs or the total costs associated with the investigation work or any resulting remediation therefrom, although such amounts may be material.

#### Elizabeth City, NC

This site is a former cabinet manufacturing facility that was operated by Triangle Pacific Corporation, now known as Armstrong Wood Products, Inc. ("Triangle Pacific"), from 1977 until 1996. The site was formerly owned by the U.S. Navy ("Navy") and Westinghouse, now CBS Corporation ("CBS"). We assumed ownership of the site when we acquired the stock of Triangle Pacific in 1998. Prior to our acquisition, the NC Department of Environment and Natural Resources listed the site as a hazardous waste site. In 1997, Triangle Pacific entered into a cost sharing agreement with Westinghouse whereby the parties agreed to share equally in costs associated with investigation and potential remediation. In 2000, Triangle Pacific and CBS entered into an Administrative Order on Consent to conduct an RI/FS with the EPA for the site. In 2007, we and CBS entered into an agreement with the Navy whereby the Navy agreed to pay one third of defined past and future investigative costs up to a certain amount, which has now been exhausted. The EPA approved the RI/FS work plan in August 2011. In January 2014, we submitted the draft Remedial Investigation and Risk

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Assessment reports and conducted supplemental investigative work based upon agency comments to those reports. The EPA has requested a schedule for next steps (e.g. feasibility study ) working toward a Proposed Plan and Record Of Decision. If remediation is required the related costs may be material, although we expect these costs to be shared with CBS and the Navy.

Summary of Financial Position

Liabilities of \$5.1 million as of March 31, 2017 and \$4.7 million as of December 31, 2016 were recorded for potential environmental liabilities that we consider probable and for which a reasonable estimate of the probable liability could be made. During the three months ended March 31, 2017 and 2016, we recorded reserves for potential environmental liabilities of \$0.6 million and \$0.7 million, respectively. Where existing data is sufficient to estimate the liability, that estimate has been used; where only a range of probable liabilities is available and no amount within that range is more likely than any other, the lower end of the range has been used. As assessments and remediation activities progress at each site, these liabilities are reviewed to reflect new information as it becomes available, and adjusted to reflect amounts actually incurred and paid. These liabilities are undiscounted.

The estimated liabilities above do not take into account any claims for recoveries from insurance or third parties. It is our policy to record insurance recoveries when cash is received. For insurance recoveries that are reimbursements of prior environmental expenditures, the income statement impact is recorded within SG&A expenses, which is where environmental charges are recorded. Insurance recoveries in excess of historical environmental spending would be recorded on the balance sheet as part of Other long-term liabilities and released as future environmental spending occurs. No material amounts were recorded for insurance recoveries as of March 31, 2017 or December 31, 2016.

Actual costs to be incurred at identified sites may vary from our estimates. Based on our knowledge of the identified sites, it is not possible to reasonably estimate future costs in excess of amounts already recognized.

OTHER CLAIMS

We are involved in various lawsuits, claims, investigations and other legal matters from time to time that arise in the ordinary course of business, including matters involving our products, intellectual property, relationships with suppliers, relationships with distributors, relationships with competitors, employees and other matters. From time to time, for example, we may be a party to litigation matters that involve product liability, tort liability and other claims under various allegations, including illness due to exposure to certain chemicals used in the workplace; or medical conditions arising from exposure to product ingredients or the presence of trace contaminants. Such allegations may involve multiple defendants and relate to legacy products that we and other defendants purportedly manufactured or sold. We believe that any current claims are without merit and intend to defend them vigorously. For these matters, we also may have rights of contribution or reimbursement from other parties or coverage under applicable insurance policies. When applicable and appropriate, we will pursue coverage and recoveries under those policies, but are unable to predict the outcome of those demands. While complete assurance cannot be given to the outcome of these proceedings, we do not believe that any current claims, individually or in the aggregate, will have a material adverse effect on our financial condition, liquidity or results of operations.

NOTE 19. EARNINGS PER SHARE

Earnings per share (“EPS”) components may not add due to rounding.

The following table is a reconciliation of earnings to earnings attributable to common shares used in our basic and diluted EPS calculations for the three months ended March 31, 2017 and 2016:

	Three Months Ended	
	March 31,	
	2017	2016
Earnings (loss) from continuing operations	\$ 30.8	\$ (7.1)
Earnings allocated to participating non-vested share awards	(0.1)	(0.2)
Earnings (loss) from continuing operations attributable to common shares	<u>\$ 30.7</u>	<u>\$ (7.3)</u>

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The following table is a reconciliation of basic shares outstanding to diluted shares outstanding for the three months ended March 31, 2017 and 2016 (shares in millions):

	Three Months Ended March 31,	
	2017	2016
Basic shares outstanding	54.1	55.6
Dilutive effect of common stock equivalents	0.4	-
Diluted shares outstanding	<u>54.5</u>	<u>55.6</u>

Anti-dilutive stock options excluded from the computation of diluted EPS for the three months ended March 31, 2017 were 586,841. For the three months ended March 31, 2016, all common stock equivalents were excluded from dilutive EPS because their effect would have been anti-dilutive due to the net loss for the period.

## ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This discussion should be read in conjunction with the financial statements, the accompanying notes, the cautionary note regarding forward-looking statements and risk factors included in this report and our Annual Report on Form 10-K for the year ended December 31, 2016.

### **OVERVIEW**

We are a leading global producer of ceiling systems for use primarily in the construction and renovation of residential, commercial and institutional buildings. We design, manufacture and sell ceiling systems (primarily mineral fiber, fiberglass wool and metal) around the world.

On April 1, 2016, we completed our previously announced separation of Armstrong Flooring, Inc. ("AFI"). Beginning in the second quarter of 2016, AFI's historical financial results for periods prior to April 1, 2016 are reflected in our Condensed Consolidated Financial Statements as a discontinued operation.

On January 13, 2017, we acquired the business and assets of Tectum, Inc. ("Tectum") for a total cash purchase price of \$31.4 million. Tectum is a manufacturer of acoustical ceiling, wall and structural solutions for commercial building applications with two manufacturing facilities. Tectum's operations from the date of acquisition, and its assets and liabilities as of March 31, 2017, have been included as a component of our Americas segment.

We are focused on driving sustainable shareholder value creation. Our strategic priorities are to accelerate profitable volume growth globally and to improve the returns in our international business. Our primary goal is to expand into new, and grow in existing, markets by selling a broad array of products and solutions into those markets.

As of March 31, 2017, we operated 16 manufacturing plants in eight countries, including eight plants located throughout the U.S. Three of our plants are leased and the remaining 13 are owned.

Worthington Armstrong Venture ("WAVE"), our joint venture with Worthington Industries, Inc. in which we hold a 50% equity interest, operates 9 additional plants in five countries to produce suspension system (grid) products used in our ceiling systems.

### **Reportable Segments**

Our reportable operating segments consist of the following three distinct geographical segments: Americas (including Canada); Europe, Middle East and Africa (including Russia) ("EMEA"); and Pacific Rim.

Each of our geographical segments produce suspended fiber and metal ceilings for use in commercial and institutional settings in addition to sourcing complimentary ceiling products. Commercial ceiling materials and accessories are sold to resale distributors and to ceiling systems contractors. Residential ceiling products are sold in the Americas primarily to wholesalers and retailers (including large home centers). Each segment also includes our WAVE joint venture, which manufactures suspension system (grid) products that are invoiced by both us and WAVE. In each of our segments, WAVE primarily sells its suspension system products directly to customers, for which we provide sales and administrative support. To a lesser extent, however, in some markets, WAVE sells its suspension systems products to us for resale to customers. Our segment results reflect those sales transactions.

Balance sheet items classified as Unallocated Corporate primarily include cash and cash equivalents and outstanding borrowings under our senior credit facilities. The majority of expenses for our corporate support functions are allocated to our Americas segment.

See Note 2 to the Condensed Consolidated Financial Statements for additional financial information on our consolidated company and our reportable segments.

### **Factors Affecting Revenues**

*Markets.* We compete in building material markets around the world, with the majority of our sales in the Americas. We closely monitor publicly available macroeconomic trends that provide insight into commercial and residential market activity including Gross Domestic Product, office vacancy rates, the Architecture Billings Index, new commercial construction starts, state and local

government spending, and corporate profits and retail sales. In addition, we noted several factors and trends within our markets that we believe directly affected our business performance during the first quarter of 2017, including:

#### Americas

We believe we experienced growth from new construction and, to a lesser extent, renovation activity. We experienced growth in the first quarter of 2017 over a strong 2016 first quarter and we believe that the pace of activity improved in comparison to the fourth quarter of 2016.

#### EMEA

Market opportunities continue to be hindered by low global oil prices particularly in economies closely linked to oil, such as Russia and the Middle East. However, recent improvement and stabilization in oil prices have begun to positively impact market opportunities in these countries. Activity improved in the first quarter broadly across the region from a soft first quarter of 2016.

#### Pacific Rim

Commercial office markets in China continued to experience challenging conditions, however, markets in India and Australia improved in comparison to the first quarter of 2016.

*Average Unit Value*. We periodically modify prices in each of our business segments due to changes in costs for raw materials and energy, market conditions and the competitive environment. In certain cases, realized price increases are less than the announced price increases because of competitive reactions and changing market conditions. Additionally, we offer a wide assortment of products that are differentiated by style, design and performance attributes. Pricing and margins for products within the assortment vary. In addition, changes in the relative quantity of products purchased at different price points can impact year-to-year comparisons of net sales and operating income. We focus on improving sales dollars per unit sold, or average unit value ("AUV"), as a measure that accounts for the varying assortment of products and geographic mix impacting our revenues. We estimate that favorable AUV increased our total consolidated net sales in the first quarter of 2017 by approximately \$8 million compared to the same period of 2016.

In the first quarter of 2017, we implemented ceiling tile and grid price increases in the Americas, EMEA and Pacific Rim. We also announced price increases for grid products in the Americas effective in the second quarter of 2017. We may implement additional pricing actions based upon future movements in raw material prices or foreign currency valuations.

#### **Factors Affecting Operating Costs**

*Operating Expenses*. Our operating expenses are comprised of direct production costs (principally raw materials, labor and energy), manufacturing overhead costs, freight, costs to purchase sourced products and selling, general, and administrative ("SG&A") expenses.

Our largest individual raw material expenditures are for fiberglass, mineral wool, perlite, starch and waste paper. Natural gas and packaging materials are also significant input costs. Fluctuations in the prices of these inputs are generally beyond our control and have a direct impact on our financial results. In the first quarter of 2017, costs for raw materials, sourced products and energy negatively impacted operating income by \$1 million compared to the same period of 2016.

#### **Employees**

As of March 31, 2017, we had approximately 3,800 full-time and part-time employees worldwide compared to 3,700 full-time and part-time employees worldwide as of December 31, 2016. The increase compared to December 31, 2016 was primarily due to the addition of Tectum employees in January 2017, partially offset by a reduction of employees related to the idling of one of our China plants.

#### **RESULTS OF CONTINUING OPERATIONS**

Unless otherwise indicated, net sales in these results of continuing operations are reported based upon the AWI location where the sale was made. Please refer to Notes 2 and 3 to the Condensed Consolidated Financial Statements for a reconciliation of operating income to consolidated earnings from continuing operations before income taxes and additional financial information related to discontinued operations.

**CONSOLIDATED RESULTS FROM CONTINUING OPERATIONS**

(dollar amounts in millions)

	Three Months Ended March 31,		Change is Favorable
	2017	2016	
Total consolidated net sales	\$ 315.4	\$ 287.4	9.7 %
Operating income	\$ 63.0	\$ 21.6	Favorable

Excluding the unfavorable impact of foreign exchange of \$2 million, consolidated net sales increased 10.4% due to favorable AUV of \$8 million and higher volumes of \$22 million.

Cost of goods sold in the first quarter of 2017 was 68.5% of net sales, compared to 70.7% for the same period in 2016, due primarily to a \$6 million reduction in expense related to our U.S. pension plan.

SG&A expenses in the first quarter of 2017 were \$54.6 million, or 17.3% of net sales, compared to \$53.7 million, or 18.7% of net sales, for the same period in 2016. The increase in SG&A expenses in the first quarter of 2017 was in the Americas, primarily a result of the Tectum acquisition, an increase in share based compensation expense due to the timing of annual employee grants, and modest investments to enhance our total solutions selling capabilities in the Americas. These increases in SG&A were partially offset by a \$4 million reduction in expense related to our U.S. pension plan.

Equity earnings from our WAVE joint venture were \$18.3 million for the first quarter of 2017, compared to \$18.1 million in the first quarter of 2016. When compared to the prior year period, earnings increased in the first quarter due to favorable AUV and higher sales volumes which was mostly offset by higher input costs, particularly steel, as well as increased investments in selling expenses. See Note 7 to the Condensed Consolidated Financial Statements for further information.

Interest expense was \$9.2 million for the first quarter of 2017 compared to \$21.9 million in the first quarter of 2016. The decrease in interest expense in the first quarter was as a result of the refinancing of our credit facilities in April 2016, which resulted in a reduction in total debt outstanding and a lower interest rate spread. Interest expense also decreased versus the prior year quarter due to \$10.7 million of losses that were reclassified from accumulated other comprehensive income to interest expense during the first quarter of 2016 as a result of the settlement of \$450.0 million of notional amount interest rate swaps which occurred in connection with the refinancing of our credit facilities.

Other non-operating expense was \$1.8 million in the first quarter of 2017. Other non-operating income was \$3.4 million for the first quarter of 2017 and \$5.2 million for the first quarter of 2016. The changes in other non-operating income and expense were primarily due to foreign exchange gains and losses on the translation of unhedged cross-currency intercompany loans.

Income tax expense was \$24.6 million for the first quarter of 2017 compared to \$12.0 million in the first quarter of 2016. The effective tax rate for the first quarter of 2017 was 44.4% as compared to a rate of 244.9% for the same period of 2016. Excluding the impact of the increase in pre-tax income, the effective rate for the first quarter of 2017 was lower in comparison to the same period in 2016 as income tax expense in the first quarter of 2016 was negatively impacted by the separation of AFI.

Total other comprehensive income ("OCI") was \$13.7 million in the first quarter of 2017 compared to \$10.8 million for the first quarter of 2016. Foreign currency translation adjustments represent the change in the U.S. dollar value of assets and liabilities denominated in foreign currencies. Amounts in the first quarter of 2017 were driven primarily by changes in the exchange rates of the Russian ruble, British pound and Australian dollar. Amounts in the first quarter of 2016 were driven primarily by changes in the exchange rates of the British pound, Australian dollar and the Euro. Derivative gain/loss represents the mark-to-market value adjustments of our derivative assets and liabilities and the recognition of gains and losses previously deferred in OCI. The period changes are primarily due to the mark-to-market changes related to our interest rate swap derivatives. Pension and postretirement adjustments represent the amortization of actuarial gains and losses related to our defined benefit pension and postretirement plans. The amounts in all periods primarily related to the amortization of losses on the U.S. pension plans.

**REPORTABLE SEGMENT RESULTS**

**Americas**

(dollar amounts in millions)

	Three Months Ended March 31,		
	2017	2016	Change is Favorable
Total segment net sales	\$ 219.8	\$ 200.1	9.8 %
Operating income	\$ 67.2	\$ 56.1	19.8 %

Excluding the favorable impact of foreign exchange of \$1 million, net sales in the Americas increased 9.5% and were driven by higher volumes of \$12 million and favorable AUV of \$7 million.

Operating income increased in the first quarter of 2017, as the impact of higher volumes of \$8 million, favorable AUV of \$3 million and a \$3 million decrease in manufacturing and input costs more than offset higher SG&A expenses of \$3 million. The decrease in manufacturing and input costs was primarily due to a \$6 million lower pension expense, partially offset by input cost inflation. The increase in SG&A expenses was primarily the result of the Tectum acquisition, an increase in share based compensation expense, and modest investments to enhance our total solutions selling capabilities, partially offset by \$4 million in lower pension expense.

**EMEA**

(dollar amounts in millions)

	Three Months Ended March 31,		
	2017	2016	Change is Favorable
Total segment net sales	\$ 66.6	\$ 59.6	11.7 %
Operating (loss)	\$ (3.1)	\$ (4.0)	22.5

Excluding the unfavorable impact of foreign exchange of \$3 million, net sales in the EMEA markets increased 16.1% due to higher volumes of \$9 million and favorable AUV of \$1 million.

Operating (loss) decreased as higher volumes of \$3 million and favorable AUV of \$2 million more than offset higher manufacturing and input costs of \$3 million and higher SG&A expenses of \$1 million.

**Pacific Rim**

(dollar amounts in millions)

	Three Months Ended March 31,		
	2017	2016	Change is Favorable
Total segment net sales	\$ 29.0	\$ 27.7	4.7 %
Operating (loss)	\$ (1.1)	\$ (1.3)	15.4

Net sales in the Pacific Rim increased 4.7% due to higher volumes of \$1 million. Net sales in India and Australia improved, partially offset by lower net sales in China.

Operating (loss) was essentially flat compared to the prior year.

**Unallocated Corporate**

Unallocated corporate expenses were \$29.2 million for the first quarter of 2016 due to \$27 million of charges incurred in connection with our separation of AFI.

**FINANCIAL CONDITION AND LIQUIDITY**

**Cash Flow**

Operating activities in the first three months of 2017 provided \$10.6 million of cash, compared to \$65.0 million used in the first three months of 2016. The increase resulted primarily from higher cash earnings and changes in working capital, specifically accounts payable and accrued expenses related to the separation of AFI.

Net cash used for investing activities was \$ 37.5 million for the first three months of 2017, compared to \$ 10.3 million used for the first three months of 2016. The decrease resulted primarily from the Tectum acquisition.

Net cash used for financing activities was \$36.1 million for the first three months of 2017, compared to \$20.1 million used during the first three months of 2016. The unfavorable cash use resulted primarily from the repurchase of outstanding common stock and borrowings against our credit facility.

Liquidity

Our liquidity needs for operations vary throughout the year. We retain lines of credit to facilitate our seasonal cash flow needs, since cash flow is generally lower during the first and fourth quarters of our fiscal year. We have a \$1,050.0 million credit facility which is comprised of a \$200.0 million revolving credit facility (with a \$150.0 million sublimit for letters of credit), a \$600.0 million Term Loan A and a \$250.0 million Term Loan B. We also have a \$25.0 million letter of credit facility with the Bank of Nova Scotia, also known as our bi-lateral facility. As of March 31, 2017, we had \$15.0 million borrowings outstanding on the revolving credit facility. This \$1,050.0 million senior credit facility is secured by U.S. personal property, the capital stock of material U.S. subsidiaries and a pledge of 65% of the stock of our material first tier foreign subsidiaries.

Under our senior credit facility we are subject to year-end leverage tests that may trigger mandatory prepayments. If our ratio of consolidated funded indebtedness, minus AWI and domestic subsidiary unrestricted cash and cash equivalents up to \$100 million, to consolidated earnings before interest, taxes, depreciation and amortization ("EBITDA") ("Consolidated Net Leverage Ratio") is greater than 3.5 to 1.0, the prepayment amount would be 50% of fiscal year Consolidated Excess Cash Flow. These annual payments would be made in the first quarter of the following year. No payment was required during the first quarter of 2017 under the senior credit facility.

The refinanced senior credit facilities include two financial covenants that require the ratio of consolidated EBITDA to consolidated cash interest expense minus cash consolidated interest income to be greater than or equal to 3.0 to 1.0 and requires the Consolidated Net Leverage Ratio to be less than or equal to 3.75 to 1.0 as of April 1st each year. As of March 31, 2017, we were in compliance with all covenants of the senior credit facility.

In February 2017, we repriced the interest rate on our Term Loan B borrowing, resulting in a lower LIBOR spread (2.75% vs. 3.25%). The maturity date and all other terms and conditions remained unchanged. In connection with the refinancing, we paid \$0.6 million of bank, legal and other fees, the majority of which were capitalized.

The following table summarizes our interest rate swaps as of March 31, 2017 (dollar amounts in millions):

Trade Date	Notional Amount	Coverage Period	Risk Coverage
November 13, 2016	\$ 250.0	November 2016 to March 2018	Term Loan A
November 13, 2016	\$ 200.0	November 2016 to March 2021	Term Loan A
April 1, 2016	\$ 100.0	April 2016 to March 2023	Term Loan B

In connection with our credit facility refinancing, \$450.0 million of notional amount Term Loan B swaps with a trade date of March 27, 2012 were settled and \$10.7 million of losses recorded as a component of accumulated other comprehensive income were reclassified to interest expense during the first quarter of 2016, with the cash payment for the settlement of this swap occurring during the second quarter of 2016.

Under the terms of the Term Loan A swaps with a trade dates of November 13, 2016, we receive 1-month LIBOR and pay a fixed rate over the hedged period. Under the terms of our Term Loan B swap with a trade date of April 1, 2016, we receive the greater of 3-month LIBOR or a 0.75% LIBOR Floor and pay a fixed rate over the hedged period.

These swaps are designated as cash flow hedges against changes in LIBOR for a portion of our variable rate debt. The unpaid balances of the Term Loan A, the revolving credit facility and the Term Loan B of the credit facility may be prepaid without penalty at the maturity of their respective interest reset periods. Any amounts prepaid on the Term Loan A or Term Loan B may not be re-borrowed.

Our foreign subsidiaries had available lines of credit totaling \$4.3 million as of March 31, 2017. These lines of credit are uncommitted, and poor operating results or credit concerns at the related foreign subsidiaries could result in the lines being withdrawn

by the lenders. We have historically been able to maintain and, as needed, replace credit facilities to support our non-U.S. operations. As of March 31, 2017, we had no borrowings under these lines of credit.

As of March 31, 2017, we had \$81.0 million of cash and cash equivalents, \$68.8 million in various foreign jurisdictions and \$12.2 million in the U.S.

In March 2016, we amended and decreased our \$100.0 million Accounts Receivable Securitization Facility with the Bank of Nova Scotia to \$40.0 million to reflect a lower anticipated receivables balance in connection with the separation of AFI, and we extended the maturity date to March 2019. As of March 31, 2017, there were no outstanding borrowings on the accounts receivable securitization facility.

We utilize lines of credit and other commercial commitments in order to ensure that adequate funds are available to meet operating requirements. Letters of credit are currently arranged through our revolving credit facility, our bi-lateral facility and our securitization facility. In addition, our foreign subsidiaries' available lines of credit are available for letters of credit and guarantees. Letters of credit are issued to third party suppliers, insurance and financial institutions and typically can only be drawn upon in the event of AWI's failure to pay its obligations to the beneficiary. The following table presents details related to our letters of credit (dollar amounts in millions):

Financing Arrangements	As of March 31, 2017		
	Limit	Used	Available
Revolving credit facility	\$ 150.0	\$ -	\$ 150.0
Bi-lateral facility	25.0	19.2	5.8
Accounts receivable securitization facility	33.2	36.2	(3.0)
Foreign lines of credit	0.2	-	0.2
<b>Total</b>	<b>\$ 208.4</b>	<b>\$ 55.4</b>	<b>\$ 153.0</b>

As of March 31, 2017, \$3.0 million of letters of credits issued under our accounts receivable securitization facility in excess of our maximum limit were classified as restricted cash and reported as a component of Cash and cash equivalents on our Condensed Consolidated Balance Sheets. This restriction will lapse upon replacement of collateral with accounts receivables and/or upon a change in the letter of credit limit as a result of higher securitized accounts receivable balances.

We believe that cash on hand and cash generated from operations, together with lines of credit, availability under our securitization facility and the remaining availability under our revolving credit facility, will be adequate to address our foreseeable liquidity needs based on current expectations of our business operations, capital expenditures and scheduled payments of debt obligations.

**CONTRACTUAL OBLIGATIONS**

Information related to our contractual obligations at December 31, 2016 can be found in our 2016 Annual Report, Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

### **ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

For information regarding our exposure to certain market risks, see Item 7A, “Quantitative and Qualitative Disclosures About Market Risk,” in our 2016 Annual Report on Form 10-K. There have been no material changes in our use of financial instruments to hedge against market risks or market risk exposures since December 31, 2016.

### **ITEM 4. CONTROLS AND PROCEDURES**

- (a) Evaluation of Disclosure Controls and Procedures. The Securities and Exchange Commission defines the term “disclosure controls and procedures” to mean a company’s controls and other procedures that are designed to ensure that information required to be disclosed in the reports that it files or submits under the Securities Exchange Act of 1934, as amended (the “Act”), is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms. Based on the evaluation of the effectiveness of our disclosure controls and procedures by our management, with the participation of our principal executive officer and our chief financial officer, as of March 31, 2017, our principal executive officer and our chief financial officer have concluded that our disclosure controls and procedures were effective to ensure that information required to be disclosed in the reports that we file or submit under the Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms.
- (b) Changes in Internal Control Over Financial Reporting. There have been no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Act) during the fiscal quarter ended March 31, 2017 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

## PART II – OTHER INFORMATION

### ITEM 1. LEGAL PROCEEDINGS

See Note 18 to the Condensed Consolidated Financial Statements, which is incorporated herein by reference.

### ITEM 1A. RISK FACTORS

There have been no other material changes to the risk factors disclosed in our 2016 Annual Report on Form 10-K.

### ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

#### (c) Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased <sup>1</sup>	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Approximate Value of Shares that may yet be Purchased under the Plans or Programs
January 1 – 31, 2017	335,934	\$ 39.71	322,022	\$ 93,359,374
February 1 – 28, 2017	395,713	\$ 39.54	375,500	\$ 78,521,911
March 1 – 31, 2017	494,625	\$ 45.27	492,499	\$ 56,215,828
Total	<u>1,226,272</u>		<u>1,190,021</u>	

<sup>1</sup> Includes shares reacquired through the withholding of shares to pay employee tax obligations upon the exercise of options or vesting of restricted shares previously granted under our long term incentive plans.

On July 29, 2016, we announced that our Board of Directors had approved a share repurchase program pursuant to which we are authorized to repurchase up to \$150.0 million of our outstanding shares of common stock through July 31, 2018 (the “Program”). Repurchases under the Program may be made through open market, block and privately-negotiated transactions, including Rule 10b5-1 plans, at such times and in such amounts as management deems appropriate, subject to market and business conditions, regulatory requirements and other factors. The Program does not obligate us to repurchase any particular amount of common stock and may be suspended or discontinued at any time without notice. During the first quarter of 2017, we repurchased 1.2 million shares under the Program for a total cost of \$50.0 million, or an average price of \$41.90 per share.

### ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

### ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable.

### ITEM 5. OTHER INFORMATION

#### 5.03 Amendments to Articles of Incorporation or Bylaw; Change in Fiscal Year

On April 26, 2017, the Board, in accordance with Section 1914 of the Pennsylvania Business Corporation Law of 1988 and Article SEVENTH of the Company’s Articles of Incorporation, approved and adopted an amendment to the Company’s Articles of Incorporation to remove certain expired or inapplicable provisions, including certain provisions relating to legacy rights of the Armstrong World Industries, Inc. Asbestos Personal Injury Settlement Trust. The above summary of the amendment is qualified in its entirety by the Amended and Restated Articles of Incorporation filed with the Pennsylvania Department of State that are included as Exhibit 3.1 to this Quarterly Report on Form 10-Q and are incorporated by reference herein.

## **ITEM 6. EXHIBITS**

The following exhibits are filed as part of this Quarterly Report on Form 10-Q:

<u>Exhibit No.</u>	<u>Description</u>
3.1	Amended and Restated Articles of Incorporation of Armstrong World Industries, Inc. dated April 26, 2017. †
10.1	Seventh Amendment to Receivables Purchase Agreement, dated as of March 24, 2017, by and among Armstrong Receivables Company, LLC, Armstrong World Industries, Inc., The Bank of Nova Scotia, and Liberty Street Funding LLC. †
10.2	Form of 2017 Long-Term Performance-Based Restricted Stock Unit Grant (Performance Goals Based on Absolute TSR) for Senior Executives under the 2016 Long-Term Incentive Plan.* †
10.3	Form of 2017 Long-Term Performance-Based Restricted Stock Unit Grant (Performance Goals Based on Cumulative Free Cash Flow) for Senior Executives under the 2016 Long-Term Incentive Plan.* †
10.4	Form of 2017 Long-Term Performance-Based Restricted Stock Unit Grant (Performance Goals Based on Absolute TSR) under the 2016 Long-Term Incentive Plan.* †
10.5	Form of 2017 Long-Term Performance-Based Restricted Stock Unit Grant (Performance Goals Based on Cumulative Free Cash Flow) under the 2016 Long-Term Incentive Plan.* †
31.1	Certification of Chief Executive Officer required by Rule 13a-15(e) or 15d-15(e) of the Securities Exchange Act. †
31.2	Certification of Chief Financial Officer required by Rule 13a-15(e) or 15d-15(e) of the Securities Exchange Act. †
32.1	Certification of Chief Executive Officer required by Rule 13a and 18 U.S.C. Section 1350. †
32.2	Certification of Chief Financial Officer required by Rule 13a and 18 U.S.C. Section 1350. †
101.INS	XBRL Instance Document. †
101.SCH	XBRL Taxonomy Extension Schema. †
101.CAL	XBRL Taxonomy Extension Calculation Linkbase. †
101.DEF	XBRL Taxonomy Extension Definition Linkbase. †
101.LAB	XBRL Taxonomy Extension Label Linkbase. †
101.PRE	XBRL Taxonomy Extension Presentation Linkbase. †

† Filed herewith.

\* Management Contract or Compensatory Plan.

**SIGNATURES**

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

Armstrong World Industries, Inc.

By: /s/ Brian L. MacNeal  
Brian L. MacNeal, Senior Vice President and  
Chief Financial Officer (Principal Financial Officer)

By: /s/ Stephen F. McNamara  
Stephen F. McNamara, Vice President and  
Controller (Principal Accounting Officer)

Date: May 1, 2017

**AMENDED AND RESTATED ARTICLES OF INCORPORATION**  
**OF**  
**ARMSTRONG WORLD INDUSTRIES, INC.**  
**(the "Corporation")**

**FIRST: Name.** The name of the Corporation is Armstrong World Industries, Inc.

**SECOND: Registered Office.** The location and post office address of its registered office in this Commonwealth is 2500 Columbia Avenue, Lancaster, Lancaster County, Pennsylvania.

**THIRD: Purposes.** The purpose or purposes for which the Corporation is incorporated under the Business Corporation Law of 1998 of the Commonwealth of Pennsylvania (the "PBCL") are to engage in, and do any lawful act concerning, any or all lawful business for which corporations may be incorporated under the PBCL, including, but not limited to, manufacturing, purchasing and selling a variety of interior furnishings, interior finish materials and related services for residential, commercial and institutional interiors, including resilient floors and carpeting, ceiling materials and ceiling systems, furniture and related accessory items; as well as insulation materials and industrial specialties; engaging in research and development, furnishing services, and acquiring, owning, using, and disposing of real property of any nature whatsoever.

**FOURTH: Duration.** The term of its existence is perpetual.

**FIFTH: Authorized Shares.**

(A) The authorized shares of the Corporation shall be of two classes: 15,000,000 Preferred Shares without par value, which may be issued in series as hereinafter provided, and 200,000,000 Common Shares, par value \$0.01 per share.

(B) A description of each class of shares and a statement of the designations, voting rights, preferences, limitations and special rights granted to or imposed upon the shares of each class and of the authority vested in the Board of Directors of the Corporation to establish series of Preferred Shares and to set, and determine variations in, the designations, voting rights, preferences, limitations and special rights of the series of Preferred Shares are as follows:

- (i) The holders of Common Shares shall be entitled to receive dividends, when and as declared by the Board of Directors, out of assets legally available therefor.
  - (ii) The holders of Common Shares shall have one vote per share.
  - (iii) The Corporation may issue shares, option rights or securities having conversion or option rights, without first offering them to holders of Preferred Shares or Common Shares.
  - (iv) The Board of Directors may in its discretion, at any time or from time to time, issue or cause to be issued all or any part of the authorized and unissued Common
-

Shares for consideration of such character and value as the Board shall from time to time set or determine.

- (v) (a) The Board of Directors is hereby expressly authorized, at any time or from time to time, by resolution or resolutions adopted by the Board to divide any or all of the Preferred Shares into one or more series, and, before issuance of any of the shares thereof, to set and determine the number of shares and the designation of such series, so as to distinguish it from the shares of all other series and classes, and to set and determine the voting rights, preferences, limitations and special rights of the series of Preferred Shares, or of all series of Preferred Shares, all by amendment of these Articles without approval of the shareholders and otherwise in the manner, and to the fullest extent now or hereafter permitted, by the PBCL, including, but not limited to, providing in respect of a series of Preferred Shares, and providing for variations between different series of Preferred Shares, in the following respects:
- (1) the distinctive designation of such series and the number of shares that shall constitute such series, which number may be increased or decreased (but not below the number of shares thereof then outstanding) from time to time by the Board of Directors;
  - (2) the annual or other dividend rate for such series, and the date or dates from which dividends shall commence to accrue and whether or not dividends shall accumulate;
  - (3) the price or prices at which, and the terms and conditions on which, the shares of such series may be made redeemable;
  - (4) the redemption or purchase, and sinking fund provisions, if any, for the redemption or purchase, of shares of such series;
  - (5) the preferential amount or amounts payable upon shares of such series in the event of liquidation, dissolution, or winding up of the Corporation;
  - (6) the voting powers and rights, if any, of shares of such series;
  - (7) the terms and conditions, if any, upon which shares of such series may be converted or exchanged and the class or classes or series of shares of the Corporation or other securities into which such shares may be converted or exchanged;
  - (8) the relative seniority, priority or junior rank of such series as to dividends or assets with respect to any other classes or series of stock then or thereafter to be issued; and
  - (9) such other terms, qualifications, privileges, limitations, options, restrictions, and special or relative rights and preferences, if any, of shares of such series as the Board of Directors may, at the time of such resolution

or resolutions, lawfully set or determine under the laws of the Commonwealth of Pennsylvania.

(b) Unless otherwise provided by law, the articles of incorporation or bylaws of the Corporation or in a resolution or resolutions establishing any particular series of Preferred Shares adopted pursuant to this Article Fifth, the aggregate number of authorized Preferred Shares may be increased by an amendment of the articles of incorporation of the Corporation approved solely by the affirmative vote of the holders of a majority of the outstanding Common Shares.

(c) All shares within each series of Preferred Shares shall be alike in every particular, except with respect to the dates from which dividends shall commence to accrue or with respect to other rights, powers or privileges which may vary among the holders of such shares based on the number of shares held or the duration of their shareholdings.

(d) The Board of Directors may in its discretion, at any time or from time to time, issue or cause to be issued all or any part of the authorized and unissued Preferred Shares for consideration of such character and value as the Board of Directors shall from time to time set or determine.

(C) Any or all classes and series of shares of the Corporation, or any part thereof, may be represented by uncertificated shares to the extent determined by the Board of Directors, except that shares represented by a certificate that is issued and outstanding shall continue to be represented thereby until the certificate is surrendered to the Corporation. Within a reasonable time after the issuance or transfer of uncertificated shares, the Corporation shall send to the registered owner thereof a written notice containing the information required by law to be set forth or stated on share certificates. The rights and obligations of the holders of shares represented by certificates and the rights and obligations of the holders of uncertificated shares of the same class and series shall be identical.

**SIXTH: Management of the Corporation's Business and Affairs.**

(A) The Board of Directors shall have such number of members as shall be determined by or pursuant to the bylaws of the Corporation, provided that no reduction in the number of members shall end the term of office of any director earlier than such term of office would otherwise end. The term of office of all directors shall extend until the next annual meeting of shareholders and the election at such annual meeting and qualification of the director's successor, or until his or her earlier disqualification, resignation, removal, death or incapacity, and the term of office of any director elected by the shareholders or the Board of Directors, as permitted by law, to fill any vacancy on the Board of Directors shall extend until the next annual meeting of shareholders and until the election at such annual meeting and qualification of the director's successor, or until his or her earlier disqualification, resignation, removal, death or incapacity.

(B) In addition to the right of the Board of Directors under law to remove a director for cause, and subject to the voting rights of the holders of any series of Preferred Shares, directors may be removed from office before the expiration of their terms of office at any time, with or without cause, by the affirmative vote of the holders of a majority of the Common Shares

present (in person or by proxy) at a meeting of shareholders at which a quorum is present or, as permitted by law, by the written consent in lieu of a meeting of the holders of a majority of the Common Shares. For the avoidance of doubt, from said date forward, directors may be removed from office without assigning any cause regarding such removal. For purposes of this Article Sixth (B), "Cause" for the removal of a director shall mean conviction of a felony, any act of dishonesty in respect of the Corporation or a breach of fiduciary duty to the Corporation.

(C) With respect to the election of directors, each shareholder shall be entitled to cast for any candidate for election as a director only one vote per share and shareholders shall not be entitled to cumulate their votes and cast them in favor of one candidate or distribute them among any two or more candidates.

(D) A director of the Corporation shall not be personally liable, as such, for monetary damage for any action taken by him or her unless he or she has breached or failed to perform the duties of his or her office under subchapter B of chapter 17 of the PBCL and the breach or failure to perform constitutes self-dealing, willful misconduct or recklessness, except as otherwise specifically provided by the PBCL. No amendment or repeal of this Article Sixth (D) shall apply to or have any effect on the liability or alleged liability of any person who is or was a director of the Corporation for or with respect to any act or omission occurring prior to the effective date of such amendment or repeal. If Pennsylvania law is amended to permit a Pennsylvania corporation to provide greater protection to persons who serve or have served as directors of the corporation from personal liability with respect to their service to the corporation as directors than provided by the terms of this Article Sixth (D), then such protection shall also apply to the persons who serve or have served as directors of the Corporation and this Article Sixth (D) shall be construed to provide such greater protection. To the fullest extent permitted by law (including, without limitation, as permitted by section 1746 of the PBCL) from time to time in effect, the Corporation shall indemnify persons who, after the Effective Date, serve as its directors and officers and shall advance to them expenses incurred in defending or responding to claims, actions, investigations, inquiries and other proceedings and may, by provisions in its bylaws, by contract and by any other means permitted by law, establish reasonable procedures for the making of such indemnification and advancement of expenses and may further obligate itself to provide indemnification or to advance expenses to such persons and may set apart funds to provide for the payment thereof. To the fullest extent permitted by law (including, without limitation, as permitted by section 1746 of the PBCL) from time to time in effect, the Corporation may indemnify persons who before the Effective Date served as directors or officers of the Corporation and persons who, before or after the Effective Date, serve as its employees and agents and may advance to them expenses incurred in defending or responding to claims, actions, investigations, inquiries and other proceedings and may, by provisions in its bylaws, by contract and by any other means permitted by law, obligate itself to provide indemnification or to advance expenses to such persons and may set apart funds to provide for the payment thereof. Notwithstanding the foregoing provisions of this Article Sixth (D), if Pennsylvania law shall be amended so as to limit or reduce the indemnification which a Pennsylvania corporation may provide to its directors or officers from that in effect on the Effective Date, then, to the fullest extent permitted by law, such limitation or reduction shall not apply to or have any effect on the right to indemnify or advancement of expenses provided by this Article Sixth (D) to a person who served as a director or officer of the Corporation with respect to any act or omission occurring prior to the effective date of such amendment.

(E) Commencing on October 2, 2006 , none of the provisions of Subchapters 25D, 25E, 25F, 25G and 25H of the PBCL (as in effect on such date) shall apply to the Corporation, except as may be required by law.

(F) Special meetings of shareholders may be called by the Board of Directors, by shareholders entitled to cast at least 20% of the votes that all shareholders generally are entitled to cast in the election of directors, by such holders of Preferred Shares as may be permitted to call a meeting of shareholders by provision of an amendment to the articles of incorporation of the Corporation adopted by the Board of Directors as provided by Article Fifth (B) hereof and by such officers of the Corporation or other persons as may be provided in the bylaws of the Corporation.

(G) To the fullest extent and in the manner permitted by law, any action required or permitted to be taken at a meeting of shareholders or a class or series of shareholders may be taken without a meeting of the shareholders or of such class or series of shareholders upon the consent in writing signed by such shareholders who would have been entitled to vote the minimum number of votes that would be necessary to authorize the action at a meeting at which all the shareholders entitled to vote thereon were present and voting.

**SEVENTH: Amendment of Articles of Incorporation.** The articles of incorporation of the Corporation may be amended, modified or repealed and new provisions adopted as permitted by law, except that the provisions of Articles Sixth (A), (B), (F) and (G) and this Article Seventh of these Amended and Restated Articles of Incorporation may be amended, modified or repealed, and any inconsistent provision may be adopted, only with the affirmative vote or written consent, as permitted by law, of the holders of 80% of the Common Shares.

**EIGHTH: Effective Time; Bylaws.**

(A) These Amended and Restated Articles of Incorporation shall become effective immediately upon filing with the Office of the Secretary of State of the Commonwealth of Pennsylvania on April 26, 2017.

(B) The bylaws of the Corporation may be amended, to the extent provided by such bylaws, by the shareholders or (to the fullest extent permitted by law, including, without limitation, with respect to the matters referred to in section 1504(b) of the PBCL) by the Board of Directors (subject, however, to the power of the shareholders to adopt, amend and repeal bylaws).

**SEVENTH AMENDMENT TO  
RECEIVABLES PURCHASE AGREEMENT**

This SEVENTH AMENDMENT TO RECEIVABLES PURCHASE AGREEMENT (this “Amendment”), dated as of March 24, 2017, is entered into by and among ARMSTRONG RECEIVABLES COMPANY LLC, a Delaware limited liability company, as Seller (the “Seller”), ARMSTRONG WORLD INDUSTRIES, INC., a Pennsylvania corporation, individually and as Servicer (in such capacity, the “Servicer”), THE BANK OF NOVA SCOTIA, as Administrative Agent, Related Committed Purchaser and LC Bank (“Scotiabank”, or, as applicable, the “Administrative Agent”, the “Related Committed Purchaser” or the “LC Bank”) and LIBERTY STREET FUNDING LLC, a Delaware limited liability company, as Conduit Purchaser (the “Conduit Purchaser”).

Unless otherwise provided, capitalized terms used herein without definition shall have the meanings assigned to them in, or by reference in, the Receivables Purchase Agreement identified below.

**BACKGROUND RECITALS**

1. The Seller, the Servicer, the Conduit Purchaser and Scotiabank are party to that certain Receivables Purchase Agreement dated as of December 10, 2010, as amended by the Omnibus Amendment Agreement dated as of August 1, 2011, the Second Omnibus Amendment to Receivables Purchase Agreement and Purchase and Sale Agreement dated as of December 21, 2011, the Third Omnibus Amendment Agreement dated as of March 28, 2013, the Fourth Amendment to the Receivables Purchase Agreement dated as of December 18, 2014, the Fourth Omnibus Amendment Agreement dated as of March 30, 2016, and the Sixth Amendment to Receivables Purchase Agreement dated as of December 21, 2016 (as so amended, the “Receivables Purchase Agreement”).

2. Pursuant to Section 6.1 of the Receivables Purchase Agreement, the parties hereto agree to amend the Receivables Purchase Agreement as described herein.

NOW, THEREFORE, in consideration of the premises set forth above, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

SECTION 1. Amendments to the Receivables Purchase Agreement. As of the date hereof, subject to the satisfaction of the condition precedent set forth in Section 3 hereof:

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(a) The definition of “ Accrual Reserve Amount ”, as set forth in Exhibit I to the Receivables Purchase Agreement, is hereby amended and restated in order to incorporate the black-lined changes set forth below:

“ Accrual Reserve Amount ” means, on any date, the *sum* of (a) the cash discount accrual balance, (b) the volume rebate accrual balance, (c) the fileback accrual balance, (d) the mark down accrual balance and (e) the bad debt reserve accrual balance, each as reported in the most recent Servicer Report as of such date, ~~provided, that such sum shall be increased by \$6,000,000 at all times during each calendar month of February and for purposes of each Settlement Date occurring in, and the Servicer Report delivered in, the following March.~~

(b) The definition of “ Dilution Ratio ”, as set forth in Exhibit I to the Receivables Purchase Agreement, is hereby amended and restated in order to incorporate the black-lined changes set forth below:

“ Dilution Ratio ” means the ratio (expressed as a percentage and rounded to the nearest 1/100th of 1%, with 5/1000th of 1% rounded upward) computed as of the last day of each calendar month by dividing: (a) ~~subject to the proviso below,~~ the aggregate amount of Dilutions that occurred during such calendar month by (b) the aggregate gross sales of the Originators during the calendar month that is one month prior to such calendar month, ~~provided~~, however, that the crediting of accrual balances included in the definition of “Accrual Reserve Amount” to the Outstanding Balances of related Pool Receivables from time to time in accordance with the Credit and Collection Policy and the terms of the related Contracts shall not constitute “Dilution” for purposes of this definition. solely for purposes calculating the Dilution Ratio with respect to that calendar month of February of each year (and the related Servicer Report delivered in March of each year), the amount determined pursuant to clause (a) above shall be the greater of (i) the arithmetic average of the aggregate amount of Dilutions that occurred during each of the eleven (11) consecutive calendar months immediately preceding such February calendar month, and (ii) the excess (if any) of (x) the aggregate amount of Dilutions that occurred during such February calendar month, over (y) \$6,000,000.

SECTION 2. Representations and Warranties. Each of the Seller and the Servicer hereby represents and warrants to each of the other parties hereto that, as to itself:

(a) Representations and Warranties. Each of the representations and warranties made by it under the Receivables Purchase Agreement and each of the other Transaction Documents to which it is party are true and correct in all material respects as of the date hereof (except to the extent that such representations and warranties (A) specifically refer to an earlier date, in which case they shall be true and correct in all material respects as of such earlier date and/or (B) are qualified by materiality, in which case they shall be true and correct in all respects).

(b) Enforceability. The execution and delivery by such Person of this Amendment, and the performance of its obligations under this Amendment and the Receivables Purchase Agreement, as amended hereby, are within its organizational powers and have been duly authorized by all necessary organizational action on its part. This Amendment and the Receivables Purchase Agreement, as amended hereby, are such Person's legal, valid and binding obligations, enforceable against it in accordance with the terms hereof and thereof, except as such enforcement may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws relating to or limiting creditors' rights generally and by general principles of equity (regardless of whether enforcement is sought in a proceeding in equity or at law).

(c) No Default. On the date hereof, both before and immediately after giving effect to this Amendment, no Termination Event or Incipient Termination Event has occurred and is continuing.

(d) Further Assurances. Such Person agrees to provide (or to cause to be provided) to the Administrative Agent a copy of all agreements, documents, certificates and instruments, if any, relating to the subject matter of this Amendment, as the Administrative Agent may reasonably request.

SECTION 3. Condition Precedent. This Amendment shall become effective, as of the date first above written, upon receipt by the Administrative Agent of duly executed counterparts of this Amendment from each of the parties hereto.

SECTION 4. Reference to and Effect on the Receivables Purchase Agreement.

(a) Upon the effectiveness of this Amendment, (i) each reference in the Receivables Purchase Agreement to "this Agreement", "hereunder", "hereof", "herein" or words of like import shall mean and be a reference to the Receivables Purchase Agreement as amended or otherwise modified hereby, and (ii) each reference to the Receivables Purchase Agreement in any other Transaction Document or any other document, instrument or agreement executed and/or delivered in connection therewith, shall mean and be a reference to the Receivables Purchase Agreement as amended or otherwise modified hereby.

(b) Except as specifically amended, terminated or otherwise modified above, the terms and conditions of the Receivables Purchase Agreement, of all other Transaction Documents and any other documents, instruments and agreements executed and/or delivered in connection therewith, shall remain in full force and effect and are hereby ratified and confirmed.

(c) The execution, delivery and effectiveness of this Amendment shall not operate as a waiver of any right, power or remedy of any party under the Receivables Purchase Agreement or any other Transaction Document or any other document, instrument or agreement executed in connection therewith, nor constitute a waiver of any provision contained therein.

SECTION 5. Execution in Counterparts. This Amendment may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed and delivered shall be deemed to be an original and all of which when taken together shall constitute but one and the same instrument. Delivery of an executed counterpart of a signature page to this Amendment by facsimile or other electronic means shall be effective as delivery of a manually executed counterpart of this Amendment.

SECTION 6. Transaction Document. This Amendment shall constitute a Transaction Document.

SECTION 7. Governing Law. THIS AMENDMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER SHALL BE GOVERNED BY AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH THE INTERNAL LAWS OF THE STATE OF NEW YORK (INCLUDING WITHOUT LIMITATION SECTION 5-1401 AND SECTION 5-1402 OF THE GENERAL OBLIGATIONS LAW OF THE STATE OF NEW YORK).

SECTION 8. Headings. Section headings in this Amendment are included herein for convenience of reference only and shall not constitute a part of this Amendment for any other purpose.

SECTION 9. Fees and Expenses. Seller hereby confirms its agreement to pay on demand all reasonable, properly documented costs and expenses of the Administrative Agent in connection with the preparation, execution and delivery of this Amendment and any of the other instruments, documents and agreements to be executed and/or delivered in connection herewith, including, without limitation, the reasonable fees and expenses of outside legal counsel to the Administrative Agent with respect thereto.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed by their respective officers as of the date first above written.

**ARMSTRONG RECEIVABLES COMPANY LLC**

By: /s/ Bryan Y.M. Tham  
Name: Bryan Y.M. Tham  
Title: Secretary

**ARMSTRONG WORLD INDUSTRIES, INC.**

By: /s/ Lingling Stewart  
Name: Lingling Stewart  
Title: Director, Treasury

**THE BANK OF NOVA SCOTIA** , as Administrative Agent, Related  
Committed Purchaser and LC Bank

By: /s/ Jill A. Russo

Name: Jill A. Russo

Title: Vice President

**LIBERTY STREET FUNDING LLC** , as Conduit Purchaser

By: /s/ Jill A. Russo

Name: Jill A. Russo

Title: Vice President



Employment Events

The following chart is a summary of the provisions which apply to this award in connection with termination of employment. The following is only a summary, and in the event of termination of employment, the award will be governed by the Terms and Conditions.

Event	Provisions
▪ Voluntary Resignation ▪ Termination for Cause	All Performance Units and accrued dividend equivalents are forfeited.
▪ “55 / 5” Rule Termination (55 years of age or older with 5 years of service) ▪ Involuntary Termination Without Cause	If termination occurs after 10 months following the Date of Grant, then to the extent that the Performance Goal is achieved for the Performance Period, Performance Units and accrued dividend equivalents are earned and vested pro-rata, based on the period of employment; otherwise the Performance Units and accrued dividend equivalents are forfeited.
▪ Death ▪ Long-Term Disability	To the extent that the Performance Goal is achieved for the Performance Period, Performance Units and accrued dividend equivalents are earned and vested pro-rata, based on the period of employment.
After a Change in Control: ▪ Involuntary Termination Without Cause ▪ Death ▪ Long-Term Disability	Upon a Change in Control Performance Units and accrued dividend equivalents are earned as described in <u>Exhibit A</u> and will vest as described in <u>Exhibit B</u> .

In the event of any inconsistency between the foregoing summary and the Terms and Conditions or the 2016 Long-Term Incentive Plan, the Terms and Conditions or the 2016 Long-Term Incentive Plan, as applicable, will govern. Capitalized terms used but not defined in this grant letter will have the meanings set forth in the 2016 Long-Term Incentive Plan or the Terms and Conditions, as applicable. **As described in the Terms and Conditions, if and to the extent that the terms of this award agreement conflict with the terms of a change in control agreement or employment agreement between you and the Company, the terms of this award agreement shall supersede the terms of the change in control agreement or employment agreement.**

Please contact Kelly Strunk (717-396-3477) if you have questions.

Sincerely,



Victor D. Grizzle  
Chief Executive Officer

*The information contained in this letter is confidential and any discussion, distribution or use of this information is prohibited.*

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**Exhibit A**  
**Performance Goal**

**Absolute Total Shareholder Return:** Absolute Total Shareholder Return (“Absolute TSR”) tracks the appreciation in share price of the Company Stock, including dividends, and is annualized for the Performance Period, as determined by the Committee. Specifically, Absolute TSR is calculated based on the following formula:

$$\left( \frac{\text{Ending Share Price} + \text{Aggregate Dividends}}{\text{Starting Share Price}} \right)^{(1/3)} - 1$$

For purposes of the Absolute TSR calculation:

- “Ending Share Price” means the volume weighted average closing price of the Company Stock for the highest consecutive 30 trading days in the 60 trading day period beginning with and immediately following January 2, 2020.
- “Aggregate Dividends” means a cumulative number of shares of Company Stock assuming same day reinvestment in Company Stock on the ex-dividend date of the dividends paid on a share of Company Stock during the Performance Period.
- “Starting Share Price” means the volume weighted average closing price of the Company Stock for the highest consecutive 30 trading days in the 60 trading day period beginning with and immediately following January 3, 2017.

Absolute TSR		
Performance Level		Payout
Below 9%		0%
9%		25%
10%		50%
12%		100%
20%		200%
30%		300%

Threshold level performance must be achieved in order to earn any Performance Units for the Performance Goal. If actual performance is between performance levels, the number of Performance Units earned with respect to the Performance Goal will be interpolated on a straight line basis for pro-rata achievement for performance at or between performance levels. If the Performance Goal would produce fractional units, the number of Performance Units earned shall be rounded up to the nearest whole unit, but not in excess of an aggregate of 300% of the Target Award.

**Change in Control:**

If a Change in Control occurs prior to the end of the Performance Period or prior to the end of the 60 trading day period following the end of the Performance Period, the number of Performance Units earned with respect to the Absolute TSR Performance Goal will be based on Absolute TSR through the date of the Change in Control, calculated by using the per-share sales price in the Change in Control as the Ending Share Price and as if the Change in Control date were the end of the Performance Period, as determined by the Committee before the Change in Control in its sole discretion.

The Committee reserves discretion to provide for accelerated vesting of the earned Performance Units pursuant to Section 14(c) of the Plan.

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**EXHIBIT B**

**ARMSTRONG WORLD INDUSTRIES, INC.  
2016 LONG-TERM INCENTIVE PLAN**

**PERFORMANCE RESTRICTED STOCK UNIT GRANT  
TERMS AND CONDITIONS**

1. Grant.

(a) Subject to the terms set forth below, Armstrong World Industries, Inc. (the “Company”) has granted to the designated employee (the “Grantee”) two target awards (the “Target Award”) of performance-based restricted stock units (the “Performance Units”) as specified in the 2017 Long-Term Performance Restricted Stock Unit Grant Letters to which these Grant Conditions relate (the “Grant Letters”). The “Date of Grant” is February 28, 2017. The Performance Units are Stock Units with respect to common stock of the Company (“Company Stock”).

(b) The Performance Units shall be earned, vested and payable if and to the extent that the Cumulative Free Cash Flow and Absolute TSR performance goals set forth in the Grant Letters (the “Performance Goals”), employment conditions and other terms of these Grant Conditions are met. The “Performance Period” for which the attainment of the Performance Goals will be measured is the period beginning January 1, 2017 and ending December 31, 2019.

(c) These Terms and Conditions (the “Grant Conditions”) are part of the Grant Letters. This grant is made under the Armstrong World Industries, Inc. 2016 Long-Term Incentive Plan (the “Plan”). Any terms not defined herein shall have the meanings set forth in the Plan.

2. Performance Goals; Vesting.

(a) The Grantee shall earn and vest in a number of Performance Units based on the attainment of the Performance Goals for the Performance Period, provided that the Grantee continues to be employed by the Company or its subsidiaries or affiliates (collectively the “Employer”) through December 31, 2019 (the “Vesting Date”). The Performance Units shall be earned based on attainment of the Performance Goals and shall vest based on the Grantee’s continued employment through the Vesting Date, or as otherwise provided below.

(b) After the end of the Performance Period, the Management Development and Compensation Committee (the “Committee”) will determine whether and to what extent the Performance Goals have been met and the amount earned with respect to the Performance Units. The Grantee can earn up to 275% of the Target Award based on attainment of the Performance Goals, as set forth in the Grant Letters. Earned and vested Performance Units shall be payable as described in Section 5.

(c) If a Change in Control occurs, the amount earned with respect to the Performance Units shall be determined as of the date of the Change in Control as described in the Grant Letters. The earned Performance Units shall continue to vest based on the Grantee’s continued employment through the Vesting Date, except as otherwise provided herein. Earned and vested Performance Units shall be payable as described in Section 5. Notwithstanding the foregoing, if the Performance Units are not assumed by, or replaced by substantially identical grants by, the successor company in the Change in Control, the earned Performance Units shall vest as of the date of the Change in Control, and such earned and vested Performance Units shall be paid as of the date of the Change in Control if the Change in Control is a 409A CIC (as defined below) and if permitted by the plan termination provisions of the regulations under section 409A of the Code. If payment at the date of the Change in Control is not permitted under section 409A, the earned and vested Performance Units shall be payable as described in Section 5.

(d) Except as described below, no Performance Units shall be earned prior to the Committee’s determination of achievement of the Performance Goals, and to the extent that the Performance Goals are not attained, the Performance Units shall be immediately forfeited and shall cease to be outstanding as of the date of the Committee’s determination.

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### 3. Termination of Employment.

(a) *General Rule* . Except as described below, if the Grantee ceases to be employed by the Employer prior to the Vesting Date, the Performance Units shall be forfeited as of the termination date and shall cease to be outstanding.

(b) *“55/5” Rule Termination* . If, after ten months following the Date of Grant but prior to the Vesting Date, the Grantee ceases to be employed by the Employer on account of a “55 / 5” Rule Termination (as defined below), the Grantee shall earn and vest in a pro-rated portion of the outstanding Performance Units based on the extent to which the Performance Goals are achieved for the Performance Period. In the event of a Change in Control, the amount achieved for the Performance Period shall be determined as of the Change in Control date as described in the Grant Letters. The pro-rated portion shall be determined by multiplying the number of Performance Units earned based on attainment of the Performance Goals by a fraction, the numerator of which is the number of months that elapsed during the period beginning on January 1, 2017 through the Grantee’s termination date, and the denominator of which is 36. A partial month after the month of grant shall count as a full month for purposes of this calculation. The pro-rated earned Performance Units shall be paid as described in Section 5.

(c) *Involuntary Termination before a Change in Control* . If, before a Change in Control and after ten months following the Date of Grant but prior to the Vesting Date, the Grantee ceases to be employed by the Employer on account of Involuntary Termination (as defined below), the Grantee shall earn and vest in a pro-rated portion of the outstanding Performance Units based on the extent to which the Performance Goals are achieved for the Performance Period. In the event of a subsequent Change in Control, the amount achieved for the Performance Period shall be determined as of the Change in Control date as described in the Grant Letters. The pro-rated portion shall be determined by multiplying the number of Performance Units earned based on attainment of the Performance Goals by a fraction, the numerator of which is the number of months that elapsed during the period beginning on January 1, 2017 through the Grantee’s termination date, and the denominator of which is 36. A partial month after the month of grant shall count as a full month for purposes of this calculation. The pro-rated earned Performance Units shall be paid as described in Section 5.

(d) *Death or Long-Term Disability Before a Change in Control* . If, before a Change in Control, the Grantee ceases to be employed by the Employer prior to the Vesting Date on account of death or Long-Term Disability (as defined below), the Grantee shall earn and vest in a pro-rated portion of the outstanding Performance Units based on the extent to which the Performance Goals are achieved for the Performance Period. In the event of a subsequent Change in Control, the amount achieved for the Performance Period shall be determined as of the Change in Control date as described in the Grant Letters. The pro-rated portion shall be determined by multiplying the number of Performance Units earned based on attainment of the Performance Goals by a fraction, the numerator of which is the number of months that elapsed during the period beginning on January 1, 2017 through the Grantee’s termination date and the denominator of which is 36. A partial month after the month of grant shall count as a full month for purposes of this calculation. The pro-rated earned Performance Units shall be paid as described in Section 5.

(e) *Involuntary Termination, Death and Disability on or after a Change in Control*. If the Grantee’s employment terminates on account of Involuntary Termination, death or Long-Term Disability on or after a Change in Control and prior to the Vesting Date, the Grantee shall vest in the Performance Units earned as of the Change in Control date as described in the Grant Letters. If the Grantee has a Change in Control Severance Agreement with the Company (“Change in Control Agreement”), on and after a Change in Control, the term “Involuntary Termination” shall have the meaning given a termination by the Company without Cause in the Change in Control Agreement, and shall include without limitation a termination for Good Reason as defined in the Change in Control Agreement. **The Grantee agrees that, subject to the immediately preceding sentence, if and to the extent that these Grant Conditions conflict with the terms of the Change in Control Agreement or any employment agreement between the Company and the Grantee, these Grant Conditions shall supersede the provisions of the Change in Control Agreement and employment agreement applicable to vesting of performance units on and after a Change in Control, notwithstanding anything in the Change in Control Agreement or employment agreement to the contrary.**

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(f) *Coordination of Provisions* . If the Grantee terminates employment in a termination that is both a “55 / 5’ Rule Termination” and an Involuntary Termination, the termination shall be treated as an Involuntary Termination for purposes of the Grant Condition and Grant Letters.

4. Definitions . For purposes of these Grant Conditions and the Grant Letters:

(a) “ 55 / 5’ Rule Termination ” shall mean the Grantee’s termination of employment other than for Cause after the Grantee has attained age 55 and has completed at least five years of service with the Employer.

(b) “ Cause ” shall mean any of the following, as determined in the sole discretion of the Employer: (i) commission of a felony or a crime involving moral turpitude; (ii) fraud, dishonesty, misrepresentation, theft or misappropriation of funds with respect to the Employer; (iii) violation of the Employer’s Code of Conduct or employment policies, as in effect from time to time; (iv) breach of any written noncompetition, confidentiality or nonsolicitation covenant of the Grantee with respect to the Employer; or (v) gross negligence or misconduct in the performance of the Grantee’s duties with the Employer.

(c) “ Involuntary Termination ” shall mean the Employer’s termination of the Grantee’s employment other than for Cause.

(d) “ Long-Term Disability ” shall mean the Grantee is receiving long-term disability benefits under the Employer’s long-term disability plan.

5. Payment .

(a) Except as provided below, after the end of the Performance Period, if the Committee certifies that the Performance Goals and other conditions to payment of the Performance Units have been met, the Company shall issue shares of Company Stock to the Grantee equal to the number of earned and vested Performance Units, subject to applicable tax withholding and subject to compliance with section 409A of the Code and as described in Section 20(h) of the Plan. Payment of earned and vested Performance Units shall be made in 2020 as soon as practicable after the Committee certifies the extent to which the Performance Goals and other conditions to payment of the Performance Units have been met, but not later than May 31, 2020, except as provided below. All unpaid Performance Units shall be forfeited in the event of termination for Cause.

(b) If the Grantee’s employment terminates for any reason other than Cause upon or within two years after a Change in Control that meets the requirements of a 409A CIC, the Grantee’s Performance Units that are unpaid earned and vested (if any) shall be paid within 60 days after the termination date, subject to compliance with section 409A of the Code, if applicable, and as described in Section 20(h) of the Plan. The Company shall issue shares of Company Stock to the Grantee equal to the number of the earned and vested Performance Units, subject to applicable tax withholding. If a Change in Control does not meet the requirements of a 409A CIC, the Grantee’s earned and vested Performance Units (if any) shall be paid on the date described in subsection (a).

(c) Any fractional shares will be rounded up to the nearest whole share, but not exceeding 275% of the Target Award.

6. Dividend Equivalents . Dividend Equivalents shall accrue with respect to Performance Units and shall be payable subject to the same Performance Goals, vesting terms and other conditions as the Performance Units to which they relate. Dividend Equivalents shall be credited on the Performance Units when dividends are declared on shares of Company Stock from the Date of Grant until the payment date for the vested Performance Units. The Company will keep records of Dividend Equivalents in a non-interest bearing bookkeeping account for the Grantee. No interest will be credited to any such account. Vested Dividend Equivalents shall be paid in cash at the same time and subject to the same terms as the underlying vested Performance Units. If and to the extent that the underlying Performance Units are forfeited, all related Dividend Equivalents shall also be forfeited.

7. Delivery of Shares . The Company’s obligation to deliver shares upon the vesting of the Performance Units shall be subject to applicable laws, rules and regulations and also to such approvals by governmental agencies as may be deemed appropriate to comply with relevant securities laws and regulations.

8. Holding Requirements . Shares of Company Stock distributed for Performance Units earned in excess of the applicable Target Award must be held by the Grantee for one year following the Vesting Date

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(the “Holding Period”) and may not be assigned, transferred, pledged or otherwise disposed of by the Grantee, other than by will or the laws of descent and distribution, during the Holding Period. However, if the Grantee’s employment with the Employer terminates for any reason, or a Change in Control occurs, the holding requirement of this Section 8 shall lapse as of the date of the Grantee’s termination of employment or the Change in Control, as applicable.

9. No Shareholder Rights. No shares of Company Stock shall be issued to the Grantee on the Date of Grant, and the Grantee shall not be, nor have any of the rights or privileges of, a shareholder of the Company with respect to any Performance Units.

10. No Right to Continued Employment. The grant of Performance Units shall not confer upon the Grantee any right to continued employment with the Employer or interfere with the right of the Employer to terminate the Grantee’s employment at any time.

11. Incorporation of Plan by Reference. The Grant Letters and these Grant Conditions are made pursuant to the terms of the Plan, the terms of which are incorporated herein by reference, and shall in all respects be interpreted in accordance therewith. The decisions of the Committee shall be conclusive upon any question arising hereunder. The Grantee’s receipt of the Performance Units constitutes the Grantee’s acknowledgment that all decisions and determinations of the Committee with respect to the Plan, the Grant Letters, these Grant Conditions, and the Performance Units shall be final and binding on the Grantee and any other person claiming an interest in the Performance Units.

12. Withholding Taxes. The Employer shall have the right to deduct from all payments made hereunder and from other compensation an amount equal to the federal (including FICA), state, local and foreign taxes required by law to be withheld with respect to the Performance Units. The Employer will withhold shares of Company Stock payable hereunder to satisfy the tax withholding obligation on amounts payable in shares, unless the Grantee provides a payment to the Employer to cover such taxes, in accordance with procedures established by the Committee. The share withholding amount shall be determined in accordance with the procedures approved by the Committee.

13. Company Policies. All amounts payable under the Grant Letters and these Grant Conditions shall be subject to any applicable clawback or recoupment policies, share trading policies and other policies that may be implemented by the Company’s Board of Directors from time to time.

14. Assignment. The Grant Letters and these Grant Conditions shall bind and inure to the benefit of the successors and assignees of the Company. The Grantee may not sell, assign, transfer, pledge or otherwise dispose of the Performance Units, except to a successor grantee in the event of the Grantee’s death.

15. Section 409A. The Grant Letters and these Grant Conditions are intended to comply with section 409A of the Code or an exemption, consistent with Section 20(h) of the Plan, including the six-month delay for specified employees in accordance with the requirements of section 409A of the Code, if applicable. In furtherance of the foregoing, if the Performance Units or related Dividend Equivalents constitute “nonqualified deferred compensation” within the meaning of section 409A of the Code, vested Performance Units and related Dividend Equivalents shall be settled on the earliest date that would be permitted under section 409A of the Code without incurring penalty or accelerated taxes thereunder.

16. Successors. The provisions of the Grant Letters and these Grant Conditions shall extend to any business that becomes a successor to the Company or its subsidiaries or affiliates on account of a merger, consolidation, sale of assets, spinoff or similar transaction with respect to any business of the Company or its subsidiaries or affiliates with which the Grantee is employed, and if this grant continues in effect after such corporate event, references to the “Company or its subsidiaries or affiliates” or the “Employer” in the Grant Letters and these Grant Conditions shall include the successor business and its affiliates, as appropriate. In that event, the Company may make such modifications to the Grant Letters and these Grant Conditions as it deems appropriate to reflect the corporate event.

17. Governing Law. The validity, construction, interpretation and effect of the Grant Letters and these Grant Conditions shall be governed by, and determined in accordance with, the applicable laws of the Commonwealth of Pennsylvania, excluding any conflicts or choice of law rule or principle.

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2017 Long-Term Performance-Based Restricted Stock Unit Grant  
Performance Goals Based on Cumulative Free Cash Flow

ARMSTRONG WORLD INDUSTRIES  
2500 Columbia Ave., P.O. Box 3001  
Lancaster, PA 17604  
717.397.0611

Company Confidential

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First Name	Middle Name	Last Name
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I am pleased to inform you that the Company’s Management Development and Compensation Committee granted you the following:

Date of Grant:	February 28, 2017
Performance Units (“ <u>Target Award</u> ”):	# of Units
Performance Period (“ <u>Performance Period</u> ”):	January 1, 2017 through December 31, 2019

This award recognizes the importance of your role in achieving the Company’s long-term strategy and is subject to the terms of the 2016 Long-Term Incentive Plan and the award agreement. The award agreement consists of this grant letter with the Performance Goals attached as Exhibit A and the Terms and Conditions attached as Exhibit B.

The Performance Units will be earned by achieving a Performance Goal based on Cumulative Free Cash Flow, subject to your continued employment through the end of the Performance Period. The Committee has established the Performance Goal set forth on Exhibit A, which allows you to earn up to 200% of the Target Award, if you remain continuously employed by the Employer through the end of the Performance Period.

To the extent the Performance Goal is achieved and you satisfy the employment requirements, a number of shares of Company Stock equal to the Performance Units that are earned and vested will be distributed to you following the conclusion of the Performance Period in accordance with the payment terms set forth in the Terms and Conditions. The Company will withhold shares to satisfy your tax obligations unless prohibited by country law or unless you provide a payment to cover the tax withholding obligation. You have no ownership or voting rights relative to the Performance Units.

If the Company makes cash dividend payments during the Performance Period, the value of the dividends on shares attributable to the Performance Units will accrue as dividend equivalents in a non-interest bearing bookkeeping account. You will receive a cash payment equal to the accrued dividend equivalents at the end of the Performance Period, adjusted for the number of Performance Units that become earned and vested.

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Employment Events

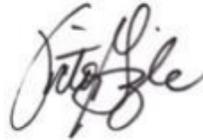
The following chart is a summary of the provisions which apply to this award in connection with termination of employment. The following is only a summary, and in the event of termination of employment, the award will be governed by the Terms and Conditions.

Event	Provisions
<ul style="list-style-type: none"><li>Voluntary Resignation</li><li>Termination for Cause</li></ul>	All Performance Units and accrued dividend equivalents are forfeited.
<ul style="list-style-type: none"><li>“55 / 5” Rule Termination (55 years of age or older with 5 years of service)</li><li>Involuntary Termination Without Cause</li></ul>	If termination occurs after 10 months following the Date of Grant, then to the extent that the Performance Goal is achieved for the Performance Period, Performance Units and accrued dividend equivalents are earned and vested pro-rata, based on the period of employment; otherwise the Performance Units and accrued dividend equivalents are forfeited.
<ul style="list-style-type: none"><li>Death</li><li>Long-Term Disability</li></ul>	To the extent that the Performance Goal is achieved for the Performance Period, Performance Units and accrued dividend equivalents are earned and vested pro-rata, based on the period of employment.
After a Change in Control: <ul style="list-style-type: none"><li>Involuntary Termination Without Cause</li><li>Death</li><li>Long-Term Disability</li></ul>	Upon a Change in Control Performance Units and accrued dividend equivalents are earned as described in <u>Exhibit A</u> and will vest as described in <u>Exhibit B</u> .

In the event of any inconsistency between the foregoing summary and the Terms and Conditions or the 2016 Long-Term Incentive Plan, the Terms and Conditions or the 2016 Long-Term Incentive Plan, as applicable, will govern. Capitalized terms used but not defined in this grant letter will have the meanings set forth in the 2016 Long-Term Incentive Plan or the Terms and Conditions, as applicable. **As described in the Terms and Conditions, if and to the extent that the terms of this award agreement conflict with the terms of a change in control agreement or employment agreement between you and the Company, the terms of this award agreement shall supersede the terms of the change in control agreement or employment agreement.**

Please contact Kelly Strunk (717-396-3477) if you have questions.

Sincerely,



Victor D. Grizzle  
Chief Executive Officer

*The information contained in this letter is confidential and any discussion, distribution or use of this information is prohibited.*

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**Exhibit A**  
**Performance Goal**

**Cumulative Free Cash Flow**: Cumulative Free Cash Flow is defined as cash flow from operations, less cash used in investing activities, as determined by the Committee.

<b>Cumulative Free Cash Flow Performance Scale</b>			
Cumulative Free Cash Flow (\$)		Performance Level	Payout
Below \$392M		Below 80% of Target Performance	0%
\$392M		80% of Target Performance	25%
\$490M		Target Performance	100%
\$553M		113% of Target Performance	150%
\$578M		118% of Target Performance	175%
\$612M		125% of Target Performance or greater	200%

Threshold level performance must be achieved in order to earn any Performance Units for the Performance Goal. If actual performance is between performance levels, the number of Performance Units earned with respect to the Performance Goal will be interpolated on a straight line basis for pro-rata achievement for performance at or between performance levels. If the Performance Goal would produce fractional units, the number of Performance Units earned shall be rounded up to the nearest whole unit, but not in excess of an aggregate of 200% of the Target Award.

**Change in Control:**

If a Change in Control occurs prior to the end of the Performance Period, the number of Performance Units earned with respect to the Cumulative Free Cash Flow Performance Goal will be based on actual Cumulative Free Cash Flow through the date of the Change in Control relative to the 2017, 2018 and 2019 portions of the total Cumulative Free Cash Flow target, as determined by the Committee before the Change in Control in its sole discretion. Cumulative Free Cash Flow through the date of the Change in Control shall be compared to the annual and quarterly targets for the period through the date of the Change in Control.

The Committee reserves discretion to provide for accelerated vesting of the earned Performance Units pursuant to Section 14(c) of the Plan.

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**EXHIBIT B**

**ARMSTRONG WORLD INDUSTRIES, INC.  
2016 LONG-TERM INCENTIVE PLAN**

**PERFORMANCE RESTRICTED STOCK UNIT GRANT  
TERMS AND CONDITIONS**

1. Grant.

(a) Subject to the terms set forth below, Armstrong World Industries, Inc. (the “Company”) has granted to the designated employee (the “Grantee”) two target awards (the “Target Award”) of performance-based restricted stock units (the “Performance Units”) as specified in the 2017 Long-Term Performance Restricted Stock Unit Grant Letters to which these Grant Conditions relate (the “Grant Letters”). The “Date of Grant” is February 28, 2017. The Performance Units are Stock Units with respect to common stock of the Company (“Company Stock”).

(b) The Performance Units shall be earned, vested and payable if and to the extent that the Cumulative Free Cash Flow and Absolute TSR performance goals set forth in the Grant Letters (the “Performance Goals”), employment conditions and other terms of these Grant Conditions are met. The “Performance Period” for which the attainment of the Performance Goals will be measured is the period beginning January 1, 2017 and ending December 31, 2019.

(c) These Terms and Conditions (the “Grant Conditions”) are part of the Grant Letters. This grant is made under the Armstrong World Industries, Inc. 2016 Long-Term Incentive Plan (the “Plan”). Any terms not defined herein shall have the meanings set forth in the Plan.

2. Performance Goals: Vesting.

(a) The Grantee shall earn and vest in a number of Performance Units based on the attainment of the Performance Goals for the Performance Period, provided that the Grantee continues to be employed by the Company or its subsidiaries or affiliates (collectively the “Employer”) through December 31, 2019 (the “Vesting Date”). The Performance Units shall be earned based on attainment of the Performance Goals and shall vest based on the Grantee’s continued employment through the Vesting Date, or as otherwise provided below.

(b) After the end of the Performance Period, the Management Development and Compensation Committee (the “Committee”) will determine whether and to what extent the Performance Goals have been met and the amount earned with respect to the Performance Units. The Grantee can earn up to 275% of the Target Award based on attainment of the Performance Goals, as set forth in the Grant Letters. Earned and vested Performance Units shall be payable as described in Section 5.

(c) If a Change in Control occurs, the amount earned with respect to the Performance Units shall be determined as of the date of the Change in Control as described in the Grant Letters. The earned Performance Units shall continue to vest based on the Grantee’s continued employment through the Vesting Date, except as otherwise provided herein. Earned and vested Performance Units shall be payable as described in Section 5. Notwithstanding the foregoing, if the Performance Units are not assumed by, or replaced by substantially identical grants by, the successor company in the Change in Control, the earned Performance Units shall vest as of the date of the Change in Control, and such earned and vested Performance Units shall be paid as of the date of the Change in Control if the Change in Control is a 409A CIC (as defined below) and if permitted by the plan termination provisions of the regulations under section 409A of the Code. If payment at the date of the Change in Control is not permitted under section 409A, the earned and vested Performance Units shall be payable as described in Section 5.

(d) Except as described below, no Performance Units shall be earned prior to the Committee’s determination of achievement of the Performance Goals, and to the extent that the Performance Goals are not attained, the Performance Units shall be immediately forfeited and shall cease to be outstanding as of the date of the Committee’s determination.

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### 3. Termination of Employment.

(a) *General Rule* . Except as described below, if the Grantee ceases to be employed by the Employer prior to the Vesting Date, the Performance Units shall be forfeited as of the termination date and shall cease to be outstanding.

(b) *"55/5" Rule Termination* . If, after ten months following the Date of Grant but prior to the Vesting Date, the Grantee ceases to be employed by the Employer on account of a "55 / 5" Rule Termination (as defined below), the Grantee shall earn and vest in a pro-rated portion of the outstanding Performance Units based on the extent to which the Performance Goals are achieved for the Performance Period. In the event of a Change in Control, the amount achieved for the Performance Period shall be determined as of the Change in Control date as described in the Grant Letters. The pro-rated portion shall be determined by multiplying the number of Performance Units earned based on attainment of the Performance Goals by a fraction, the numerator of which is the number of months that elapsed during the period beginning on January 1, 2017 through the Grantee's termination date, and the denominator of which is 36. A partial month after the month of grant shall count as a full month for purposes of this calculation. The pro-rated earned Performance Units shall be paid as described in Section 5.

(c) *Involuntary Termination before a Change in Control* . If, before a Change in Control and after ten months following the Date of Grant but prior to the Vesting Date, the Grantee ceases to be employed by the Employer on account of Involuntary Termination (as defined below), the Grantee shall earn and vest in a pro-rated portion of the outstanding Performance Units based on the extent to which the Performance Goals are achieved for the Performance Period. In the event of a subsequent Change in Control, the amount achieved for the Performance Period shall be determined as of the Change in Control date as described in the Grant Letters. The pro-rated portion shall be determined by multiplying the number of Performance Units earned based on attainment of the Performance Goals by a fraction, the numerator of which is the number of months that elapsed during the period beginning on January 1, 2017 through the Grantee's termination date, and the denominator of which is 36. A partial month after the month of grant shall count as a full month for purposes of this calculation. The pro-rated earned Performance Units shall be paid as described in Section 5.

(d) *Death or Long-Term Disability Before a Change in Control* . If, before a Change in Control, the Grantee ceases to be employed by the Employer prior to the Vesting Date on account of death or Long-Term Disability (as defined below), the Grantee shall earn and vest in a pro-rated portion of the outstanding Performance Units based on the extent to which the Performance Goals are achieved for the Performance Period. In the event of a subsequent Change in Control, the amount achieved for the Performance Period shall be determined as of the Change in Control date as described in the Grant Letters. The pro-rated portion shall be determined by multiplying the number of Performance Units earned based on attainment of the Performance Goals by a fraction, the numerator of which is the number of months that elapsed during the period beginning on January 1, 2017 through the Grantee's termination date and the denominator of which is 36. A partial month after the month of grant shall count as a full month for purposes of this calculation. The pro-rated earned Performance Units shall be paid as described in Section 5.

(e) *Involuntary Termination, Death and Disability on or after a Change in Control*. If the Grantee's employment terminates on account of Involuntary Termination, death or Long-Term Disability on or after a Change in Control and prior to the Vesting Date, the Grantee shall vest in the Performance Units earned as of the Change in Control date as described in the Grant Letters. If the Grantee has a Change in Control Severance Agreement with the Company ("Change in Control Agreement"), on and after a Change in Control, the term "Involuntary Termination" shall have the meaning given a termination by the Company without Cause in the Change in Control Agreement, and shall include without limitation a termination for Good Reason as defined in the Change in Control Agreement. **The Grantee agrees that, subject to the immediately preceding sentence, if and to the extent that these Grant Conditions conflict with the terms of the Change in Control Agreement or any employment agreement between the Company and the Grantee, these Grant Conditions shall supersede the provisions of the Change in Control Agreement and employment agreement applicable to vesting of performance units on and after a Change in Control, notwithstanding anything in the Change in Control Agreement or employment agreement to the contrary.**

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(f) *Coordination of Provisions*. If the Grantee terminates employment in a termination that is both a “55 / 5’ Rule Termination” and an Involuntary Termination, the termination shall be treated as an Involuntary Termination for purposes of the Grant Condition and Grant Letters.

4. Definitions. For purposes of these Grant Conditions and the Grant Letters:

(a) “55 / 5’ Rule Termination” shall mean the Grantee’s termination of employment other than for Cause after the Grantee has attained age 55 and has completed at least five years of service with the Employer.

(b) “Cause” shall mean any of the following, as determined in the sole discretion of the Employer: (i) commission of a felony or a crime involving moral turpitude; (ii) fraud, dishonesty, misrepresentation, theft or misappropriation of funds with respect to the Employer; (iii) violation of the Employer’s Code of Conduct or employment policies, as in effect from time to time; (iv) breach of any written noncompetition, confidentiality or nonsolicitation covenant of the Grantee with respect to the Employer; or (v) gross negligence or misconduct in the performance of the Grantee’s duties with the Employer.

(c) “Involuntary Termination” shall mean the Employer’s termination of the Grantee’s employment other than for Cause.

(d) “Long-Term Disability” shall mean the Grantee is receiving long-term disability benefits under the Employer’s long-term disability plan.

5. Payment.

(a) Except as provided below, after the end of the Performance Period, if the Committee certifies that the Performance Goals and other conditions to payment of the Performance Units have been met, the Company shall issue shares of Company Stock to the Grantee equal to the number of earned and vested Performance Units, subject to applicable tax withholding and subject to compliance with section 409A of the Code and as described in Section 20(h) of the Plan. Payment of earned and vested Performance Units shall be made in 2020 as soon as practicable after the Committee certifies the extent to which the Performance Goals and other conditions to payment of the Performance Units have been met, but not later than May 31, 2020, except as provided below. All unpaid Performance Units shall be forfeited in the event of termination for Cause.

(b) If the Grantee’s employment terminates for any reason other than Cause upon or within two years after a Change in Control that meets the requirements of a 409A CIC, the Grantee’s Performance Units that are unpaid earned and vested (if any) shall be paid within 60 days after the termination date, subject to compliance with section 409A of the Code, if applicable, and as described in Section 20(h) of the Plan. The Company shall issue shares of Company Stock to the Grantee equal to the number of the earned and vested Performance Units, subject to applicable tax withholding. If a Change in Control does not meet the requirements of a 409A CIC, the Grantee’s earned and vested Performance Units (if any) shall be paid on the date described in subsection (a).

(c) Any fractional shares will be rounded up to the nearest whole share, but not exceeding 275% of the Target Award.

6. Dividend Equivalents. Dividend Equivalents shall accrue with respect to Performance Units and shall be payable subject to the same Performance Goals, vesting terms and other conditions as the Performance Units to which they relate. Dividend Equivalents shall be credited on the Performance Units when dividends are declared on shares of Company Stock from the Date of Grant until the payment date for the vested Performance Units. The Company will keep records of Dividend Equivalents in a non-interest bearing bookkeeping account for the Grantee. No interest will be credited to any such account. Vested Dividend Equivalents shall be paid in cash at the same time and subject to the same terms as the underlying vested Performance Units. If and to the extent that the underlying Performance Units are forfeited, all related Dividend Equivalents shall also be forfeited.

7. Delivery of Shares. The Company’s obligation to deliver shares upon the vesting of the Performance Units shall be subject to applicable laws, rules and regulations and also to such approvals by governmental agencies as may be deemed appropriate to comply with relevant securities laws and regulations.

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8. Holding Requirements. Shares of Company Stock distributed for Performance Units earned in excess of the applicable Target Award must be held by the Grantee for one year following the Vesting Date (the “Holding Period”) and may not be assigned, transferred, pledged or otherwise disposed of by the Grantee, other than by will or the laws of descent and distribution, during the Holding Period. However, if the Grantee’s employment with the Employer terminates for any reason, or a Change in Control occurs, the holding requirement of this Section 8 shall lapse as of the date of the Grantee’s termination of employment or the Change in Control, as applicable.

9. No Shareholder Rights. No shares of Company Stock shall be issued to the Grantee on the Date of Grant, and the Grantee shall not be, nor have any of the rights or privileges of, a shareholder of the Company with respect to any Performance Units.

10. No Right to Continued Employment. The grant of Performance Units shall not confer upon the Grantee any right to continued employment with the Employer or interfere with the right of the Employer to terminate the Grantee’s employment at any time.

11. Incorporation of Plan by Reference. The Grant Letters and these Grant Conditions are made pursuant to the terms of the Plan, the terms of which are incorporated herein by reference, and shall in all respects be interpreted in accordance therewith. The decisions of the Committee shall be conclusive upon any question arising hereunder. The Grantee’s receipt of the Performance Units constitutes the Grantee’s acknowledgment that all decisions and determinations of the Committee with respect to the Plan, the Grant Letters, these Grant Conditions, and the Performance Units shall be final and binding on the Grantee and any other person claiming an interest in the Performance Units.

12. Withholding Taxes. The Employer shall have the right to deduct from all payments made hereunder and from other compensation an amount equal to the federal (including FICA), state, local and foreign taxes required by law to be withheld with respect to the Performance Units. The Employer will withhold shares of Company Stock payable hereunder to satisfy the tax withholding obligation on amounts payable in shares, unless the Grantee provides a payment to the Employer to cover such taxes, in accordance with procedures established by the Committee. The share withholding amount shall be determined in accordance with the procedures approved by the Committee.

13. Company Policies. All amounts payable under the Grant Letters and these Grant Conditions shall be subject to any applicable clawback or recoupment policies, share trading policies and other policies that may be implemented by the Company’s Board of Directors from time to time.

14. Assignment. The Grant Letters and these Grant Conditions shall bind and inure to the benefit of the successors and assignees of the Company. The Grantee may not sell, assign, transfer, pledge or otherwise dispose of the Performance Units, except to a successor grantee in the event of the Grantee’s death.

15. Section 409A. The Grant Letters and these Grant Conditions are intended to comply with section 409A of the Code or an exemption, consistent with Section 20(h) of the Plan, including the six-month delay for specified employees in accordance with the requirements of section 409A of the Code, if applicable. In furtherance of the foregoing, if the Performance Units or related Dividend Equivalents constitute “nonqualified deferred compensation” within the meaning of section 409A of the Code, vested Performance Units and related Dividend Equivalents shall be settled on the earliest date that would be permitted under section 409A of the Code without incurring penalty or accelerated taxes thereunder.

16. Successors. The provisions of the Grant Letters and these Grant Conditions shall extend to any business that becomes a successor to the Company or its subsidiaries or affiliates on account of a merger, consolidation, sale of assets, spinoff or similar transaction with respect to any business of the Company or its subsidiaries or affiliates with which the Grantee is employed, and if this grant continues in effect after such corporate event, references to the “Company or its subsidiaries or affiliates” or the “Employer” in the Grant Letters and these Grant Conditions shall include the successor business and its affiliates, as appropriate. In that event, the Company may make such modifications to the Grant Letters and these Grant Conditions as it deems appropriate to reflect the corporate event.

17. Governing Law. The validity, construction, interpretation and effect of the Grant Letters and these Grant Conditions shall be governed by, and determined in accordance with, the applicable laws of the Commonwealth of Pennsylvania, excluding any conflicts or choice of law rule or principle.

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2017 Long-Term Performance-Based Restricted Stock Unit Grant  
Performance Goals Based on Absolute TSR

ARMSTRONG WORLD INDUSTRIES  
2500 Columbia Ave., P.O. Box 3001  
Lancaster, PA 17604  
717.397.0611

Company Confidential

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First Name	Middle Name	Last Name
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I am pleased to inform you that the Company’s Management Development and Compensation Committee granted you the following:

Date of Grant: February 28, 2017

Performance Units (“Target Award”): # of Units

Performance Period (“Performance Period”): January 1, 2017 through December 31, 2019

This award recognizes the importance of your role in achieving the Company’s long-term strategy and is subject to the terms of the 2016 Long-Term Incentive Plan and the award agreement. The award agreement consists of this grant letter with the Performance Goals attached as Exhibit A and the Terms and Conditions attached as Exhibit B.

The Performance Units will be earned by achieving a Performance Goal based on absolute Total Shareholder Return, subject to your continued employment through the end of the Performance Period. The Committee has established the Performance Goal set forth on Exhibit A, which allows you to earn up to 300% of the Target Award, if you remain continuously employed by the Employer through the end of the Performance Period.

To the extent the Performance Goal is achieved and you satisfy the employment requirements, a number of shares of Company Stock equal to the Performance Units that are earned and vested will be distributed to you following the conclusion of the Performance Period in accordance with the payment terms set forth in the Terms and Conditions. The Company will withhold shares to satisfy your tax obligations unless prohibited by country law or unless you provide a payment to cover the tax withholding obligation. You have no ownership or voting rights relative to the Performance Units.

If the Company makes cash dividend payments during the Performance Period, the value of the dividends on shares attributable to the Performance Units will accrue as dividend equivalents in a non-interest bearing bookkeeping account. You will receive a cash payment equal to the accrued dividend equivalents at the end of the Performance Period, adjusted for the number of Performance Units that become earned and vested.

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Employment Events

The following chart is a summary of the provisions which apply to this award in connection with termination of employment. The following is only a summary, and in the event of termination of employment, the award will be governed by the Terms and Conditions.

Event	Provisions
▪ Voluntary Resignation ▪ Termination for Cause	All Performance Units and accrued dividend equivalents are forfeited.
▪ “55 / 5” Rule Termination (55 years of age or older with 5 years of service) ▪ Involuntary Termination Without Cause	If termination occurs after 10 months following the Date of Grant, then to the extent that the Performance Goal is achieved for the Performance Period, Performance Units and accrued dividend equivalents are earned and vested pro-rata, based on the period of employment; otherwise the Performance Units and accrued dividend equivalents are forfeited.
▪ Death ▪ Long-Term Disability	To the extent that the Performance Goal is achieved for the Performance Period, Performance Units and accrued dividend equivalents are earned and vested pro-rata, based on the period of employment.
After a Change in Control: ▪ Involuntary Termination Without Cause ▪ Death ▪ Long-Term Disability	Upon a Change in Control Performance Units and accrued dividend equivalents are earned as described in <u>Exhibit A</u> and will vest as described in <u>Exhibit B</u> .

In the event of any inconsistency between the foregoing summary and the Terms and Conditions or the 2016 Long-Term Incentive Plan, the Terms and Conditions or the 2016 Long-Term Incentive Plan, as applicable, will govern. Capitalized terms used but not defined in this grant letter will have the meanings set forth in the 2016 Long-Term Incentive Plan or the Terms and Conditions, as applicable. **As described in the Terms and Conditions, if and to the extent that the terms of this award agreement conflict with the terms of a change in control agreement or employment agreement between you and the Company, the terms of this award agreement shall supersede the terms of the change in control agreement or employment agreement.**

Please contact Kelly Strunk (717-396-3477) if you have questions.

Sincerely,



Victor D. Grizzle  
Chief Executive Officer

***The information contained in this letter is confidential and any discussion, distribution or use of this information is prohibited.***

**Exhibit A**  
**Performance Goal**

**Absolute Total Shareholder Return** : Absolute Total Shareholder Return (“**Absolute TSR**”) tracks the appreciation in share price of the Company Stock, including dividends, and is annualized for the Performance Period, as determined by the Committee. Specifically, Absolute TSR is calculated based on the following formula:

$$\left[ \frac{\text{Ending Share Price} + \text{Aggregate Dividends}}{\text{Starting Share Price}} \right]^{(1/3)} - 1$$

For purposes of the Absolute TSR calculation:

- “Ending Share Price” means the volume weighted average closing price of the Company Stock for the highest consecutive 30 trading days in the 60 trading day period beginning with and immediately following January 2, 2020.
- “Aggregate Dividends” means a cumulative number of shares of Company Stock assuming same day reinvestment in Company Stock on the ex-dividend date of the dividends paid on a share of Company Stock during the Performance Period.
- “Starting Share Price” means the volume weighted average closing price of the Company Stock for the highest consecutive 30 trading days in the 60 trading day period beginning with and immediately following January 3, 2017.

<b>Absolute TSR</b>		
<b>Performance Level</b>		<b>Payout</b>
Below 6%		0%
6%		50%
9%		75%
12%		100%
20%		200%
30%		300%

Threshold level performance must be achieved in order to earn any Performance Units for the Performance Goal. If actual performance is between performance levels, the number of Performance Units earned with respect to the Performance Goal will be interpolated on a straight line basis for pro-rata achievement for performance at or between performance levels. If the Performance Goal would produce fractional units, the number of Performance Units earned shall be rounded up to the nearest whole unit, but not in excess of an aggregate of 300% of the Target Award.

**Change in Control:**

If a Change in Control occurs prior to the end of the Performance Period or prior to the end of the 60 trading day period following the end of the Performance Period, the number of Performance Units earned with respect to the Absolute TSR Performance Goal will be the greater of (i) the Target Award or (ii) the number of Performance Units earned with respect to the Absolute TSR Performance Goal based on Absolute TSR through the date of the Change in Control, calculated by using the per-share sales price in the Change in Control as the Ending Share Price and as if the Change in Control date were the end of the Performance Period, as determined by the Committee before the Change in Control in its sole discretion.

The Committee reserves discretion to provide for accelerated vesting of the earned Performance Units at a higher performance level pursuant to Section 14(c) of the Plan.

**EXHIBIT B**

**ARMSTRONG WORLD INDUSTRIES, INC.  
2016 LONG-TERM INCENTIVE PLAN**

**PERFORMANCE RESTRICTED STOCK UNIT GRANT  
TERMS AND CONDITIONS**

1. Grant.

(a) Subject to the terms set forth below, Armstrong World Industries, Inc. (the “Company”) has granted to the designated employee (the “Grantee”) two target awards (the “Target Award”) of performance-based restricted stock units (the “Performance Units”) as specified in the 2017 Long-Term Performance Restricted Stock Unit Grant Letters to which these Grant Conditions relate (the “Grant Letters”). The “Date of Grant” is February 28, 2017. The Performance Units are Stock Units with respect to common stock of the Company (“Company Stock”).

(b) The Performance Units shall be earned, vested and payable if and to the extent that the Cumulative Free Cash Flow and Absolute TSR performance goals set forth in the Grant Letters (the “Performance Goals”), employment conditions and other terms of these Grant Conditions are met. The “Performance Period” for which the attainment of the Performance Goals will be measured is the period beginning January 1, 2017 and ending December 31, 2019.

(c) These Terms and Conditions (the “Grant Conditions”) are part of the Grant Letters. This grant is made under the Armstrong World Industries, Inc. 2016 Long-Term Incentive Plan (the “Plan”). Any terms not defined herein shall have the meanings set forth in the Plan.

2. Performance Goals; Vesting.

(a) The Grantee shall earn and vest in a number of Performance Units based on the attainment of the Performance Goals for the Performance Period, provided that the Grantee continues to be employed by the Company or its subsidiaries or affiliates (collectively the “Employer”) through December 31, 2019 (the “Vesting Date”). The Performance Units shall be earned based on attainment of the Performance Goals and shall vest based on the Grantee’s continued employment through the Vesting Date, or as otherwise provided below.

(b) After the end of the Performance Period, the Management Development and Compensation Committee (the “Committee”) will determine whether and to what extent the Performance Goals have been met and the amount earned with respect to the Performance Units. The Grantee can earn up to 225% of the Target Award based on attainment of the Performance Goals, as set forth in the Grant Letters. Earned and vested Performance Units shall be payable as described in Section 5.

(c) If a Change in Control occurs, the amount earned with respect to the Performance Units shall be determined as of the date of the Change in Control as described in the Grant Letters. The earned Performance Units shall continue to vest based on the Grantee’s continued employment through the Vesting Date, except as otherwise provided herein. Earned and vested Performance Units shall be payable as described in Section 5. Notwithstanding the foregoing, if the Performance Units are not assumed by, or replaced by substantially identical grants by, the successor company in the Change in Control, the earned Performance Units shall vest as of the date of the Change in Control, and such earned and vested Performance Units shall be paid as of the date of the Change in Control if the Change in Control is a 409A CIC (as defined below) and if permitted by the plan termination provisions of the regulations under section 409A of the Code. If payment at the date of the Change in Control is not permitted under section 409A, the earned and vested Performance Units shall be payable as described in Section 5.

(d) Except as described below, no Performance Units shall be earned prior to the Committee’s determination of achievement of the Performance Goals, and to the extent that the Performance Goals are not attained, the Performance Units shall be immediately forfeited and shall cease to be outstanding as of the date of the Committee’s determination.

### 3. Termination of Employment.

(a) *General Rule* . Except as described below, if the Grantee ceases to be employed by the Employer prior to the Vesting Date, the Performance Units shall be forfeited as of the termination date and shall cease to be outstanding.

(b) *“55/5” Rule Termination* . If, after ten months following the Date of Grant but prior to the Vesting Date, the Grantee ceases to be employed by the Employer on account of a “55 / 5” Rule Termination (as defined below), the Grantee shall earn and vest in a pro-rated portion of the outstanding Performance Units based on the extent to which the Performance Goals are achieved for the Performance Period; provided such vesting does not result in a violation of any age discrimination or other applicable law. In the event of a Change in Control, the amount achieved for the Performance Period shall be determined as of the Change in Control date as described in the Grant Letters. The pro-rated portion shall be determined by multiplying the number of Performance Units earned based on attainment of the Performance Goals by a fraction, the numerator of which is the number of months that elapsed during the period beginning on January 1, 2017 through the Grantee’s termination date, and the denominator of which is 36. A partial month after the month of grant shall count as a full month for purposes of this calculation. The pro-rated earned Performance Units shall be paid as described in Section 5.

(c) *Involuntary Termination before a Change in Control* . If, before a Change in Control and after ten months following the Date of Grant but prior to the Vesting Date, the Grantee ceases to be employed by the Employer on account of Involuntary Termination (as defined below), the Grantee shall earn and vest in a pro-rated portion of the outstanding Performance Units based on the extent to which the Performance Goals are achieved for the Performance Period, provided such vesting does not result in a violation of any age discrimination or other applicable law. In the event of a subsequent Change in Control, the amount achieved for the Performance Period shall be determined as of the Change in Control date as described in the Grant Letters. The pro-rated portion shall be determined by multiplying the number of Performance Units earned based on attainment of the Performance Goals by a fraction, the numerator of which is the number of months that elapsed during the period beginning on January 1, 2017 through the Grantee’s termination date, and the denominator of which is 36. A partial month after the month of grant shall count as a full month for purposes of this calculation. The pro-rated earned Performance Units shall be paid as described in Section 5.

(d) *Death or Long-Term Disability Before a Change in Control* . If, before a Change in Control, the Grantee ceases to be employed by the Employer prior to the Vesting Date on account of death or Long-Term Disability (as defined below), the Grantee shall earn and vest in a pro-rated portion of the outstanding Performance Units based on the extent to which the Performance Goals are achieved for the Performance Period. In the event of a subsequent Change in Control, the amount achieved for the Performance Period shall be determined as of the Change in Control date as described in the Grant Letters. The pro-rated portion shall be determined by multiplying the number of Performance Units earned based on attainment of the Performance Goals by a fraction, the numerator of which is the number of months that elapsed during the period beginning on January 1, 2017 through the Grantee’s termination date and the denominator of which is 36. A partial month after the month of grant shall count as a full month for purposes of this calculation. The pro-rated earned Performance Units shall be paid as described in Section 5.

(e) *Involuntary Termination, Death and Disability on or after a Change in Control*. If the Grantee’s employment terminates on account of Involuntary Termination, death or Long-Term Disability on or after a Change in Control and prior to the Vesting Date, the Grantee shall vest in the Performance Units earned as of the Change in Control date as described in the Grant Letters. If the Grantee has a Change in Control Severance Agreement with the Company (“Change in Control Agreement”), on and after a Change in Control, the term “Involuntary Termination” shall have the meaning given a termination by the Company without Cause in the Change in Control Agreement, and shall include without limitation a termination for Good Reason as defined in the Change in Control Agreement. **The Grantee agrees that, subject to the immediately preceding sentence, if and to the extent that these Grant Conditions conflict with the terms of the Change in Control Agreement or any employment agreement between the Company and the Grantee, these Grant Conditions shall supersede the provisions of the Change in Control Agreement and employment agreement applicable to vesting of performance units on and after a**

**Change in Control, notwithstanding anything in the Change in Control Agreement or employment agreement to the contrary.**

(f) *Coordination of Provisions* . If the Grantee terminates employment in a termination that is both a “55 / 5’ Rule Termination” and an Involuntary Termination, the termination shall be treated as an Involuntary Termination for purposes of the Grant Condition and Grant Letters.

4. Definitions . For purposes of these Grant Conditions and the Grant Letters:

(a) “ 55 / 5’ Rule Termination ” shall mean the Grantee’s termination of employment other than for Cause after the Grantee has attained age 55 and has completed at least five years of service with the Employer.

(b) “ Cause ” shall mean any of the following, as determined in the sole discretion of the Employer: (i) commission of a felony or a crime involving moral turpitude; (ii) fraud, dishonesty, misrepresentation, theft or misappropriation of funds with respect to the Employer; (iii) violation of the Employer’s Code of Conduct or employment policies, as in effect from time to time; (iv) breach of any written noncompetition, confidentiality or nonsolicitation covenant of the Grantee with respect to the Employer; or (v) gross negligence or misconduct in the performance of the Grantee’s duties with the Employer.

(c) “ Involuntary Termination ” shall mean the Employer’s termination of the Grantee’s employment other than for Cause.

(d) “ Long-Term Disability ” shall mean the Grantee is receiving long-term disability benefits under the Employer’s long-term disability plan.

5. Payment .

(a) Except as provided below, after the end of the Performance Period, if the Committee certifies that the Performance Goals and other conditions to payment of the Performance Units have been met, the Company shall issue shares of Company Stock to the Grantee equal to the number of earned and vested Performance Units, subject to applicable withholding for Taxes (as defined below) and subject to compliance with section 409A of the Code and as described in Section 20(h) of the Plan. Payment of earned and vested Performance Units shall be made in 2020 as soon as practicable after the Committee certifies the extent to which the Performance Goals and other conditions to payment of the Performance Units have been met, but not later than May 31, 2020, except as provided below. All unpaid Performance Units shall be forfeited in the event of termination for Cause.

(b) If the Grantee’s employment terminates for any reason other than Cause upon or within two years after a Change in Control that meets the requirements of a 409A CIC, the Grantee’s Performance Units that are unpaid earned and vested (if any) shall be paid within 60 days after the termination date, subject to compliance with section 409A of the Code, if applicable, and as described in Section 20(h) of the Plan. The Company shall issue shares of Company Stock to the Grantee equal to the number of the earned and vested Performance Units, subject to applicable withholding for Taxes. If a Change in Control does not meet the requirements of a 409A CIC, the Grantee’s earned and vested Performance Units (if any) shall be paid on the date described in subsection (a).

(c) Any fractional shares will be rounded up to the nearest whole share, but not exceeding 225% of the Target Award.

6. Dividend Equivalents . Dividend Equivalents shall accrue with respect to Performance Units and shall be payable subject to the same Performance Goals, vesting terms and other conditions as the Performance Units to which they relate. Dividend Equivalents shall be credited on the Performance Units when dividends are declared on shares of Company Stock from the Date of Grant until the payment date for the vested Performance Units. The Company will keep records of Dividend Equivalents in a non-interest bearing bookkeeping account for the Grantee. No interest will be credited to any such account. Vested Dividend Equivalents shall be paid in cash at the same time and subject to the same terms as the underlying

vested Performance Units. If and to the extent that the underlying Performance Units are forfeited, all related Dividend Equivalents shall also be forfeited.

7. Delivery of Shares. The Company's obligation to deliver shares upon the vesting of the Performance Units shall be subject to applicable laws, rules and regulations and also to such approvals by governmental agencies as may be deemed appropriate to comply with relevant securities laws and regulations.

8. No Shareholder Rights. No shares of Company Stock shall be issued to the Grantee on the Date of Grant, and the Grantee shall not be, nor have any of the rights or privileges of, a shareholder of the Company with respect to any Performance Units.

9. No Right to Continued Employment. The grant of Performance Units shall not confer upon the Grantee any right to continued employment with the Employer or interfere with the right of the Employer to terminate the Grantee's employment at any time.

10. Incorporation of Plan by Reference. The Grant Letters and these Grant Conditions are made pursuant to the terms of the Plan, the terms of which are incorporated herein by reference, and shall in all respects be interpreted in accordance therewith. The decisions of the Committee shall be conclusive upon any question arising hereunder. The Grantee's receipt of the Performance Units constitutes the Grantee's acknowledgment that all decisions and determinations of the Committee with respect to the Plan, the Grant Letters, these Grant Conditions, and the Performance Units shall be final and binding on the Grantee and any other person claiming an interest in the Performance Units.

11. Withholding Taxes.

(a) The Employer shall have the right, and the Grantee hereby authorizes the Employer, to deduct from all payments made hereunder and from other compensation an amount equal to the federal (including FICA), state, local and foreign taxes, social insurance, payroll tax, contributions, payment on account obligations or other amounts required by law to be collected, withheld or accounted for with respect to the Performance Units (the "Taxes"). The Employer will withhold shares of Company Stock payable hereunder to satisfy the withholding obligation for Taxes on amounts payable in shares, unless the Grantee provides a payment to the Employer to cover such Taxes, in accordance with procedures established by the Committee. The share withholding amount shall be determined in accordance with the procedures approved by the Committee.

(b) Regardless of any action the Employer takes with respect to any such Taxes, the Grantee acknowledges that the ultimate liability for all such Taxes legally due by the Grantee is and remains the Grantee's responsibility and may exceed the amount actually withheld by the Employer. The Grantee further acknowledges that the Employer (i) makes no representations or undertakings regarding the treatment of any Taxes in connection with any aspect of the Performance Units, including the grant, vesting or settlement of the Performance Units and the subsequent sale of any shares of Company Stock acquired at settlement and the receipt of any Dividend Equivalents; and (ii) does not commit to structure the terms of the grant or any aspect of the Performance Units to reduce or eliminate the Grantee's liability for Taxes. Further, if the Grantee has become subject to tax in more than one jurisdiction between the Date of Grant and the date of any relevant taxable event, the Grantee acknowledges that the Employer (or the Grantee's former employer, as applicable) may be required to collect, withhold or account for Taxes in more than one jurisdiction.

12. Company Policies. All amounts payable under the Grant Letters and these Grant Conditions shall be subject to any applicable clawback or recoupment policies, share trading policies and other policies that may be implemented by the Company's Board of Directors from time to time.

13. Assignment. The Grant Letters and these Grant Conditions shall bind and inure to the benefit of the successors and assignees of the Company. The Grantee may not sell, assign, transfer, pledge or otherwise dispose of the Performance Units, except to a successor grantee in the event of the Grantee's death.

14. Section 409A. The Grant Letters and these Grant Conditions are intended to comply with section 409A of the Code or an exemption, consistent with Section 20(h) of the Plan, including the six-month delay for specified employees in accordance with the requirements of section 409A of the Code, if applicable. In furtherance of the foregoing, if the Performance Units or related Dividend Equivalents constitute “nonqualified deferred compensation” within the meaning of section 409A of the Code, vested Performance Units and related Dividend Equivalents shall be settled on the earliest date that would be permitted under section 409A of the Code without incurring penalty or accelerated taxes thereunder.

15. Successors. The provisions of the Grant Letters and these Grant Conditions shall extend to any business that becomes a successor to the Company or its subsidiaries or affiliates on account of a merger, consolidation, sale of assets, spinoff or similar transaction with respect to any business of the Company or its subsidiaries or affiliates with which the Grantee is employed, and if this grant continues in effect after such corporate event, references to the “Company or its subsidiaries or affiliates” or the “Employer” in the Grant Letters and these Grant Conditions shall include the successor business and its affiliates, as appropriate. In that event, the Company may make such modifications to the Grant Letters and these Grant Conditions as it deems appropriate to reflect the corporate event.

16. Governing Law. The validity, construction, interpretation and effect of the Grant Letters and these Grant Conditions shall be governed by, and determined in accordance with, the applicable laws of the Commonwealth of Pennsylvania, excluding any conflicts or choice of law rule or principle.

17. No Entitlement or Claims for Compensation. In connection with the acceptance of the grant of the Performance Units under the Grant Letters and these Grant Conditions, the Grantee acknowledges the following:

(a) the Plan is established voluntarily by the Company, the grant of the Performance Units under the Plan is made at the discretion of the Committee and the Plan may be modified, amended, suspended or terminated by the Company at any time;

(b) the grant of the Performance Units under the Plan is voluntary and occasional and does not create any contractual or other right to receive future grants of Performance Units, or benefits in lieu of them, even if Performance Units have been granted repeatedly in the past;

(c) all decisions with respect to future grants of Performance Units, if any, will be at the sole discretion of the Committee;

(d) the Grantee is voluntarily participating in the Plan;

(e) the Performance Units and any shares of Company Stock acquired under the Plan are extraordinary items that do not constitute compensation of any kind for services of any kind rendered to the Employer (including, as applicable, the Grantee’s employer) and which are outside the scope of the Grantee’s employment contract, if any;

(f) the Performance Units and any shares of Company Stock acquired under the Plan are not to be considered part of the Grantee’s normal or expected compensation or salary for any purpose, including, but not limited to, calculating any severance, resignation, termination, payment in lieu of notice, redundancy, end of service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments;

(g) the Performance Units and the shares of Company Stock subject to the award are not intended to replace any pension rights or compensation;

(h) the grant of Performance Units and the Grantee’s participation in the Plan will not be interpreted to form an employment contract or relationship with the Employer;

(i) the future value of the underlying shares of Company Stock is unknown and cannot be predicted with certainty. If the Grantee vests in the Performance Units and receives shares of Company Stock, the value of the acquired shares may increase or decrease. The Grantee understands that the

Company is not responsible for any foreign exchange fluctuation between the United States Dollar and the Grantee's local currency that may affect the value of the Performance Units or the shares of Company Stock; and

(j) The Grantee shall have no rights, claim or entitlement to compensation or damages as a result of the Grantee's cessation of employment (for any reason whatsoever, whether or not in breach of contract or local labor law or the terms of the Grantee's employment agreement, if any), insofar as these rights, claim or entitlement arise or may arise from the Grantee's ceasing to have rights under or be entitled to receive shares of Company Stock under or ceasing to have the opportunity to participate in the Plan as a result of such cessation or loss or diminution in value of the Performance Units or any of the shares of Company Stock acquired thereunder as a result of such cessation, and the Grantee irrevocably releases the Employer from any such rights, entitlement or claim that may arise. If, notwithstanding the foregoing, any such right or claim is found by a court of competent jurisdiction to have arisen, then the Grantee shall be deemed to have irrevocably waived the Grantee's entitlement to pursue such rights or claim.

18. **Data Privacy.**

(a) The Grantee hereby explicitly, willingly and unambiguously consents to the collection, systematization, accumulation, storage, blocking, destruction, use, disclosure and transfer, in electronic or other form, of the Grantee's personal data as described in these Grant Conditions by and among, as applicable, the Grantee's employer, the Company or its subsidiaries or affiliates for the exclusive purpose of implementing, administering and managing the Grantee's participation in the Plan.

(b) The Grantee understands that the Grantee's employer, the Company or its subsidiaries or affiliates, as applicable, hold certain personal information and sensitive personal information about the Grantee regarding the Grantee's employment, the nature and amount of the Grantee's compensation and the fact and conditions of the Grantee's participation in the Plan, including, but not limited to, the Grantee's name, home address and telephone number, date of birth, social insurance number or other identification number, salary, nationality, job title, any shares of stock or directorships held in the Company or its subsidiaries or affiliates, details of all options, awards or any other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in the Grantee's favor, for the purpose of implementing, administering and managing the Plan (the "Data").

(c) The Grantee understands that the Data may be transferred, including any cross-border, transfer to the Company, its subsidiaries and affiliates and, any third parties assisting in the implementation, administration and management of the Plan, that these recipients may be located in the Grantee's country, or elsewhere, and that the recipient's country may have different data privacy laws and protections than the Grantee's country. The Grantee understands that the Grantee may request a list with the names and addresses of any potential recipients of the Data by contacting the Grantee's local human resources representative. The Grantee authorizes the recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes of implementing, administering and managing the Grantee's participation in the Plan, including any requisite transfer of such Data as may be required to a broker or other third party. The Grantee understands that the Data will be held only as long as is necessary to implement, administer and manage the Grantee's participation in the Plan. The Grantee understands that the Grantee may, at any time, view the Data, request additional information about the storage and processing of the Data, require any necessary amendments to the Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing the Grantee's local human resources representative. The Grantee understands, however, that refusing or withdrawing the Grantee's consent may affect the Grantee's ability to participate in the Plan. For more information on the consequences of refusal to consent or withdrawal of consent, the Grantee understands that the Grantee may contact the Grantee's local human resources representative.

19. Addendum. Notwithstanding any provisions in these Grant Conditions, the Performance Units shall be subject to any special terms and conditions set forth in any Addendum to this Agreement for the

Grantee's country. Moreover, if the Grantee relocates to one of the countries included in the Addendum, the special terms and conditions for such country will apply to the Grantee, to the extent the Company determines that the application of such terms and conditions is necessary for legal or administrative reasons. The Addendum constitutes part of these Grant Conditions.

\* \* \*

**ADDENDUM**

**ARMSTRONG WORLD INDUSTRIES, INC.  
PERFORMANCE RESTRICTED STOCK UNIT GRANT**

*Additional Terms and Conditions and Notifications*

This Addendum includes special terms and conditions that govern the Performance Units granted to the Grantee if the Grantee resides or works in the countries listed herein. These terms and conditions are in addition to the terms and conditions set forth in the Grant Conditions. This Addendum may also include information regarding certain other issues of which the Grantee should be aware with respect to the Grantee's participation in the Plan. Capitalized terms used but not defined herein shall have the meanings assigned to them in the Grant Conditions (of which this Addendum is a part) and the Plan.

Australia

*Offer Document*

Participation in the Plan and the Performance Units granted under the Plan are subject to the terms and conditions stated in the Offer Document attached hereto.

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## OFFER TO AUSTRALIAN RESIDENT EMPLOYEES

### ARMSTRONG WORLD INDUSTRIES, INC. 2016 LONG-TERM INCENTIVE PLAN

This Offer Document sets out information regarding the participation of Australian resident employees of Armstrong World Industries, Inc. (*Armstrong* or the *Company*) and its Australian subsidiaries in grants of restricted stock units made under the Armstrong World Industries, Inc. 2016 Long-Term Incentive Plan (*Plan*).

**Investment in securities involves a degree of risk and there is no guarantee of the future value of, or returns from, securities you may acquire under the Plan. Employees who elect to participate in the Plan should consider all risk factors relevant to the acquisition of securities under the Plan as set out in this document and any associated documents.**

**The information contained in this document and any associated documents is general information only. It is not advice or information specific to your particular objectives, financial situation or needs. Australian employees should consider obtaining their own financial product advice from an independent person who is licensed by the Australian Securities and Investments Commission to give advice about participation in the Plan.**

#### 1. OFFER AND TERMS OF PARTICIPATION

This Offer Document relates to an invitation by the Company to eligible employees in Australia to accept grants of restricted stock units made under the Plan. The restricted stock units will be issued at no cost to you.

The terms of your participation are set out in the Plan, the Plan Summary (as supplemented by the Australian Addendum and the Australian Tax Supplement to the Plan Summary), the Grant Letter, the Terms and Conditions and this Offer Document.

By accepting a grant of restricted stock units, you will be bound by terms set out in the Plan, the Plan Summary (as supplemented by the Australian Addendum and the Australian Tax Supplement), the Grant Letter, the Terms and Conditions and this Offer Document.

#### 2. HOW CAN I ASCERTAIN THE CURRENT MARKET PRICE OF SHARES UNDERLYING THE RESTRICTED STOCK UNITS IN AUSTRALIAN DOLLARS?

You could, from time to time, ascertain the market price of a share of common stock in the Company (*Share*) by obtaining that price from the New York Stock Exchange website, the Company website or The Wall Street Journal, and multiplying that price by a published exchange rate to convert U.S. Dollars into Australian Dollars, to determine the Australian dollar equivalent of that current market price.

#### 3. RISKS OF ACQUIRING AND HOLDING SHARES

Acquiring and holding restricted stock units and Shares involves risk. These risks include that:

- (a) There is no guarantee that Shares will grow in value - they may decline in value. Stock markets are subject to fluctuations and the price of Shares can rise and fall, depending upon the Company's performance and other internal and external factors.
  - (b) The Company may decide not to continue to pay dividends on its Shares at the current level, or may decide to cease the payment of dividends on its Shares.
  - (c) There are tax implications involved in acquiring and holding restricted stock units and Shares and the tax regime applying to you may change.
-

**2017 Long-Term Performance-Based Restricted Stock Unit Grant  
Performance Goals Based on Cumulative Free Cash Flow**

ARMSTRONG WORLD INDUSTRIES  
2500 Columbia Ave., P.O. Box 3001  
Lancaster, PA 17604  
717.397.0611

Company Confidential

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First Name	Middle Name	Last Name
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I am pleased to inform you that the Company’s Management Development and Compensation Committee granted you the following:

Date of Grant:	February 28, 2017
Performance Units (“ <u>Target Award</u> ”):	# of Units
Performance Period (“ <u>Performance Period</u> ”):	January 1, 2017 through December 31, 2019

This award recognizes the importance of your role in achieving the Company’s long-term strategy and is subject to the terms of the 2016 Long-Term Incentive Plan and the award agreement. The award agreement consists of this grant letter with the Performance Goals attached as Exhibit A and the Terms and Conditions attached as Exhibit B.

The Performance Units will be earned by achieving a Performance Goal based on Cumulative Free Cash Flow, subject to your continued employment through the end of the Performance Period. The Committee has established the Performance Goal set forth on Exhibit A, which allows you to earn up to 200% of the Target Award, if you remain continuously employed by the Employer through the end of the Performance Period.

To the extent the Performance Goal is achieved and you satisfy the employment requirements, a number of shares of Company Stock equal to the Performance Units that are earned and vested will be distributed to you following the conclusion of the Performance Period in accordance with the payment terms set forth in the Terms and Conditions. The Company will withhold shares to satisfy your tax obligations unless prohibited by country law or unless you provide a payment to cover the tax withholding obligation. You have no ownership or voting rights relative to the Performance Units.

If the Company makes cash dividend payments during the Performance Period, the value of the dividends on shares attributable to the Performance Units will accrue as dividend equivalents in a non-interest bearing bookkeeping account. You will receive a cash payment equal to the accrued dividend equivalents at the end of the Performance Period, adjusted for the number of Performance Units that become earned and vested.

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Employment Events

The following chart is a summary of the provisions which apply to this award in connection with termination of employment. The following is only a summary, and in the event of termination of employment, the award will be governed by the Terms and Conditions.

Event	Provisions
<ul style="list-style-type: none"><li>▪ Voluntary Resignation</li><li>▪ Termination for Cause</li></ul>	All Performance Units and accrued dividend equivalents are forfeited.
<ul style="list-style-type: none"><li>▪ “55 / 5” Rule Termination (55 years of age or older with 5 years of service)</li><li>▪ Involuntary Termination Without Cause</li></ul>	If termination occurs after 10 months following the Date of Grant, then to the extent that the Performance Goal is achieved for the Performance Period, Performance Units and accrued dividend equivalents are earned and vested pro-rata, based on the period of employment; otherwise the Performance Units and accrued dividend equivalents are forfeited.
<ul style="list-style-type: none"><li>▪ Death</li><li>▪ Long-Term Disability</li></ul>	To the extent that the Performance Goal is achieved for the Performance Period, Performance Units and accrued dividend equivalents are earned and vested pro-rata, based on the period of employment.
After a Change in Control: <ul style="list-style-type: none"><li>▪ Involuntary Termination Without Cause</li><li>▪ Death</li><li>▪ Long-Term Disability</li></ul>	Upon a Change in Control Performance Units and accrued dividend equivalents are earned as described in <u>Exhibit A</u> and will vest as described in <u>Exhibit B</u> .

In the event of any inconsistency between the foregoing summary and the Terms and Conditions or the 2016 Long-Term Incentive Plan, the Terms and Conditions or the 2016 Long-Term Incentive Plan, as applicable, will govern. Capitalized terms used but not defined in this grant letter will have the meanings set forth in the 2016 Long-Term Incentive Plan or the Terms and Conditions, as applicable. **As described in the Terms and Conditions, if and to the extent that the terms of this award agreement conflict with the terms of a change in control agreement or employment agreement between you and the Company, the terms of this award agreement shall supersede the terms of the change in control agreement or employment agreement.**

Please contact Kelly Strunk (717-396-3477) if you have questions.

Sincerely,



Victor D. Grizzle  
Chief Executive Officer

***The information contained in this letter is confidential and any discussion, distribution or use of this information is prohibited.***

**Exhibit A**  
**Performance Goal**

**Cumulative Free Cash Flow**: Cumulative Free Cash Flow is defined as cash flow from operations, less cash used in investing activities, as determined by the Committee.

<b>Cumulative Free Cash Flow Performance Scale</b>			
Cumulative Free Cash Flow (\$)		Performance Level	Payout
Below \$392M		Below 80% of Target Performance	0%
\$392M		80% of Target Performance	50%
\$490M		Target Performance	100%
\$553M		113% of Target Performance	150%
\$578M		118% of Target Performance	175%
\$612M		125% of Target Performance or greater	200%

Threshold level performance must be achieved in order to earn any Performance Units for the Performance Goal. If actual performance is between performance levels, the number of Performance Units earned with respect to the Performance Goal will be interpolated on a straight line basis for pro-rata achievement for performance at or between performance levels. If the Performance Goal would produce fractional units, the number of Performance Units earned shall be rounded up to the nearest whole unit, but not in excess of an aggregate of 200% of the Target Award.

**Change in Control:**

If a Change in Control occurs prior to the end of the Performance Period, the number of Performance Units earned with respect to the Cumulative Free Cash Flow Performance Goal will be the greater of (i) the Target Award or (ii) the number of Performance Units earned with respect to the Cumulative Free Cash Flow Performance Goal based on actual Cumulative Free Cash Flow through the date of the Change in Control relative to the 2017, 2018 and 2019 portions of the total Cumulative Free Cash Flow target, as determined by the Committee before the Change in Control in its sole discretion. Cumulative Free Cash Flow through the date of the Change in Control shall be compared to the annual and quarterly targets for the period through the date of the Change in Control.

The Committee reserves discretion to provide for accelerated vesting of the earned Performance Units at a higher performance level pursuant to Section 14(c) of the Plan.

## **EXHIBIT B**

### **ARMSTRONG WORLD INDUSTRIES, INC. 2016 LONG-TERM INCENTIVE PLAN**

#### **PERFORMANCE RESTRICTED STOCK UNIT GRANT TERMS AND CONDITIONS**

##### **1. Grant**

(a) Subject to the terms set forth below, Armstrong World Industries, Inc. (the “Company”) has granted to the designated employee (the “Grantee”) two target awards (the “Target Award”) of performance-based restricted stock units (the “Performance Units”) as specified in the 2017 Long-Term Performance Restricted Stock Unit Grant Letters to which these Grant Conditions relate (the “Grant Letters”). The “Date of Grant” is February 28, 2017. The Performance Units are Stock Units with respect to common stock of the Company (“Company Stock”).

(b) The Performance Units shall be earned, vested and payable if and to the extent that the Cumulative Free Cash Flow and Absolute TSR performance goals set forth in the Grant Letters (the “Performance Goals”), employment conditions and other terms of these Grant Conditions are met. The “Performance Period” for which the attainment of the Performance Goals will be measured is the period beginning January 1, 2017 and ending December 31, 2019.

(c) These Terms and Conditions (the “Grant Conditions”) are part of the Grant Letters. This grant is made under the Armstrong World Industries, Inc. 2016 Long-Term Incentive Plan (the “Plan”). Any terms not defined herein shall have the meanings set forth in the Plan.

##### **2. Performance Goals; Vesting**

(a) The Grantee shall earn and vest in a number of Performance Units based on the attainment of the Performance Goals for the Performance Period, provided that the Grantee continues to be employed by the Company or its subsidiaries or affiliates (collectively the “Employer”) through December 31, 2019 (the “Vesting Date”). The Performance Units shall be earned based on attainment of the Performance Goals and shall vest based on the Grantee’s continued employment through the Vesting Date, or as otherwise provided below.

(b) After the end of the Performance Period, the Management Development and Compensation Committee (the “Committee”) will determine whether and to what extent the Performance Goals have been met and the amount earned with respect to the Performance Units. The Grantee can earn up to 225% of the Target Award based on attainment of the Performance Goals, as set forth in the Grant Letters. Earned and vested Performance Units shall be payable as described in Section 5.

(c) If a Change in Control occurs, the amount earned with respect to the Performance Units shall be determined as of the date of the Change in Control as described in the Grant Letters. The earned Performance Units shall continue to vest based on the Grantee’s continued employment through the Vesting Date, except as otherwise provided herein. Earned and vested Performance Units shall be payable as described in Section 5. Notwithstanding the foregoing, if the Performance Units are not assumed by, or replaced by substantially identical grants by, the successor company in the Change in Control, the earned Performance Units shall vest as of the date of the Change in Control, and such earned and vested Performance Units shall be paid as of the date of the Change in Control if the Change in Control is a 409A CIC (as defined below) and if permitted by the plan termination provisions of the regulations under section 409A of the Code. If payment at the date of the Change in Control is not permitted under section 409A, the earned and vested Performance Units shall be payable as described in Section 5.

(d) Except as described below, no Performance Units shall be earned prior to the Committee’s determination of achievement of the Performance Goals, and to the extent that the Performance Goals are not attained, the Performance Units shall be immediately forfeited and shall cease to be outstanding as of the date of the Committee’s determination.

### 3. Termination of Employment.

(a) *General Rule* . Except as described below, if the Grantee ceases to be employed by the Employer prior to the Vesting Date, the Performance Units shall be forfeited as of the termination date and shall cease to be outstanding.

(b) *“55/5” Rule Termination* . If, after ten months following the Date of Grant but prior to the Vesting Date, the Grantee ceases to be employed by the Employer on account of a “55 / 5” Rule Termination (as defined below), the Grantee shall earn and vest in a pro-rated portion of the outstanding Performance Units based on the extent to which the Performance Goals are achieved for the Performance Period; provided such vesting does not result in a violation of any age discrimination or other applicable law. In the event of a Change in Control, the amount achieved for the Performance Period shall be determined as of the Change in Control date as described in the Grant Letters. The pro-rated portion shall be determined by multiplying the number of Performance Units earned based on attainment of the Performance Goals by a fraction, the numerator of which is the number of months that elapsed during the period beginning on January 1, 2017 through the Grantee’s termination date, and the denominator of which is 36. A partial month after the month of grant shall count as a full month for purposes of this calculation. The pro-rated earned Performance Units shall be paid as described in Section 5.

(c) *Involuntary Termination before a Change in Control* . If, before a Change in Control and after ten months following the Date of Grant but prior to the Vesting Date, the Grantee ceases to be employed by the Employer on account of Involuntary Termination (as defined below), the Grantee shall earn and vest in a pro-rated portion of the outstanding Performance Units based on the extent to which the Performance Goals are achieved for the Performance Period, provided such vesting does not result in a violation of any age discrimination or other applicable law. In the event of a subsequent Change in Control, the amount achieved for the Performance Period shall be determined as of the Change in Control date as described in the Grant Letters. The pro-rated portion shall be determined by multiplying the number of Performance Units earned based on attainment of the Performance Goals by a fraction, the numerator of which is the number of months that elapsed during the period beginning on January 1, 2017 through the Grantee’s termination date, and the denominator of which is 36. A partial month after the month of grant shall count as a full month for purposes of this calculation. The pro-rated earned Performance Units shall be paid as described in Section 5.

(d) *Death or Long-Term Disability Before a Change in Control* . If, before a Change in Control, the Grantee ceases to be employed by the Employer prior to the Vesting Date on account of death or Long-Term Disability (as defined below), the Grantee shall earn and vest in a pro-rated portion of the outstanding Performance Units based on the extent to which the Performance Goals are achieved for the Performance Period. In the event of a subsequent Change in Control, the amount achieved for the Performance Period shall be determined as of the Change in Control date as described in the Grant Letters. The pro-rated portion shall be determined by multiplying the number of Performance Units earned based on attainment of the Performance Goals by a fraction, the numerator of which is the number of months that elapsed during the period beginning on January 1, 2017 through the Grantee’s termination date and the denominator of which is 36. A partial month after the month of grant shall count as a full month for purposes of this calculation. The pro-rated earned Performance Units shall be paid as described in Section 5.

(e) *Involuntary Termination, Death and Disability on or after a Change in Control*. If the Grantee’s employment terminates on account of Involuntary Termination, death or Long-Term Disability on or after a Change in Control and prior to the Vesting Date, the Grantee shall vest in the Performance Units earned as of the Change in Control date as described in the Grant Letters. If the Grantee has a Change in Control Severance Agreement with the Company (“Change in Control Agreement”), on and after a Change in Control, the term “Involuntary Termination” shall have the meaning given a termination by the Company without Cause in the Change in Control Agreement, and shall include without limitation a termination for Good Reason as defined in the Change in Control Agreement. **The Grantee agrees that, subject to the immediately preceding sentence, if and to the extent that these Grant Conditions conflict with the terms of the Change in Control Agreement or any employment agreement between the Company and the Grantee, these Grant Conditions shall supersede the provisions of the Change in Control Agreement and employment agreement applicable to vesting of performance units on and after a Change in Control, notwithstanding anything in the Change in Control Agreement or employment agreement to the contrary.**

(f) *Coordination of Provisions* . If the Grantee terminates employment in a termination that is both a “55 / 5’ Rule Termination” and an Involuntary Termination, the termination shall be treated as an Involuntary Termination for purposes of the Grant Condition and Grant Letters.

4. Definitions . For purposes of these Grant Conditions and the Grant Letters:

(a) “ 55 / 5’ Rule Termination ” shall mean the Grantee’s termination of employment other than for Cause after the Grantee has attained age 55 and has completed at least five years of service with the Employer.

(b) “ Cause ” shall mean any of the following, as determined in the sole discretion of the Employer: (i) commission of a felony or a crime involving moral turpitude; (ii) fraud, dishonesty, misrepresentation, theft or misappropriation of funds with respect to the Employer; (iii) violation of the Employer’s Code of Conduct or employment policies, as in effect from time to time; (iv) breach of any written noncompetition, confidentiality or nonsolicitation covenant of the Grantee with respect to the Employer; or (v) gross negligence or misconduct in the performance of the Grantee’s duties with the Employer.

(c) “ Involuntary Termination ” shall mean the Employer’s termination of the Grantee’s employment other than for Cause.

(d) “ Long-Term Disability ” shall mean the Grantee is receiving long-term disability benefits under the Employer’s long-term disability plan.

5. Payment .

(a) Except as provided below, after the end of the Performance Period, if the Committee certifies that the Performance Goals and other conditions to payment of the Performance Units have been met, the Company shall issue shares of Company Stock to the Grantee equal to the number of earned and vested Performance Units, subject to applicable withholding for Taxes (as defined below) and subject to compliance with section 409A of the Code and as described in Section 20(h) of the Plan. Payment of earned and vested Performance Units shall be made in 2020 as soon as practicable after the Committee certifies the extent to which the Performance Goals and other conditions to payment of the Performance Units have been met, but not later than May 31, 2020, except as provided below. All unpaid Performance Units shall be forfeited in the event of termination for Cause.

(b) If the Grantee’s employment terminates for any reason other than Cause upon or within two years after a Change in Control that meets the requirements of a 409A CIC, the Grantee’s Performance Units that are unpaid earned and vested (if any) shall be paid within 60 days after the termination date, subject to compliance with section 409A of the Code, if applicable, and as described in Section 20(h) of the Plan. The Company shall issue shares of Company Stock to the Grantee equal to the number of the earned and vested Performance Units, subject to applicable withholding for Taxes. If a Change in Control does not meet the requirements of a 409A CIC, the Grantee’s earned and vested Performance Units (if any) shall be paid on the date described in subsection (a).

(c) Any fractional shares will be rounded up to the nearest whole share, but not exceeding 225% of the Target Award.

6. Dividend Equivalents . Dividend Equivalents shall accrue with respect to Performance Units and shall be payable subject to the same Performance Goals, vesting terms and other conditions as the Performance Units to which they relate. Dividend Equivalents shall be credited on the Performance Units when dividends are declared on shares of Company Stock from the Date of Grant until the payment date for the vested Performance Units. The Company will keep records of Dividend Equivalents in a non-interest bearing bookkeeping account for the Grantee. No interest will be credited to any such account. Vested Dividend Equivalents shall be paid in cash at the same time and subject to the same terms as the underlying vested Performance Units. If and to the extent that the underlying Performance Units are forfeited, all related Dividend Equivalents shall also be forfeited.

7. Delivery of Shares . The Company’s obligation to deliver shares upon the vesting of the Performance Units shall be subject to applicable laws, rules and regulations and also to such approvals by governmental agencies as may be deemed appropriate to comply with relevant securities laws and regulations.

8. No Shareholder Rights. No shares of Company Stock shall be issued to the Grantee on the Date of Grant, and the Grantee shall not be, nor have any of the rights or privileges of, a shareholder of the Company with respect to any Performance Units.

9. No Right to Continued Employment. The grant of Performance Units shall not confer upon the Grantee any right to continued employment with the Employer or interfere with the right of the Employer to terminate the Grantee's employment at any time.

10. Incorporation of Plan by Reference. The Grant Letters and these Grant Conditions are made pursuant to the terms of the Plan, the terms of which are incorporated herein by reference, and shall in all respects be interpreted in accordance therewith. The decisions of the Committee shall be conclusive upon any question arising hereunder. The Grantee's receipt of the Performance Units constitutes the Grantee's acknowledgment that all decisions and determinations of the Committee with respect to the Plan, the Grant Letters, these Grant Conditions, and the Performance Units shall be final and binding on the Grantee and any other person claiming an interest in the Performance Units.

11. Withholding Taxes.

(a) The Employer shall have the right, and the Grantee hereby authorizes the Employer, to deduct from all payments made hereunder and from other compensation an amount equal to the federal (including FICA), state, local and foreign taxes, social insurance, payroll tax, contributions, payment on account obligations or other amounts required by law to be collected, withheld or accounted for with respect to the Performance Units (the "Taxes"). The Employer will withhold shares of Company Stock payable hereunder to satisfy the withholding obligation for Taxes on amounts payable in shares, unless the Grantee provides a payment to the Employer to cover such Taxes, in accordance with procedures established by the Committee. The share withholding amount shall be determined in accordance with the procedures approved by the Committee.

(b) Regardless of any action the Employer takes with respect to any such Taxes, the Grantee acknowledges that the ultimate liability for all such Taxes legally due by the Grantee is and remains the Grantee's responsibility and may exceed the amount actually withheld by the Employer. The Grantee further acknowledges that the Employer (i) makes no representations or undertakings regarding the treatment of any Taxes in connection with any aspect of the Performance Units, including the grant, vesting or settlement of the Performance Units and the subsequent sale of any shares of Company Stock acquired at settlement and the receipt of any Dividend Equivalents; and (ii) does not commit to structure the terms of the grant or any aspect of the Performance Units to reduce or eliminate the Grantee's liability for Taxes. Further, if the Grantee has become subject to tax in more than one jurisdiction between the Date of Grant and the date of any relevant taxable event, the Grantee acknowledges that the Employer (or the Grantee's former employer, as applicable) may be required to collect, withhold or account for Taxes in more than one jurisdiction.

12. Company Policies. All amounts payable under the Grant Letters and these Grant Conditions shall be subject to any applicable clawback or recoupment policies, share trading policies and other policies that may be implemented by the Company's Board of Directors from time to time.

13. Assignment. The Grant Letters and these Grant Conditions shall bind and inure to the benefit of the successors and assignees of the Company. The Grantee may not sell, assign, transfer, pledge or otherwise dispose of the Performance Units, except to a successor grantee in the event of the Grantee's death.

14. Section 409A. The Grant Letters and these Grant Conditions are intended to comply with section 409A of the Code or an exemption, consistent with Section 20(h) of the Plan, including the six-month delay for specified employees in accordance with the requirements of section 409A of the Code, if applicable. In furtherance of the foregoing, if the Performance Units or related Dividend Equivalents constitute "nonqualified deferred compensation" within the meaning of section 409A of the Code, vested Performance Units and related Dividend Equivalents shall be settled on the earliest date that would be permitted under section 409A of the Code without incurring penalty or accelerated taxes thereunder.

15. Successors. The provisions of the Grant Letters and these Grant Conditions shall extend to any business that becomes a successor to the Company or its subsidiaries or affiliates on account of a merger, consolidation, sale

of assets, spinoff or similar transaction with respect to any business of the Company or its subsidiaries or affiliates with which the Grantee is employed, and if this grant continues in effect after such corporate event, references to the “Company or its subsidiaries or affiliates” or the “Employer” in the Grant Letters and these Grant Conditions shall include the successor business and its affiliates, as appropriate. In that event, the Company may make such modifications to the Grant Letters and these Grant Conditions as it deems appropriate to reflect the corporate event.

16. Governing Law. The validity, construction, interpretation and effect of the Grant Letters and these Grant Conditions shall be governed by, and determined in accordance with, the applicable laws of the Commonwealth of Pennsylvania, excluding any conflicts or choice of law rule or principle.

17. No Entitlement or Claims for Compensation. In connection with the acceptance of the grant of the Performance Units under the Grant Letters and these Grant Conditions, the Grantee acknowledges the following:

(a) the Plan is established voluntarily by the Company, the grant of the Performance Units under the Plan is made at the discretion of the Committee and the Plan may be modified, amended, suspended or terminated by the Company at any time;

(b) the grant of the Performance Units under the Plan is voluntary and occasional and does not create any contractual or other right to receive future grants of Performance Units, or benefits in lieu of them, even if Performance Units have been granted repeatedly in the past;

(c) all decisions with respect to future grants of Performance Units, if any, will be at the sole discretion of the Committee;

(d) the Grantee is voluntarily participating in the Plan;

(e) the Performance Units and any shares of Company Stock acquired under the Plan are extraordinary items that do not constitute compensation of any kind for services of any kind rendered to the Employer (including, as applicable, the Grantee’s employer) and which are outside the scope of the Grantee’s employment contract, if any;

(f) the Performance Units and any shares of Company Stock acquired under the Plan are not to be considered part of the Grantee’s normal or expected compensation or salary for any purpose, including, but not limited to, calculating any severance, resignation, termination, payment in lieu of notice, redundancy, end of service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments;

(g) the Performance Units and the shares of Company Stock subject to the award are not intended to replace any pension rights or compensation;

(h) the grant of Performance Units and the Grantee’s participation in the Plan will not be interpreted to form an employment contract or relationship with the Employer;

(i) the future value of the underlying shares of Company Stock is unknown and cannot be predicted with certainty. If the Grantee vests in the Performance Units and receives shares of Company Stock, the value of the acquired shares may increase or decrease. The Grantee understands that the Company is not responsible for any foreign exchange fluctuation between the United States Dollar and the Grantee’s local currency that may affect the value of the Performance Units or the shares of Company Stock; and

(j) the Grantee shall have no rights, claim or entitlement to compensation or damages as a result of the Grantee’s cessation of employment (for any reason whatsoever, whether or not in breach of contract or local labor law or the terms of the Grantee’s employment agreement, if any), insofar as these rights, claim or entitlement arise or may arise from the Grantee’s ceasing to have rights under or be entitled to receive shares of Company Stock under or ceasing to have the opportunity to participate in the Plan as a result of such cessation or loss or diminution in value of the Performance Units or any of the shares of Company Stock acquired thereunder as a result of such cessation, and the Grantee irrevocably releases the Employer from any such rights, entitlement or claim that may arise. If, notwithstanding the foregoing, any such right or claim is found by a court of competent jurisdiction to have

arisen, then the Grantee shall be deemed to have irrevocably waived the Grantee's entitlement to pursue such rights or claim.

18. Data Privacy .

(a) The Grantee hereby explicitly, willingly and unambiguously consents to the collection, systematization, accumulation, storage, blocking, destruction, use, disclosure and transfer, in electronic or other form, of the Grantee's personal data as described in these Grant Conditions by and among, as applicable, the Grantee's employer, the Company or its subsidiaries or affiliates for the exclusive purpose of implementing, administering and managing the Grantee's participation in the Plan.

(b) The Grantee understands that the Grantee's employer, the Company or its subsidiaries or affiliates, as applicable, hold certain personal information and sensitive personal information about the Grantee regarding the Grantee's employment, the nature and amount of the Grantee's compensation and the fact and conditions of the Grantee's participation in the Plan, including, but not limited to, the Grantee's name, home address and telephone number, date of birth, social insurance number or other identification number, salary, nationality, job title, any shares of stock or directorships held in the Company or its subsidiaries or affiliates, details of all options, awards or any other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in the Grantee's favor, for the purpose of implementing, administering and managing the Plan (the "Data").

(c) The Grantee understands that the Data may be transferred, including any cross-border, transfer to the Company, its subsidiaries and affiliates and, any third parties assisting in the implementation, administration and management of the Plan, that these recipients may be located in the Grantee's country, or elsewhere, and that the recipient's country may have different data privacy laws and protections than the Grantee's country. The Grantee understands that the Grantee may request a list with the names and addresses of any potential recipients of the Data by contacting the Grantee's local human resources representative. The Grantee authorizes the recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes of implementing, administering and managing the Grantee's participation in the Plan, including any requisite transfer of such Data as may be required to a broker or other third party. The Grantee understands that the Data will be held only as long as is necessary to implement, administer and manage the Grantee's participation in the Plan. The Grantee understands that the Grantee may, at any time, view the Data, request additional information about the storage and processing of the Data, require any necessary amendments to the Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing the Grantee's local human resources representative. The Grantee understands, however, that refusing or withdrawing the Grantee's consent may affect the Grantee's ability to participate in the Plan. For more information on the consequences of refusal to consent or withdrawal of consent, the Grantee understands that the Grantee may contact the Grantee's local human resources representative.

19. Addendum . Notwithstanding any provisions in these Grant Conditions, the Performance Units shall be subject to any special terms and conditions set forth in any Addendum to this Agreement for the Grantee's country. Moreover, if the Grantee relocates to one of the countries included in the Addendum, the special terms and conditions for such country will apply to the Grantee, to the extent the Company determines that the application of such terms and conditions is necessary for legal or administrative reasons. The Addendum constitutes part of these Grant Conditions.

\* \* \*

**ADDENDUM**

**ARMSTRONG WORLD INDUSTRIES, INC.  
PERFORMANCE RESTRICTED STOCK UNIT GRANT**

*Additional Terms and Conditions and Notifications*

This Addendum includes special terms and conditions that govern the Performance Units granted to the Grantee if the Grantee resides or works in the countries listed herein. These terms and conditions are in addition to the terms and conditions set forth in the Grant Conditions. This Addendum may also include information regarding certain other issues of which the Grantee should be aware with respect to the Grantee’s participation in the Plan. Capitalized terms used but not defined herein shall have the meanings assigned to them in the Grant Conditions (of which this Addendum is a part) and the Plan.

Australia

*Offer Document*

Participation in the Plan and the Performance Units granted under the Plan are subject to the terms and conditions stated in the Offer Document attached hereto.

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## OFFER TO AUSTRALIAN RESIDENT EMPLOYEES

### ARMSTRONG WORLD INDUSTRIES, INC. 2016 LONG-TERM INCENTIVE PLAN

This Offer Document sets out information regarding the participation of Australian resident employees of Armstrong World Industries, Inc. ( *Armstrong* or the *Company* ) and its Australian subsidiaries in grants of restricted stock units made under the Armstrong World Industries, Inc. 2016 Long-Term Incentive Plan ( *Plan* ).

**Investment in securities involves a degree of risk and there is no guarantee of the future value of, or returns from, securities you may acquire under the Plan. Employees who elect to participate in the Plan should consider all risk factors relevant to the acquisition of securities under the Plan as set out in this document and any associated documents.**

**The information contained in this document and any associated documents is general information only. It is not advice or information specific to your particular objectives, financial situation or needs. Australian employees should consider obtaining their own financial product advice from an independent person who is licensed by the Australian Securities and Investments Commission to give advice about participation in the Plan.**

#### 1. OFFER AND TERMS OF PARTICIPATION

This Offer Document relates to an invitation by the Company to eligible employees in Australia to accept grants of restricted stock units made under the Plan. The restricted stock units will be issued at no cost to you.

The terms of your participation are set out in the Plan, the Plan Summary (as supplemented by the Australian Addendum and the Australian Tax Supplement to the Plan Summary), the Grant Letter, the Terms and Conditions and this Offer Document.

By accepting a grant of restricted stock units, you will be bound by terms set out in the Plan, the Plan Summary (as supplemented by the Australian Addendum and the Australian Tax Supplement), the Grant Letter, the Terms and Conditions and this Offer Document.

#### 2. HOW CAN I ASCERTAIN THE CURRENT MARKET PRICE OF SHARES UNDERLYING THE RESTRICTED STOCK UNITS IN AUSTRALIAN DOLLARS?

You could, from time to time, ascertain the market price of a share of common stock in the Company ( *Share* ) by obtaining that price from the New York Stock Exchange website, the Company website or The Wall Street Journal, and multiplying that price by a published exchange rate to convert U.S. Dollars into Australian Dollars, to determine the Australian dollar equivalent of that current market price.

#### 3. RISKS OF ACQUIRING AND HOLDING SHARES

Acquiring and holding restricted stock units and Shares involves risk. These risks include that:

(a) There is no guarantee that Shares will grow in value - they may decline in value. Stock markets are subject to fluctuations and the price of Shares can rise and fall, depending upon the Company's performance and other internal and external factors.

(b) The Company may decide not to continue to pay dividends on its Shares at the current level, or may decide to cease the payment of dividends on its Shares.

(c) There are tax implications involved in acquiring and holding restricted stock units and Shares and the tax regime applying to you may change.

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I, Victor D. Grizzle, certify that:

- 1) I have reviewed this quarterly report on Form 10-Q of Armstrong World Industries, Inc.;
- 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 controls over financial reporting.

Date: May 1, 2017

/s/ Victor D. Grizzle

Victor D. Grizzle

Director, President and Chief Executive Officer

I, Brian L. MacNeal, certify that:

- 1) I have reviewed this quarterly report on Form 10-Q of Armstrong World Industries, Inc.;
- 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 controls over financial reporting.

Date: May 1, 2017

/s/ Brian L. MacNeal

Brian L. MacNeal

Senior Vice President and Chief Financial Officer

Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

I certify to the best of my knowledge and belief that the periodic report on Form 10-Q of Armstrong World Industries, Inc. (the "Company") containing its financial statements for the fiscal quarter ended March 31, 2017 fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934, and that information contained in that report fairly presents, in all material respects, the financial condition and results of operations of the Company as of that date.

/s/ Victor D. Grizzle

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Victor D. Grizzle

Director, President and Chief Executive Officer  
Armstrong World Industries, Inc.

Dated: May 1, 2017

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

Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

I certify to the best of my knowledge and belief that the periodic report on Form 10-Q of Armstrong World Industries, Inc. (the "Company") containing its financial statements for the fiscal quarter ended March 31, 2017 fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934, and that information contained in that report fairly presents, in all material respects, the financial condition and results of operations of the Company as of that date.

/s/ Brian L. MacNeal

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Brian L. MacNeal  
Senior Vice President and Chief Financial Officer  
Armstrong World Industries, Inc.

Dated: May 1, 2017

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