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## Armstrong World Industries Reports Third Quarter 2020 Results

October 27, 2020

### Key Highlights

- Net sales of \$246.3 million, down 11% versus the prior year quarter
- Operating income of \$72.3 million, down 36% versus the prior year quarter
- Adjusted EBITDA down 19% versus the prior year quarter
- Acquired Turf Design and Moz Designs during the quarter
- 2020 Guidance: Net Sales of \$920-\$935 million, EBITDA of \$320-\$330 million, and adjusted Free Cash Flow of \$200-\$210 million

LANCASTER, Pa., Oct. 27, 2020 (GLOBE NEWSWIRE) -- Armstrong World Industries, Inc. (NYSE:AWI), a leader in the design, innovation and manufacture of commercial and residential ceiling, wall and suspension system solutions, today reported financial results for the third quarter of 2020.

### Third Quarter Results from Continuing Operations

(Dollar amounts in millions except per-share data)	For the Three Months Ended September 30,		
	2020	2019	Change
Net sales	\$ 246.3	\$ 277.1	(11.1)%
Operating income	\$ 72.3	\$ 113.3	(36.2)%
Earnings from continuing operations	\$ 54.2	\$ 90.7	(40.2)%
Diluted earnings per share	\$ 1.13	\$ 1.83	(38.3)%

Net sales decreased compared to the prior year quarter, driven by lower volume in both the Mineral Fiber and Architectural Specialties segments as a result of lower market demand due to COVID-19, as well as unfavorable Mineral Fiber AUV primarily due to regional weakness in major metropolitan areas heavily impacted by COVID-19 and channel mix, partially offset by the positive sales impact of 2020 and 2019 acquisitions.

Operating income decreased from the prior year quarter, driven primarily by lower sales volume in the Mineral Fiber segment and lower earnings from our WAVE joint venture, partially offset by improved manufacturing productivity. Equity earnings in the third quarter of 2019 included a net \$21 million gain on WAVE's sale of its European and Pacific Rim businesses.

"As expected, we saw a sequentially better demand environment in the third quarter, and we expect this improving trend to continue into the fourth quarter. I am pleased that in a quarter impacted by a pandemic we were able to close on two more strategic acquisitions, Turf Design and Moz Designs, our sixth and seventh acquisitions since 2017. Turf gives us the leading position in the growing category of felt ceilings, walls and barriers, and Moz extends our leadership position and capabilities in metal ceilings, walls and column covers," said Vic Grizzle, President and CEO of Armstrong. "Ceilings play a critical role in the creation of healthy spaces and our recently announced *24/7 Defend* line of products represent innovative new solutions to enable everyone to get back to life and work in a healthy and safe way."

### Additional (non-GAAP\*) Financial Metrics from Continuing Operations

(Dollar amounts in millions except per-share data)	For the Three Months Ended September 30,		
	2020	2019	Change
Adjusted EBITDA	\$ 92	\$ 114	(19.2)%
Adjusted net income	\$ 49	\$ 68	(28.0)%
Adjusted diluted earnings per share	\$ 1.07	\$ 1.38	(22.3)%
Adjusted free cash flow	\$ 46	\$ 99	(53.9)%

\* The Company uses the above non-GAAP adjusted measures in managing the business and believes the adjustments provide meaningful comparisons of operating performance between periods. The Company also believes that the adjustments help users of our financial information understand the effect of those adjusted items on our selected reported results and provide useful alternative measurements of performance. See Supplemental Reconciliations of GAAP to non-GAAP results (below) for a breakdown of the adjustments and a reconciliation of the selected reported results to these non-GAAP measures.

(Dollar amounts in millions)	For the Three Months Ended September 30,		
	2020	2019	Change

## Adjusted EBITDA

Mineral Fiber	\$	79	\$	99	(20.6	)%
Architectural Specialties		13		14	(8.7	)%
<b>Consolidated Adjusted EBITDA</b>	<b>\$</b>	<b>92</b>	<b>\$</b>	<b>114</b>	<b>(19.2</b>	<b>)%</b>

Consolidated adjusted EBITDA declined 19% in the third quarter when compared to the same prior year period, driven primarily by lower sales volume, unfavorable AUV and a decrease in WAVE earnings, partially offset by improved manufacturing productivity. Adjusted free cash flow declined primarily due to lower cash earnings driven by volume declines.

## Third Quarter Segment Highlights

### Mineral Fiber

(Dollar amounts in millions)	For the Three Months Ended			Change	
	September 30,				
	2020	2019			
Net sales (as reported)	\$ 187.3	\$ 218.6	(14.3	)%	
Operating income (as reported)	\$ 58.1	\$ 103.5	(43.9	)%	
Adjusted EBITDA	\$ 79	\$ 99	(20.6	)%	

Mineral Fiber net sales decreased due to lower volume and unfavorable AUV. Unfavorable AUV was driven by mix due primarily to regional weakness in major metropolitan areas heavily impacted by COVID-19 and channel mix. Like for like price was positive in the quarter.

Operating income decreased in the second quarter primarily due to the negative impact of lower sales volume, lower WAVE earnings and the impact of unfavorable AUV, partially offset by improved manufacturing productivity and a reduction in incentive compensation expenses.

### Architectural Specialties

(Dollar amounts in millions)	For the Three Months Ended			Change	
	September 30,				
	2020	2019			
Net sales (as reported)	\$ 59.0	\$ 58.5	0.9	%	
Operating income (as reported)	\$ 9.1	\$ 11.6	(21.6	)%	
Adjusted EBITDA	\$ 13	\$ 14	(8.7	)%	

Net sales in Architectural Specialties increased slightly due to sales from the recent acquisitions of Turf Design and Moz Designs, mostly offset by a reduction in demand as a result of the COVID-19 pandemic.

Operating income decreased due the negative impact of lower sales volume, excluding the impact of the 2019 and 2020 acquisitions, as well as additional amortization expense related to acquisitions.

### Unallocated Corporate

Unallocated corporate income of \$5.2 million increased from \$1.8 million of expense in the prior year quarter primarily due to gains related to the sale of our idled Mineral Fiber plant in China.

## Year to Date Results from Continuing Operations

(Dollar amounts in millions)	For the Nine Months Ended			Change	
	September 30,				
	2020	2019			
Net sales (as reported)	\$ 698.2	\$ 791.2	(11.8	)%	
Operating income (as reported)	\$ 210.7	\$ 255.2	(17.4	)%	
Adjusted EBITDA	\$ 257	\$ 314	(17.9	)%	

Net sales decreased driven mainly by lower volumes in both the Mineral Fiber and Architectural Specialties segments as a result of the COVID-19 pandemic and unfavorable AUV in the Mineral Fiber segment.

Operating income decreased from the prior year period, primarily due to impact of decreased sales, partially offset by lower SG&A expense, the gain on sale of the idled China plant, and improved manufacturing productivity.

## Market Outlook and 2020 Guidance

"Assuming continued sequential market improvement and no second wave of construction site shutdowns, we expect sales for the full year in the range of \$920-\$935 million, adjusted EBITDA in the range of \$320-\$330 million, and adjusted free cash flow of \$200-\$210 million," said Brian MacNeal, CFO of Armstrong. "With a strong balance sheet and ample liquidity, we continue to remain confident in our ability to execute on our long-term value creation strategy."

## Earnings Webcast

Management will host a live internet broadcast beginning at 11:00 a.m. eastern time today, to discuss third quarter 2020 results. This event will be broadcast live on the Company's website. To access the call and accompanying slide presentation, go to [www.armstrongceilings.com](http://www.armstrongceilings.com) and click Investors. The replay of this event will also be available on the Company's website for up to one year after the date of the call.

## Uncertainties Affecting Forward-Looking Statements

Disclosures in this release, including without limitation, those relating to future financial results, market conditions and guidance, and in our other public documents and comments, contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Those statements provide our future expectations or forecasts and can be identified by our use of words such as “anticipate,” “estimate,” “expect,” “project,” “intend,” “plan,” “believe,” “outlook,” “target,” “predict,” “may,” “will,” “would,” “could,” “should,” “seek,” and other words or phrases of similar meaning in connection with any discussion of future operating or financial performance. Forward-looking statements, by their nature, address matters that are uncertain and involve risks because they relate to events and depend on circumstances that may or may not occur in the future. As a result, our actual results may differ materially from our expected results and from those expressed in our forward-looking statements. A more detailed discussion of the risks and uncertainties that could cause our actual results to differ materially from those projected, anticipated or implied is included in the “Risk Factors” and “Management’s Discussion and Analysis” section of our report on Forms 10-K/A and 10-Q filed with the U.S. Securities and Exchange Commission (“SEC”). Forward-looking statements speak only as of the date they are made. We undertake no obligation to update any forward-looking statements beyond what is required under applicable securities law.

## About Armstrong and Additional Information

More details on the Company’s performance can be found in its quarterly report on Form 10-Q for the quarter ended September 30, 2020 that the Company expects to file with the SEC today.

Armstrong World Industries, Inc. (AWI) is a leader in the design and manufacture of innovative commercial and residential ceiling, wall and suspension system solutions in the Americas. With over \$1 billion in revenue in 2019, AWI has approximately 2,500 employees and a manufacturing network of 15 facilities, plus five facilities dedicated to its WAVE joint venture.

Additional forward looking non-GAAP metrics are available on the Company’s website at [www.armstrongceilings.com](http://www.armstrongceilings.com) under the Investors tab. The website is not part of this release and references to our website address in this release are intended to be inactive textual references only.

## As Reported Financial Highlights

**FINANCIAL HIGHLIGHTS**  
Armstrong World Industries, Inc. and Subsidiaries  
(Amounts in millions, except for per-share amounts, quarterly data is unaudited)

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2020	2019	2020	2019
Net sales	\$ 246.3	\$ 277.1	\$ 698.2	\$ 791.2
Cost of goods sold	155.1	165.4	447.9	484.7
Gross profit	91.2	111.7	250.3	306.5
Selling, general and administrative expenses	41.0	41.3	108.8	134.3
Gain related to sale of fixed and intangible assets	(6.9 )	-	(21.0 )	-
Equity earnings from joint venture	(15.2 )	(42.9 )	(48.2 )	(83.0 )
Operating income	72.3	113.3	210.7	255.2
Interest expense	6.1	11.7	18.7	31.6
Other non-operating (income) expense, net	(3.2 )	(5.1 )	361.8	(16.0 )
Earnings (loss) from continuing operations before income taxes	69.4	106.7	(169.8 )	239.6
Income tax expense (benefit)	15.2	16.0	(50.9 )	48.8
Earnings (loss) from continuing operations	54.2	90.7	(118.9 )	190.8
Net (loss) from discontinued operations	(0.2 )	(17.5 )	(3.0 )	(24.0 )
Net earnings (loss)	\$ 54.0	\$ 73.2	\$ (121.9 )	\$ 166.8
Diluted earnings (loss) per share of common stock, continuing operations:	\$ 1.13	\$ 1.83	\$ (2.48 )	\$ 3.84
Diluted earnings (loss) per share of common stock, discontinued operations:	\$ -	\$ (0.35 )	\$ (0.06 )	\$ (0.48 )
Net earnings (loss) per share of common stock:	\$ 1.13	\$ 1.48	\$ (2.54 )	\$ 3.36
Average number of diluted common shares outstanding:	48.0	49.5	47.9	49.6

**SEGMENT RESULTS**  
Armstrong World Industries, Inc. and Subsidiaries  
(Amounts in millions)  
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Net Sales				
Mineral Fiber	\$ 187.3	\$ 218.6	\$ 542.9	\$ 629.4

Architectural Specialties	59.0	58.5	155.3	161.8
Total net sales	\$ 246.3	\$ 277.1	\$ 698.2	\$ 791.2
	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2020	2019	2020	2019
Segment operating income (loss)				
Mineral Fiber	\$ 58.1	\$ 103.5	\$ 173.7	\$ 230.5
Architectural Specialties	9.1	11.6	20.9	30.3
Unallocated Corporate	5.1	(1.8 )	16.1	(5.6 )
Total consolidated operating income	\$ 72.3	\$ 113.3	\$ 210.7	\$ 255.2

Selected Balance Sheet Information  
(Amounts in millions)

	September 30, 2020	December 31, 2019
Assets		
Current assets	\$ 323.3	\$ 244.4
Property, plant and equipment, net	514.8	524.6
Other noncurrent assets	795.2	724.3
Total assets	\$ 1,633.3	\$ 1,493.3
Liabilities and shareholders' equity		
Current liabilities	\$ 132.3	\$ 155.2
Noncurrent liabilities	1,058.4	973.2
Equity	442.6	364.9
Total liabilities and shareholders' equity	\$ 1,633.3	\$ 1,493.3

Selected Cash Flow Information  
(Amounts in millions)  
(Unaudited)

	For the Nine Months Ended September 30,	
	2020	2019
Net (loss) earnings	\$ (121.9 )	\$ 166.8
Other adjustments to reconcile net (loss) earnings to net cash provided by operating activities	284.9	45.6
Changes in operating assets and liabilities, net	(14.6 )	(91.0 )
Net cash provided by operating activities	148.4	121.4
Net cash (used for) investing activities	(52.2 )	(70.9 )
Net cash (used for) financing activities	(2.5 )	(289.0 )
Effect of exchange rate changes on cash and cash equivalents	(0.2 )	0.8
Net increase (decrease) in cash and cash equivalents	93.5	(237.7 )
Cash and cash equivalents at beginning of year	45.3	335.7
Cash and cash equivalents at end of period	\$ 138.8	\$ 98.0

**Supplemental Reconciliations of GAAP to non-GAAP Results (unaudited)**

(Amounts in millions, except per share data)

To supplement its consolidated financial statements presented in accordance with accounting principles generally accepted in the United States ("GAAP"), the Company provides additional measures of performance adjusted to exclude the impact of certain discrete expenses and income. Investors should not consider non-GAAP measures as a substitute for GAAP measures. Examples of excluded items include plant closures, restructuring charges and related costs, impairments, separation costs, environmental site expenses and related insurance recoveries, and certain other gains and losses. The Company also excludes income/expense from its U.S. Retirement Income Plan ("RIP") in the non-GAAP results as it represents the actuarial net periodic benefit credit/cost recorded. For all periods presented, the Company was not required and did not make cash contributions to the RIP based on guidelines established by the Pension Benefit Guaranty Corporation, nor does the Company expect to make cash contributions to the plan in 2020. Adjusted free cash flow is defined as cash from operating and investing activities, adjusted to remove the impact of cash used or proceeds received for acquisitions and divestitures, legacy environmental matters and litigation. The Company believes adjusted free cash flow is useful because it provides insight into the amount of cash that the Company generates for discretionary uses, after expenditures for capital investments and adjustments for acquisitions and divestitures. The Company uses these adjusted performance measures in managing the business, including communications with its Board of Directors and employees, and believes that they provide users of this financial information with meaningful comparisons of operating performance between current results and results in prior periods. The Company believes that these non-GAAP financial measures are appropriate to enhance understanding of its past performance, as well as prospects for its future performance. The Company also uses adjusted EBITDA and adjusted free cash flow as factors in determining at-risk compensation for senior management. These non-GAAP measures may not be defined and calculated the same as similar measures used by other companies. A reconciliation of these adjustments to the

most directly comparable GAAP measures is included in this release and on the Company's website. These non-GAAP measures should not be considered in isolation or as a substitute for the most comparable GAAP measures. Non-GAAP financial measures utilized by the Company may not be comparable to non-GAAP financial measures used by other companies.

In the following charts, numbers may not sum due to rounding.

### Consolidated Results From Continuing Operations – Adjusted EBITDA

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2020	2019	2020	2019
<b>Earnings (Loss) from continuing operations, Reported</b>	<b>\$ 54</b>	<b>\$ 91</b>	<b>\$ (119 )</b>	<b>\$ 191</b>
Add: Income tax expense (benefit), as reported	15	16	(51 )	49
<b>Earnings (Loss) before tax, Reported</b>	<b>\$ 69</b>	<b>\$ 107</b>	<b>\$ (170 )</b>	<b>\$ 240</b>
Add: Interest/other income and expense, net	3	7	381	16
<b>Operating Income, Reported</b>	<b>\$ 72</b>	<b>\$ 113</b>	<b>\$ 211</b>	<b>\$ 255</b>
Add: RIP Cost (1)	1	1	4	4
Add: WAVE Pension Settlement (2)	-	-	-	1
Add: Litigation Expense (3)	-	-	-	20
Add: Net Proforma International Allocations, Other	-	1	-	-
Add: Net Environmental Expenses	-	1	1	1
(Less): Gain on Sale of Idled China Facility	(7 )	-	(21 )	-
Add: WAVE FSA (4)	-	4	-	4
(Less): AWI Portion of WAVE's (gain) on Sale to Knauf	-	(25 )	-	(25 )
<b>Operating Income, Adjusted</b>	<b>\$ 67</b>	<b>\$ 95</b>	<b>\$ 195</b>	<b>\$ 260</b>
Add: D&A	25	19	62	53
<b>Adjusted EBITDA</b>	<b>\$ 92</b>	<b>\$ 114</b>	<b>\$ 257</b>	<b>\$ 314</b>

(1) U.S. pension expense represents only the service cost related to the RIP that is recorded within Operating Income. For all periods presented, we were not required and did not make cash contributions to our RIP.

(2) WAVE settled a portion of their pension plan, resulting in a non-cash accounting charge.

(3) Represents Rockfon litigation costs and settlement.

(4) WAVE Fresh Start Accounting asset amortization.

### Mineral Fiber

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2020	2019	2020	2019
<b>Operating Income, Reported</b>	<b>\$ 58</b>	<b>\$ 104</b>	<b>\$ 174</b>	<b>\$ 231</b>
Add: WAVE Pension Settlement (1)	-	-	-	1
Add: Litigation Expense (2)	-	-	-	20
Add: Net Proforma International Allocations, Other	-	1	-	-
Add: Net Environmental Expenses	-	1	1	1
Add: WAVE FSA (3)	-	4	-	4
(Less): AWI Portion of WAVE's (gain) on Sale to Knauf	-	(25 )	-	(25 )
<b>Operating Income, Adjusted</b>	<b>\$ 58</b>	<b>\$ 84</b>	<b>\$ 175</b>	<b>\$ 232</b>
Add: D&A	20	16	54	45
<b>Adjusted EBITDA</b>	<b>\$ 79</b>	<b>\$ 99</b>	<b>\$ 228</b>	<b>\$ 277</b>

(1) WAVE settled a portion of their pension plan, resulting in a non-cash accounting charge.

(2) Represents Rockfon litigation costs and settlement.

(3) WAVE Fresh Start Accounting asset amortization.

### Architectural Specialties

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2020	2019	2020	2019
<b>Operating Income, Reported</b>	<b>\$ 9</b>	<b>\$ 12</b>	<b>\$ 21</b>	<b>\$ 30</b>
Add: D&A	4	3	8	6
<b>Adjusted EBITDA</b>	<b>\$ 13</b>	<b>\$ 14</b>	<b>\$ 29</b>	<b>\$ 36</b>

### Unallocated Corporate

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2020	2019	2020	2019
<b>Operating (Loss), Reported</b>	<b>\$ 5</b>	<b>\$ (2 )</b>	<b>\$ 16</b>	<b>\$ (6 )</b>

Add: RIP Cost (1)	1	1	4	4
Less: Gain on Sale of Idled China Facility	(7 )	-	(21 )	-
<b>Operating (Loss), Adjusted</b>	<b>\$ (0 )</b>	<b>\$ (1 )</b>	<b>\$ (1 )</b>	<b>\$ (2 )</b>
Add: D&A	-	1	1	2
<b>Adjusted EBITDA</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

(1) U.S. pension expense represents only the service cost related to the U.S. pension plan that is recorded within Operating Income. For all periods presented, we were not required and did not make cash contributions to our U.S. Retirement Income Plan.

#### Adjusted Free Cash Flow

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2020	2019	2020	2019
<b>Net cash provided by operations</b>	<b>\$ 69</b>	<b>\$ 74</b>	<b>\$ 148</b>	<b>\$ 121</b>
Net cash (used for) investing activities	\$ (63 )	(39 )	\$ (52 )	(71 )
Add: Acquisitions, net	74	-	74	43
Add: Litigation, net	-	-	-	20
Add: Environmental Payments, net	-	9	1	4
(Less)/Add: Proceeds from sale of international, net (1)	(20 )	55	(21 )	55
Add: Net Payments to WAVE for Portion of Proceeds from Sale of International Business	3	-	13	-
(Less): Proceeds from sale of Idled China Facility	(19 )	-	(19 )	-
<b>Adjusted Free Cash Flow</b>	<b>\$ 46</b>	<b>\$ 99</b>	<b>\$ 145</b>	<b>\$ 173</b>

(1) Includes related income tax impacts

#### Consolidated Results From Continuing Operations – Adjusted Diluted Earnings Per Share

	For the Three Months Ended September 30,				For the Nine Months Ended September 30,			
	2020		2019		2020		2019	
	Total	Per Diluted Share	Total	Per Diluted Share	Total	Per Diluted Share	Total	Per Diluted Share
<b>Earnings (Loss) from continuing operations, As Reported</b>	<b>\$ 54</b>	<b>\$ 1.13</b>	<b>\$ 91</b>	<b>\$ 1.83</b>	<b>\$ (119)</b>	<b>\$ (2.48)</b>	<b>\$ 191</b>	<b>\$ 3.84</b>
Add/(Less): Income tax expense (benefit), as reported	15		16		(51 )		49	
<b>Earnings (Loss) from continuing operations before income taxes, As Reported</b>	<b>\$ 69</b>		<b>\$ 107</b>		<b>\$ (170)</b>		<b>\$ 240</b>	
Add/(Less): RIP Expense (Credit) (1)	-		(2 )		370		(6 )	
Add: WAVE Pension Settlement (2)	-		-		-		1	
Add: Litigation Expense (3)	-		-		-		20	
Add: Net Proforma International Allocations, Other	-		1		-		-	
Add: Net Environmental Expenses	-		1		1		1	
Add: WAVE FSA (4)	-		4		-		4	
(Less): Gain on Sale of Idled China Facility	(7 )		-		(21 )		-	
Add: Accelerated Depreciation from closed St. Helens facility	3		-		3		-	
(Less): AWI Portion of WAVE's (gain) on Sale to Knauf	-		(25 )		-		(25 )	
<b>Adjusted earnings from continuing operations before income taxes</b>	<b>\$ 66</b>		<b>\$ 85</b>		<b>\$ 183</b>		<b>\$ 235</b>	
(Less): Adjusted Income tax expense (5)	(14)		(17 )		(45 )		(54 )	
<b>Adjusted net income</b>	<b>\$ 51</b>	<b>\$ 1.07</b>	<b>\$ 68</b>	<b>\$ 1.38</b>	<b>\$ 138</b>	<b>\$ 2.86</b>	<b>\$ 181</b>	<b>\$ 3.66</b>
Adjusted EPS Change versus Prior Year	-22%				-22%			
Diluted Shares Outstanding (6)	48.0		49.5		48.3		49.6	
Tax Rate (7)	22%		20%		25%		23%	

(1) RIP expense (credit) represents the entire actuarial net periodic pension expense (credit) recorded as a component of earnings from continuing operations. For all periods presented, we were not required and did not make cash contributions to our RIP.

(2) WAVE settled a portion of their pension plan, resulting in a non-cash accounting charge.

(3) Represents Rockfon litigation costs and settlement.

(4) WAVE Fresh Start Accounting asset amortization.

(5) Adjusted income tax expense is calculated using the as reported tax rate multiplied by the adjusted earnings from continuing operations before

income taxes.

(6) 2020 Dilutive shares outstanding for the nine months ended September 30, 2020 include anti-dilutive common stock equivalents which are excluded from U.S. GAAP accounting. Dilutive shares outstanding for the three months ended September 30, 2020 and for the three and nine months ended September 30, 2019 are as-reported.

(7) The tax rate for the nine months ended September 30, 2020 excludes Q1 pension annuitization and the gain on the sale of our idled China facility and for 2019 is our actual tax rate excluding WAVE's gain on sale to Knauf.

#### Adjusted EBITDA Guidance

	For the Year Ending December 31, 2020	
	Low	High
<b>Net (loss)</b>	<b>\$ (96 )</b>	<b>\$ (82 )</b>
Add: Interest expense	25	25
Add: RIP Expense	360	360
(Less): Income tax (benefit)	(25 )	(29 )
Add: Net Environmental Expenses	1	1
(Less): Gain on Sale of Idled China Facility	(21 )	(21 )
<b>Operating income</b>	<b>\$ 249</b>	<b>\$ 254</b>
Add: U.S. Pension expense (2)	6	6
Add: D&A/Other	70	70
<b>Adjusted EBITDA</b>	<b>\$ 320</b>	<b>\$ 330</b>

(1) RIP Expense represents the actuarial net periodic benefit expected to be recorded as a component of other non-operating income. We do not expect to be and do not plan to make cash contributions to our U.S. Retirement Income Plan based on guidelines established by the Pension Benefit Guaranty Corporation.

(2) U.S. pension expense represents only the service cost related to the U.S. pension plan that is recorded within Operating Income. For all periods presented, we were not required and did not make cash contributions to our U.S. Retirement Income Plan.

#### Adjusted Diluted Earnings Per Share (EPS) Guidance

	For the Year Ending December 31, 2020	
	Low	High
<b>Net (loss)</b>	<b>\$ (96 )</b>	<b>\$ (82 )</b>
Add: Interest expense	25	25
Add: RIP expense (2)	360	360
(Less): Income tax (benefit)	(25 )	(29 )
Add: Net Environmental Expenses	1	1
(Less): Gain on Sale of Idled China Facility	(21 )	(21 )
<b>Operating income</b>	<b>\$ 244</b>	<b>\$ 254</b>
Add: RIP expense (3)	6	6
(Less): Interest expense	(25 )	(25 )
<b>Adjusted earnings before income taxes</b>	<b>\$ 225</b>	<b>\$ 235</b>
(Less): Income tax expense	(56 )	(59 )
<b>Adjusted net income</b>	<b>\$ 169</b>	<b>\$ 176</b>
	<b>\$ 3.50</b>	<b>\$ 3.70</b>

(1) Adjusted EPS guidance for 2020 is calculated based on an adjusted effective tax rate of 25% and based on ~48 million of diluted shares outstanding.

(2) RIP expense represents the actuarial net periodic benefit expected to be recorded as a component of other non-operating income. We do not expect to be required to make, nor do we plan to make cash contributions to our U.S. Retirement Income Plan based on guidelines established by the Pension Benefit Guaranty Corporation.

(3) RIP expense represents only the service cost related to the U.S. pension plan and is recorded as a component of operating income. We do not expect to be required to make, nor do we plan to make cash contributions to our U.S. Retirement Income Plan based on guidelines established by the Pension Benefit Guaranty Corporation.

#### Adjusted Free Cash Flow Guidance

	For the Year Ending December 31, 2020	
	Low	High
<b>Net cash provided by operating activities</b>	<b>\$ 195</b>	<b>\$ 205</b>
Add: Return of investment from joint venture	60	65
<b>Adjusted net cash provided by operating activities</b>	<b>\$ 255</b>	<b>\$ 270</b>
Less: Capital expenditures	(55 )	(60 )
<b>Adjusted Free Cash Flow</b>	<b>\$ 200</b>	<b>\$ 210</b>

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Source: Armstrong World Industries