ROGERS CORP Form 10-Q August 01, 2018

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

FORM 10-Q

ROGERS CORPORATION FORM 10-Q

June 30, 2018

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This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of	Sect

This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. See "Forward-Looking Statements" in Item 2, Management's Discussion and Analysis of Financial Condition and Results of Operations for additional information.

Part I – Financial Information Item 1. Financial Statements

ROGERS CORPORATION

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

(Dollars and shares in thousands, except per share amounts)

	Three Months Ended		Six Months Ended	
	June 30,	June 30,	June 30,	June 30,
	2018	2017	2018	2017
Net sales	\$214,675	\$201,424	\$429,286	\$405,252
Cost of sales	138,003	120,878	276,007	244,356
Gross margin	76,672	80,546	153,279	160,896
Selling, general and administrative expenses	42,540	40,012	83,137	74,580
Research and development expenses	8,750	7,141	16,884	14,102
Restructuring and impairment charges	541	1,079	963	1,805
Other operating (income) expense, net	(383)	-		(942)
Operating income	25,224	32,314	56,269	71,351
operating meenie	20,221	52,511	50,207	/ 1,00 1
Equity income in unconsolidated joint ventures	1,804	966	2,811	1,976
Other income (expense), net	(34)	260	32	1,379
Interest expense, net	(1,292)	(1,947)	(2,503)	(3,195)
Income before income tax expense	25,702	31,593	56,609	71,511
Income tax expense	8,373	10,697	13,144	23,583
Net income	\$17,329	\$20,896	\$43,465	\$47,928
Basic earnings per share	\$0.94	\$1.15	\$2.37	\$2.65
Diluted earnings per share	\$0.94 \$0.93	\$1.13	\$2.37	\$2.60 \$2.60
Diffued earnings per share	\$0.95	φ1.15	\$2.33	\$2.00
Shares used in computing:				
Basic earnings per share	18,389	18,140	18,338	18,098
Diluted earnings per share	18,660	18,547	18,635	18,460

The accompanying notes are an integral part of the condensed consolidated financial statements. 3

ROGERS CORPORATION CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS) (Unaudited) (Dollars in thousands)

	Three Months Ended		Six Months Ended	
Net income	June 30, 2018 \$17,329	June 30, 2017 \$20,896	June 30, 2018 \$43,465	June 30, 2017 \$47,928
Foreign currency translation adjustment Derivative instruments designated as cash flow hedges:	(15,294)	12,591	(8,293)) 16,730
Unrealized gain (loss) on derivative instruments held at period end, net of ta (Note 6)	^x 320	(321)	1,097	(435)
Unrealized loss reclassified into earnings (Note 6)		107		107
Accumulated other comprehensive loss pension and post-retirement benefits				
Actuarial net gain incurred in fiscal year, net of tax (Note 6)	44	334	87	334
Pension and postretirement benefit plans reclassified into earnings:				
Amortization of loss, net of tax (Note 6)		6		36
Other comprehensive income (loss)	(14,930)	12,717	(7,109)) 16,772
Comprehensive income	\$2,399	\$33,613	\$36,356	\$64,700

The accompanying notes are an integral part of the condensed consolidated financial statements. 4

ROGERS CORPORATION CONDENSED CONSOLIDATED STATEMENTS OF FINANCIAL POSITION (Unaudited) (Dollars and shares in thousands)

	June 30, 2018	December 31, 2017
Assets		
Current assets		
Cash and cash equivalents	\$174,700	\$181,159
Accounts receivable, less allowance for doubtful accounts of \$1,284 and \$1,525	148,727	140,562
Contract assets	21,933	
Inventories	117,739	112,557
Prepaid income taxes	2,732	3,087
Current portion of asbestos-related insurance receivables	5,682	5,682
Assets held for sale	381	896
Other current assets	13,535	10,580
Total current assets	485,429	454,523
Property, plant and equipment, net of accumulated depreciation of \$300,416 and \$289,909	184,478	179,611
Investments in unconsolidated joint ventures	19,411	18,324
Deferred income taxes	3,501	6,008
Goodwill	234,287	237,107
Other intangible assets, net of amortization	152,009	160,278
Asbestos-related insurance receivables	63,511	63,511
Other long-term assets	5,503	5,772
Total assets	\$1,148,129	\$1,125,134
Liabilities and Shareholders' Equity		
Current liabilities		
Accounts payable	\$37,299	\$36,116
Accrued employee benefits and compensation	26,081	39,394
Accrued income taxes payable	3,987	6,408
Current portion of capital lease obligations	600	579
Current portion of asbestos-related liabilities	5,682	5,682
Other accrued liabilities	25,095	25,629
Total current liabilities	98,744	113,808
Borrowings under credit facility	130,982	130,982
Non-current portion of capital lease obligations	5,404	5,873
Pension liability	8,720	8,720
Retiree health care and life insurance benefits	1,685	1,685
Asbestos-related liabilities	70,056	70,500
Non-current income tax	9,755	12,823
Deferred income taxes	13,879	10,706
Other long-term liabilities	4,119	3,464
Commitments and contingencies (Note 14)	1,117	5,101
Shareholders' equity		
Capital Stock - \$1 par value; 50,000 authorized shares; 18,380 and 18,255 shares issued		
and outstanding	18,380	18,255
Additional paid-in capital	126,452	128,933
Retained earnings	732,217	684,540
Accumulated other comprehensive loss		(65,155)
Total shareholders' equity	804,785	766,573
Tour shureholders equity	507,705	100,515

Total liabilities and shareholders' equity

The accompanying notes are an integral part of the condensed consolidated financial statements. 5

ROGERS CORPORATION CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited) (Dollars and shares in thousands)

	Six Month June 30, 2018	s Ended June 30, 2017	
Operating Activities: Net income Adjustments to reconcile net income to cash provided by operating activities:	\$43,465	\$47,928	
Depreciation and amortization Equity compensation expense Deferred income taxes	22,084 5,814 3,879	21,536 5,327 4,813	
Equity in undistributed income of unconsolidated joint ventures Dividends received from unconsolidated joint ventures	(2,811) 1,809	(1,976) 616)
Pension and postretirement benefits Realized (gain) loss from sale of property, plant and equipment Bad debt expense	(383)	(794) (942) 61	
Proceeds from insurance related to operations Changes in operating assets and liabilities, excluding effects of acquisitions:	—	826	
Accounts receivable Contract assets Inventories	(21,933)	(13,220)	1
Pension and postretirement benefit contributions Other current assets	(338) (1,299)		
Accounts payable and other accrued expenses Other, net Net cash provided by operating activities	(13,835) 3,287 22,818	7,213 1,703 64,489	
Investing Activities:			
Acquisition of business, net of cash received Capital expenditures Proceeds from insurance claims	(20,177) 	(60,191) (9,696) 922	
Proceeds from the sale of property, plant and equipment, net Net cash used in investing activities	1,027 (19,150)	1,641 (67,324))
Financing Activities: Line of credit issuance costs		(1,169)	,
Repayment of debt principal and capital lease obligations Repurchases of capital stock	(2,999)	(50,178)	
Proceeds from the exercise of stock options, net Payments of taxes related to net share settlement of equity awards Proceeds from issuance of shares to employee stock purchase plan	698 (6,427) 558	1,905 (2,617) 422	1
Net cash used in financing activities		(51,637))
Effect of exchange rate fluctuations on cash		4,017	
Net decrease in cash and cash equivalents Cash and cash equivalents at beginning of period Cash and cash equivalents at end of period	(6,459) 181,159 \$174,700	(50,455) 227,767 \$177,312	1

Supplemental Disclosures:		
Cash paid during the year for: Interest, net of amounts capitalized	\$2,631	\$3,085
Income taxes	\$14,040	\$13,913

The accompanying notes are an integral part of the condensed consolidated financial statements. 6

ROGERS CORPORATION CONDENSED CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY (Unaudited) (Dollars in thousands)

	Capital Stock	Additional Paid-In Capital	Retained	Accumulated Other Comprehensive Loss	Total Shareholde Equity	ers'
Balance at December 31, 2017	\$18,255	\$128,933	\$684,540	\$ (65,155)	\$766,573	
Net income		_	43,465		43,465	
Other comprehensive income (loss)		_		(7,109)	(7,109)
Stock options exercised	18	680			698	
Stock issued to directors	11	(11)			_	
Shares issued for employee stock purchase plan	6	552			558	
Shares issued for vested restricted stock units, net of cancellations for tax withholding	113	(6,540)		_	(6,427)
Shares repurchased	(23)	(2,976)			(2,999)
Cumulative-effect adjustment of revenue recognition ASC 606	_	_	4,212	_	4,212	
Equity compensation expense		5,814	_		5,814	
Balance at June 30, 2018	\$18,380	\$126,452	\$732,217	\$ (72,264)	\$ 804,785	

The accompanying notes are an integral part of the condensed consolidated financial statements. 7

ROGERS CORPORATION NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

Note 1 - Basis of Presentation

As used herein, the terms "Company," "Rogers," "we," "us," "our" and similar terms mean Rogers Corporation and its subsidiaries, unless the context indicates otherwise.

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) for interim financial information. Accordingly, these statements do not include all of the information and footnotes required by GAAP for complete financial statements. In our opinion, the accompanying condensed consolidated financial statements include all normal recurring adjustments necessary for their fair presentation in accordance with GAAP. All significant intercompany transactions have been eliminated.

On January 1, 2018, the Company adopted ASU 2017-07, Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Post-Retirement Benefit Cost. Upon adoption, the Company reclassified \$0.4 million and \$0.8 million in net periodic pension benefits from Selling, general and administrative expenses to Other income (expense), net for the three and six months ended June 30, 2017, respectively. See Note 21, "Recent Accounting Standards" for further information.

Interim results are not necessarily indicative of results for a full year. For further information regarding our accounting policies, refer to the audited consolidated financial statements and footnotes thereto included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

Note 2 - Fair Value Measurements

The accounting guidance for fair value measurements establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value:

Level 1 – Quoted prices in active markets for identical assets or liabilities.

Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

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.

From time to time we enter into various instruments that require fair value measurement, including foreign currency contracts, copper derivative contracts and interest rate swaps. Derivative instruments measured at fair value on a recurring basis, categorized by the level of inputs used in the valuation, consist of:

	Derivative Instruments			
	at Fair Value as of June			
	30, 2018			
(Dollars in thousands)	Le ke lvel 1 2	Level Total		
Foreign currency contracts	\$ -\$ 118	\$ -\$118		
Copper derivative contracts	\$ -\$ 827	\$ -\$827		
Interest rate swap	\$-\$1,439	\$ _\$1,439		
	Derivative	e Instruments at		
	Derivative Fair Value			
		e as of		
(Dollars in thousands)	Fair Value	e as of · 31, 2017		
(Dollars in thousands) Foreign currency contracts Copper derivative contracts Interest rate swap	Fair Value December Level 2 1 \$-\$(396)	e as of 31, 2017 Level Total 3 -\$(396)		

Note 3 - Hedging Transactions and Derivative Financial Instruments

We are exposed to certain risks related to our ongoing business operations. The primary risks being managed through our use of derivative instruments are foreign currency exchange rate risk and commodity pricing risk (primarily related to copper). During 2017, we entered into an interest rate swap to hedge interest rate risk. We do not use derivative financial instruments for trading or speculative purposes. The valuation of derivative contracts used to manage each of these risks is described below:

Foreign Currency - The fair value of any foreign currency option derivative is based upon valuation models applied to current market information such as strike price, spot rate, maturity date and volatility, and by reference to market values resulting from an over-the-counter market or obtaining market data for similar instruments with similar characteristics.

Commodity - The fair value of copper derivatives is computed using a combination of intrinsic and time value valuation models. The intrinsic valuation model reflects the difference between the strike price of the underlying copper derivative instrument and the current prevailing copper prices in an over-the-counter market at period end. The time value valuation model incorporates the constant changes in the price of the underlying copper derivative instrument, the time value of money, the underlying copper derivative instrument's strike price and the remaining time to the underlying copper derivative instrument's expiration date from the period end date. Overall, fair value is a function of five primary variables: price of the underlying instrument, time to expiration, strike price, interest rate, and volatility.

Interest Rates - The fair value of interest rate swap instruments is derived by comparing the present value of the interest rate forward curve against the present value of the swap rate, relative to the notional amount of the swap. The net value represents the estimated amount we would receive or pay to terminate the agreements. Settlement amounts for an "in the money" swap would be adjusted down to compensate the counterparty for cost of funds, and the adjustment is directly related to the counterparties' credit ratings.

The guidance for the accounting and disclosure of derivatives and hedging transactions requires companies to recognize all of their derivative instruments as either assets or liabilities at fair value in the statements of financial position. The accounting for changes in the fair value (i.e., gains or losses) of a derivative instrument depends on whether it has been designated and qualifies for hedge accounting treatment as defined under the applicable accounting guidance. For derivative instruments that are designated and qualify for hedge accounting treatment as cash flow hedges (i.e., hedging the exposure to variability in expected future cash flows that is attributable to a particular risk), the effective portion of the gain or loss on the derivative instrument is reported as a component of other comprehensive income (loss). This gain or loss is reclassified into earnings in the same line item of the condensed consolidated statements of operations associated with the forecasted transaction and in the same period or periods during which the hedged transaction affects earnings. As of June 30, 2018, only our interest rate swap qualified for hedge accounting treatment as a cash flow hedge. For the six months ended June 30, 2018 and 2017, the hedge was highly effective.

Foreign Currency

During the three months ended June 30, 2018, we entered into Korean Won, Japanese Yen, Euro, Hungarian Forint and Chinese Renminbi forward contracts. We entered into these foreign currency forward contracts to mitigate certain global transactional exposures. These contracts do not qualify for hedge accounting treatment. As a result, any fair value adjustments required on these contracts are recorded in "Other income (expense), net" in our condensed consolidated statements of operations.

As of June 30, 2018 the notional values of these foreign currency forward contracts were:

Notional Values of Foreign Currency Derivatives KRW/USD 3,454,400,000 JPY/EUR ¥335,000,000 EUR/USD €12,822,491 EUR/HUF €1,132,697 USD/CNY \$10,637,837 Commodity

Commodity We currently have 25 outstanding contracts to hedge exposure related to the purchase of copper in our Power Electronics Solutions (PES) and Advanced Connectivity Solutions (ACS) operating segments. These contracts are held with financial institutions and are intended to offset rising copper prices. These contracts provide some coverage over the forecasted 2018 and 2019 monthly copper exposure and do not qualify for hedge accounting treatment. As a result, any fair value adjustments required on these contracts are recorded in "Other income (expense), net" in our

condensed consolidated statements of operations in the period in which the adjustment occurs. The notional values of our copper contracts outstanding as of June 30, 2018 were:

Volume of Copper DerivativesJuly 2018 - September 2018153 metric tons per monthOctober 2018 - December 2018153 metric tons per monthJanuary 2019 - March 2019189 metric tons per monthApril 2019 - June 2019188 metric tons per monthJuly 2019 - September 2019145 metric tons per month

Interest Rates

In 2017, we entered into an interest rate swap to hedge the variable interest rate on \$75.0 million of our \$450.0 million revolving credit facility. This transaction has been designated as a cash flow hedge and qualifies for hedge accounting treatment. See Note 12, "Debt" for further discussion regarding the credit facility. Effects on Statements of Operations and of Comprehensive Income (Loss):

The Effect of Current Fair Values Derivative of Instruments on Derivative (Dollars in thousands) the Financial Instruments Statements for as of June the period ended 30, 2018 June 30, 2018 Other Gain (Loss) Assets (Liabilities) Three Six Months Months Foreign Exchange Contracts Location Ended Ended \$(60) \$(124) \$ 118 Contracts not designated as hedging instruments Other income (expense), net **Copper Derivatives** Contracts not designated as hedging instruments Other income (expense), net \$(363) \$(1,185) \$ 827 Interest Rate Swap Contracts designated as hedging instruments Other comprehensive income (loss) \$410 \$1,399 \$ 1,439 The Effect of Current Fair Values Derivative of Instruments on Derivative (Dollars in thousands) the Financial Instruments as of June Statements for the period ended 30, 2017 June 30, 2017 Other Gain (Loss) Assets (Liabilities) Three Six Months Months Foreign Exchange Contracts Location Ended Ended Contracts not designated as hedging instruments Other income (expense), net \$(312) \$(291) \$ (312)) **Copper Derivatives** Contracts not designated as hedging instruments Other income (expense), net \$71 \$205 \$ 1,331 Interest Rate Swap Contracts designated as hedging instruments Other comprehensive income (loss) (335) (515) (622)) Note 4 – Inventories Inventories are valued at the lower of cost or market. Inventories were as follows at the end of the periods noted below:

(Dollars in thousands) June 30, December 31, 2018 2017

Raw materials	\$51,370	\$ 43,092	
Work-in-process	29,150	28,133	
Finished goods	37,219	41,332	
Total inventories	\$117,739	\$ 112,557	
10			

Note 5 – Acquisitions

Diversified Silicone Products

On January 6, 2017, we acquired the principal operating assets of Diversified Silicone Products, Inc. (DSP), pursuant to the terms of the Asset Purchase Agreement by and among the Company, DSP and the principal shareholders of DSP (the Purchase Agreement). Pursuant to the terms of the Purchase Agreement, we acquired certain assets and assumed certain liabilities of DSP for a total purchase price of approximately \$60.2 million.

We used borrowings of \$30.0 million under our credit facility in addition to cash on hand to fund the acquisition. DSP is a custom silicone product development and manufacturing business and expands the portfolio of our Elastomeric Material Solutions (EMS) operating segment in cellular sponge and specialty extruded silicone profile technologies, while strengthening existing expertise in precision-calendered silicone and silicone formulating and compounding.

The results of DSP have been included in our condensed consolidated financial statements only for the periods subsequent to the completion of our acquisition on January 6, 2017.

Note 6 - Accumulated Other Comprehensive Loss

The changes in accumulated other comprehensive loss by component for the six months ended June 30, 2018 and 2017 were as follows:

(Dollars and accompanying footnotes in thousands)	Foreign currency translation adjustments	Funded status of pension plans and other postretirement benefits ⁽¹⁾	Unrealized gain (loss) on derivative instruments (2)	Total
Beginning Balance December 31, 2017	\$(17,983)	\$ (47,198)	\$ 26	\$(65,155)
Other comprehensive income (loss) before reclassifications	(8,293)		1,097	(7,196)
Amounts reclassified from accumulated other comprehensive loss		87		87
Net current-period other comprehensive income (loss)	(8,293)	87	1,097	(7,109)
Ending Balance June 30, 2018	\$ (26,276)	\$ (47,111)	\$ 1,123	\$(72,264)
Beginning Balance December 31, 2016 Other comprehensive income (loss) before reclassifications Actuarial net gain incurred in the fiscal year	\$ (46,446) 16,730 —	\$ (45,816) 	\$— (435)	\$(92,262) 16,295 334
Amounts reclassified from accumulated other comprehensive loss	_	36	107	143
Net current-period other comprehensive income (loss)	16,730	370	(328)	16,772
Ending Balance June 30, 2017	\$ (29,716)	\$ (45,446)	\$ (328)	\$(75,490)
(1) Net of taxes of \$9,536 and \$9,563 as of June 30, 2018 and D	ecember 31, 2	2017, respectivel	y. Net of taxe	s of

\$8,961 and \$9,160 as of June 30, 2017 and December 31, 2016, respectively.

(2) Net of taxes of \$316 and \$15 as of June 30, 2018 and December 31, 2017, respectively. Net of taxes of \$187 and \$0 as of June 30, 2017 and December 31, 2016, respectively.

Note 7 – Earnings Per Share

The following table sets forth the computation of basic and diluted earnings per share for the periods indicated:

	Three M	onths	Six Mon	ths
(Dollars and shares in thousands,	Ended		Ended	
except per share amounts)	June 30,	June 30,	June 30,	June 30,
	2018	2017	2018	2017
Numerator:				
Net income	\$17,329	\$20,896	\$43,465	\$47,928
Denominator:				
Weighted-average shares outstanding - basic	18,389	18,140	18,338	18,098
Effect of dilutive shares	271	407	297	362
Weighted-average shares outstanding - diluted	18,660	18,547	18,635	18,460
Basic earnings per share	\$0.94	\$1.15	\$2.37	\$2.65
Diluted earnings per share	\$0.93	\$1.13	\$2.33	\$2.60

Certain potential options to purchase shares may be excluded from the calculation of diluted weighted-average shares outstanding where their exercise price is greater than the average market price of our capital stock during the relevant reporting period. For the three months ended June 30, 2018, 27,145 shares were excluded. For the three months ended June 30, 2017, no shares were excluded.

Note 8 – Equity Compensation

Performance-Based Restricted Stock Units

As of June 30, 2018, we had performance-based restricted stock units from 2016, 2017 and 2018 outstanding. These awards generally cliff vest at the end of a three year measurement period. However, employees whose employment terminates during the measurement period due to death, disability, or, in certain cases, retirement may receive a pro-rata payout based on the number of days they were employed during the measurement period. Participants are eligible to be awarded shares ranging from 0% to 200% of the original award amount, based on certain defined performance measures.

The 2016, 2017 and 2018 awards have one measurement criteria: the three year total shareholder return (TSR) on the performance of our capital stock as compared to that of a specified group of peer companies. The TSR measurement criteria of the awards is considered a market condition. As such, the fair value of this measurement criteria was determined on the grant date using a Monte Carlo simulation valuation model. We recognize compensation expense on all of these awards on a straight-line basis over the vesting period with no changes for final projected payout of the awards. We account for forfeitures as they occur.

Below were the assumptions used in the Monte Carlo calculation:

	June 30, 2018	June 30, 2017
Expected volatility	34.8%	33.6%
Expected term (in years)	3.0	3.0
Risk-free interest rate	2.28%	1.38%
Ennested relatility In a		

Expected volatility – In determining expected volatility, we have considered a number of factors, including historical volatility.

Expected term – We use the measurement period of the award to determine the expected term assumption for the Monte Carlo simulation valuation model.

Risk-free interest rate – We use an implied "spot rate" yield on U.S. Treasury Constant Maturity rates as of the grant date for our assumption of the risk-free interest rate.

Expected dividend yield – We do not currently pay dividends on our capital stock; therefore, a dividend yield of 0% was used in the Monte Carlo simulation valuation model.

The following table summarizes the change in number of performance-based restricted stock units outstanding for the six months ended June 30, 2018:

	Performance-Base	d
	Restricted Stock	
	Units	
Awards outstanding at December 31, 2017	169,202	
Awards granted	72,160	
Stock issued	(81,230))
Awards forfeited	(17,489))
Awards outstanding at June 30, 2018	142,643	

During the three and six months ended June 30, 2018, we recognized compensation expense for performance-based restricted stock units of approximately \$0.8 million and \$1.8 million, respectively. During the three and six months ended June 30, 2017, we recognized compensation expense for performance-based restricted stock units of approximately \$1.6 million and \$1.5 million, respectively.

Time-Based Restricted Stock Units

As of June 30, 2018, we had time-based restricted stock unit awards from 2014, 2015, 2016, 2017 and 2018 outstanding. The 2015, 2016, 2017 and 2018 grants all ratably vest on the first, second and third anniversaries of the original grant date. The remaining outstanding 2014 grants cliff vest on December 17, 2018, the fourth anniversary of the original grant date. Each restricted stock unit represents a right to receive one share of the Rogers' capital stock at the end of the vesting period. The fair value of the award is determined by the market value of the underlying stock price at the grant date. We recognize compensation expense on all of these awards on a straight-line basis over the vesting period. We account for forfeitures as they occur.

The following table summarizes the change in number of time-based restricted stock units outstanding for the six months ended June 30, 2018:

	Time-Bas	ed
	Restricted	1
	Stock Un	its
Awards outstanding at December 31, 2017	173,331	
Awards granted	41,310	
Stock issued	(77,513)
Awards forfeited	(14,627)
Awards outstanding at June 30, 2018	122,501	

During the three and six months ended June 30, 2018 we recognized compensation expense for time-based restricted stock units of approximately \$1.3 million and \$2.9 million, respectively. During the three and six months ended June 30, 2017 we recognized compensation expense for time-based restricted stock units of approximately \$1.7 million and \$2.7 million, respectively.

Deferred Stock Units

We grant deferred stock units to non-management directors. These awards are fully vested on the date of grant and the related shares are generally issued on the 13-month anniversary of the grant date unless the individual elects to defer the receipt of those shares. Each deferred stock unit results in the issuance of one share of Rogers' capital stock. The grant of deferred stock units is typically done annually during the second quarter of each year. The fair value of the award is determined by the market value of the underlying stock price at the grant date.

The following table summarizes the change in number of deferred stock units outstanding during the six months ended June 30, 2018:

	Deferred
	Stock
	Units
Awards outstanding at December 31, 2017	9,250
Awards granted	8,400

Stock issued(8,400)Awards outstanding at June 30, 20189,250During each of the three- and six-month periods ended June 30, 2018 and 2017, we recognized compensation expenseassociated with the deferred stock units of \$0.9 million.

Stock Options

Stock options have been granted under various equity compensation plans, and they generally became exercisable in one-third increments on the second, third and fourth anniversaries of the grant dates. The maximum contractual term for all options was normally ten years. We used the Black-Scholes option-pricing model to calculate the grant-date fair value of an option. We have not granted any stock options since the first quarter of 2012.

The following table summarizes the change in number of stock options outstanding for the six months ended June 30, 2018:

	Options Outstanding	Weighted Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life in Years	Aggregate Intrinsic Value
Outstanding at December 31, 2017	33,283	\$ 36.40	2.2	\$4,177,655
Options exercised	(17,683)	\$ 39.48		
Options forfeited		\$ —		
Options outstanding at June 30, 2018	15,600	\$ 32.91	2.5	\$1,225,308
Options exercisable at June 30, 2018	15,600	\$ 32.91	2.5	\$1,225,308
Options vested at June 30, 2018	15,600	\$ 32.91	2.5	\$1,225,308

During the six months ended June 30, 2018, the total intrinsic value of options exercised (i.e., the difference between the market price at time of exercise and the price paid by the individual to exercise the options) was \$2.0 million, and the total amount of cash received from the exercise of these options was \$0.7 million.

Employee Stock Purchase Plan

We have an employee stock purchase plan (ESPP) that allows eligible employees to purchase, through payroll deductions, shares of our capital stock at a discount to fair market value. The ESPP has two six month offering periods each year, the first beginning in January and ending in June and the second beginning in July and ending in December. The ESPP contains a look-back feature that allows the employee to acquire shares of our capital stock at a 15% discount from the underlying market price at the beginning or end of the applicable period, whichever is lower. We recognize compensation expense on this plan ratably over the offering period based on the fair value of the anticipated number of shares that will be issued at the end of each offering period. Compensation expense is adjusted at the end of each offering period for the actual number of shares issued. Fair value is determined based on two factors: (i) the 15% discount on the underlying stock's market value on the first day of the applicable offering period and (ii) the fair value of the look-back feature determined by using the Black-Scholes option-pricing model. We recognized approximately \$0.1 million of compensation expense associated with the plan in each of the three-month periods ended June 30, 2018 and 2017 and approximately \$0.2 million of compensation expense associated with each of the six-month periods ended June 30, 2018 and 2017.

Note 9 - Pension Benefits and Other Postretirement Benefit Plans

We have two qualified noncontributory defined benefit pension plans: 1) the Rogers Corporation Employee's Pension Plan for unionized hourly employees (the Union Plan); and 2) the Rogers Corporation Defined Benefit Pension Plan for (i) all other U.S. employees hired before December 31, 2007 who are salaried employees or non-union hourly employees and (ii) employees of the acquired Arlon business (the Rogers Plan).

The Company also maintains the Rogers Corporation Amended and Restated Pension Restoration Plan effective as of January 1, 2004 and the Rogers Corporation Amended and Restated Pension Restoration Plan effective as of January 1, 2005 (collectively, the Nonqualified Plans). The Nonqualified Plans serve to restore certain retirement benefits that might otherwise be lost due to limitations imposed by federal law on qualified pension plans, as well as to provide supplemental retirement benefits, for certain senior executives of the Company.

In addition, we sponsor multiple fully insured or self-funded medical plans and life insurance plans for certain retirees. The measurement date for all plans is December 31 for each respective plan year.

Pension Plan Proposed Termination

The Company currently intends to terminate the Rogers Plan and has requested a determination letter from the Internal Revenue Service (IRS). The termination of the Rogers Plan remains subject to final approval by both management and the IRS. The Company plans to provide for lump sum distributions or annuity payments in connection with the termination of the Rogers Plan and we expect the settlement process to be completed in early 2019. The Company lacks sufficient information as of June 30, 2018 to determine the financial impact of the proposed plan termination. At this time, there are no plans to terminate the Union Plan.

Components of Net Periodic (Benefit) Cost

The components of net periodic (benefit) cost for the periods indicated were:

	Pension Benefits			Retirement Health and Life Insurance Benefits				
(Dollars in thousands)	Three Month Ended		Six M Ended		Three N Ended	Aonths	Six Mo Ended	nths
	June 3	0,	June 3	0,	June 30	,	June 30	,
Change in benefit obligation:	2018	2017	2018	2017	2018	2017	2018	2017
Service cost	\$—	\$ —	\$—	\$ —	\$17	\$17	\$38	\$56
Interest cost	1,692	1,841	3,372	3,682	16	13	31	31
Expected return on plan assets	(2,16)4	(2,309	(4,33)3	(4,618)			_	
Amortization of prior service credit					(400)	(407)	(801)	(780)
Amortization of net loss (gain)	457	433	913	866		(17)		(31)
Net periodic (benefit) cost	\$(15)	(35)	\$(48)	(70)	\$(367)	\$(394)	\$(732)	\$(724)
Employer Contributions								

There were no required contributions to our qualified defined benefit pension plans for the three and six months ended June 30, 2018, and we are not required to make additional contributions to these plans for the remainder of 2018. We paid \$0.1 million of required contributions to our qualified defined benefit pension plans for the three and six months ended June 30, 2017. No voluntary contributions were made to our qualified defined benefit pension plans for the three and six months three and six months ended June 30, 2018 and 2017. We anticipate making an estimated payment of \$25.0 million to the Rogers Plan during the third quarter of 2018 as part of the termination process.

As there is no funding requirement for the non-qualified unfunded noncontributory defined benefit pension plan or the retiree health and life insurance benefit plans, benefit payments made during the year are funded directly by the Company.

Note 10 - Segment Information

Our reporting structure is comprised of the following operating segments: ACS, EMS and PES. Our non-core businesses are reported in the Other operating segment. We believe this structure aligns our external reporting presentation with how we currently manage and view our business internally.

On January 1, 2018, we adopted ASU 2014-09, Revenue from Contracts with Customers. See Note 19, "Revenue from Contracts with Customers" for further information about this adoption. The Company sells products to fabricators and distributors who then sell directly into various end markets. End markets within the ACS operating segment include wireless infrastructure, aerospace and defense, auto safety and connectivity, and consumer electronics. End markets within the EMS operating segment include general industrial, portable electronics, mass transit, and automotive. End markets within the PES operating segment include industrial, e-mobility, renewable energy, mass transit, and micro channel coolers. End markets in the Other operating segment include automotive and industrial. The following table presents a disaggregation of revenue from contracts with customers for the periods indicated; inter-segment sales have been eliminated from the net sales data:

(Dollars in thousands)	Advanced Connectivity Solutions	Elastomeric Material Solutions	Power Electronics Solutions	Other	Total
Three Months Ended June 30, 2018	.	• • • • -	* * * *	.	
Net sales - recognized over time	\$ —	\$ 907	\$ 53,052	\$4,616	\$58,575
Net sales - recognized at a point in time	76,376	78,309	595 # 52 (17	820	156,100
Total net sales	\$ 76,376	\$ 79,216	\$ 53,647	\$5,436	\$214,675
Operating income	\$ 10,594	\$ 8,421	\$ 4,239	\$1,970	\$25,224
Three Months Ended June 30, 2017 ⁽¹⁾					
Net sales - recognized over time	\$ —	\$415	\$ 43,409	\$4,741	\$48,565
Net sales - recognized at a point in time	74,340	77,170	496	853	152,859
Total net sales	\$ 74,340	\$ 77,585	\$ 43,905	\$5,594	\$201,424
Operating income	\$ 12,997	\$ 13,934	\$ 3,560	\$1,823	\$32,314
Six Months Ended June 30, 2018					
Net sales - recognized over time	\$ —	\$ 1,941	\$ 110,451	\$9,265	\$121,657
Net sales - recognized at a point in time	149,831	155,358	909	1,531	307,629
Total net sales	\$ 149,831	\$ 157,299	\$ 111,360	\$10,796	\$429,286
Operating income	\$ 18,496	\$ 22,581	\$ 11,260	\$3,932	\$56,269
Six Months Ended June 30, 2017 ⁽¹⁾					
Net sales - recognized over time	\$ —	\$ 1,082	\$ 85,681	\$9,838	\$96,601
Net sales - recognized at a point in time	152,882	153,352	876	1,541	308,651
Total net sales	\$ 152,882	\$ 154,434	\$ 86,557	\$11,379	\$405,252
Operating income	\$ 32,495	\$ 26,724	\$ 8,404	\$3,728	\$71,351

⁽¹⁾ For comparison purposes, this table reflects the disaggregation of 2017 revenue in accordance with Accounting Standards Codification 606, Revenue from Contracts with Customers (ASC 606).

Information relating to our segment operations by geographic area for the three months ended June 30, 2018 and 2017 was as follows:

was as 10110 ws.						
(Dollars in thousands)) Net Sales ⁽¹⁾					
	Advand	Edastomeric	Power			
Region/Country	Connec	ct Maty erial	Electronics	Other	Total	
	Solutio	nSolutions	Solutions			
June 30, 2018						
United States	14,447	35,777	8,279	866	59,369	
Other Americas	758	2,179	323	725	3,985	
Total Americas	15,205	37,956	8,602	1,591	63,354	
China	32,032	24,071	8,940	1,410	66,453	
Other APAC	18,588	8,324	7,092	649	34,653	
Total APAC	50,620	32,395	16,032	2,059	101,106	
Germany	4,823	2,595	16,524	163	24,105	
Other EMEA	5,728	6,270	12,489	1,623	26,110	
Total EMEA	10,551	8,865	29,013	1,786	50,215	
Total Net sales	76,376	79,216	53,647	5,436	214,675	
June 30, 2017						
United States	11,372	35,904	7,118	1,348	55,742	
Other Americas	1,158	2,989	258	193	4,598	
Total Americas	12,530	38,893	7,376	1,541	60,340	
China	33,949	22,556	7,884	1,072	65,461	
Other APAC	16,984	8,693	5,156	1,002	31,835	
Total APAC	50,933	31,249	13,040	2,074	97,296	
Germany	6,786	2,355	13,380	158	22,679	
Other EMEA	4,091	5,088	10,109	1,821	21,109	
Total EMEA	10,877	7,443	23,489	1,979	43,788	
Total Net sales	74,340	77,585	43,905	5,594	201,424	
NT 1 11						

(1) Net sales are allocated to countries based on the location of the customer. The table above includes countries with 10% or more of net sales for the periods indicated.

Information relating to our segment operations by geographic area for the six months ended June 30, 2018 and 2017 was as follows:

(Dollars in thousands)	Net Sale	s ⁽¹⁾			
	Advance	Elastomeric	Power		
Region/Country	Connect	i Witay terial	Electronics	Other	Total
	Solution	sSolutions	Solutions		
June 30, 2018					
United States	26,725	73,469	16,857	2,123	119,174
Other Americas	1,584	3,980	681	555	6,800
Total Americas	28,309	77,449	17,538	2,678	125,974
China	65,539	44,865	18,362	2,727	131,493
Other APAC	33,926	17,484	13,543	1,442	66,395
Total APAC	99,465	62,349	31,905	4,169	197,888
Germany	11,073	5,337	31,234	332	47,976
Other EMEA	10,984	12,164	30,683	3,617	57,448
Total EMEA	22,057	17,501	61,917	3,949	105,424
Total Net sales	149,831	157,299	111,360	10,796	429,286
June 30, 2017					
United States	24,595	74,000	15,708	2,563	116,866
Other Americas	1,725	5,461	561	377	8,124
Total Americas	26,320	79,461	16,269	2,940	124,990
China	71,378	39,468	14,251	2,414	127,511
Other APAC	32,911	18,635	10,275	1,917	63,738
Total APAC	104,289	58,103	24,526	4,331	191,249
Germany	12,862	4,648	25,315	341	43,166
Other EMEA	9,411	12,222	20,447	3,767	45,847
Total EMEA	22,273	16,870	45,762	4,108	89,013
Total Net sales	152,882	154,434	86,557	11,379	405,252

(1) Net sales are allocated to countries based on the location of the customer. The table above includes countries with 10% or more of net sales for the periods indicated.

Note 11 – Joint Ventures

As of June 30, 2018, we had two joint ventures, each 50% owned, which were accounted for under the equity method of accounting.

Joint Venture

Location Operating Segment

Fiscal Year-End

Rogers INOAC Corporation (RIC)JapanElastomeric Material Solutions October 31Rogers INOAC Suzhou Corporation (RIS)ChinaElastomeric Material Solutions December 31

We recognized equity income related to the joint ventures of \$1.8 million and \$2.8 million for the three and six months ended June 30, 2018, respectively. We recognized equity income related to the joint ventures of \$1.0 million

and \$2.0 million for the three and six months ended June 30, 2017, respectively. These amounts are included in the condensed consolidated statements of operations.

The summarized financial information for the joint ventures for the periods indicated was as follows:

	Three M	onths	Six Months		
	Ended		Ended		
(Dollars in thousands)	June 30,	June 30,	June 30,	June 30,	
	2018	2017	2018	2017	
Net sales	\$14,907	\$12,846	\$28,232	\$24,270	
Gross profit	\$5,608	\$4,706	\$11,081	\$9,142	
Net income	\$3,609	\$1,932	\$5,622	\$3,952	
D			.		

Receivables from and payables to joint ventures arise during the normal course of business from transactions between us and the joint ventures. As of June 30, 2018 and December 31, 2017, we had receivables of \$3.0 million and \$3.7 million, respectively, due from RIC, RIS, our affiliated partner in the joint ventures, as well as its subsidiaries. As of June 30, 2018 and December 31, 2017, we owed payables of \$1.9 million and \$2.1 million, respectively, to RIC and RIS.

Note 12 – Debt

On February 17, 2017, we entered into a secured five year credit agreement with JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto (the Third Amended Credit Agreement), which increased the principal amount of our revolving credit facility to up to \$450.0 million borrowing capacity, with sublimits for multicurrency borrowings, letters of credit and swing-line notes, and provided an additional \$175.0 million accordion feature. Borrowings may be used to finance working capital needs, for letters of credit and for general corporate purposes in the ordinary course of business, including the financing of permitted acquisitions (as defined in the Third Amended Credit Agreement).

Borrowings under the Third Amended Credit Agreement can be made as alternate base rate loans or euro-currency loans. Alternate base rate loans bear interest that includes a base reference rate plus a spread of 37.5 to 75.0 basis points, depending on our leverage ratio. The base reference rate is the greater of the prime rate; federal funds effective rate (or the overnight bank funding rate, if greater) plus 50 basis points; or adjusted 1-month LIBOR plus 100 basis points. Euro-currency loans bear interest based on adjusted LIBOR plus a spread of 137.5 to 175.0 basis points, depending on our leverage ratio.

In addition to interest payable on the principal amount of indebtedness outstanding from time to time under the Third Amended Credit Agreement, we are required to pay a quarterly fee of 20 to 30 basis points (based upon our leverage ratio) of the unused amount of the lenders' commitments under the Third Amended Credit Agreement.

The Third Amended Credit Agreement contains customary representations, warranties, covenants, mandatory prepayments and events of default under which our payment obligations may be accelerated. If an event of default occurs, the lenders may, among other things, terminate their commitments and declare all outstanding borrowings to be immediately due and payable together with accrued interest and fees. The financial covenants include requirements to maintain (1) a leverage ratio of no more than 3.25 to 1.00, subject to an election to increase the maximum leverage ratio to 3.50 to 1.00 for one fiscal year in connection with a permitted acquisition, and (2) an interest coverage ratio of no less than 3.00 to 1.00.

All obligations under the Third Amended Credit Agreement are guaranteed by each of our existing and future material domestic subsidiaries, as defined in the Third Amended Credit Agreement (the Guarantors). The obligations are also

secured by a Third Amended and Restated Pledge and Security Agreement, dated as of February 17, 2017, entered into by us and the Guarantors which grants to the administrative agent, for the benefit of the lenders, a security interest, subject to certain exceptions, in substantially all of the non-real estate assets of the Guarantors. These assets include, but are not limited to, receivables, equipment, intellectual property, inventory, and stock in certain subsidiaries.

All revolving loans are due on the maturity date, February 17, 2022. We are not required to make any quarterly principal payments under the Third Amended Credit Agreement, and as of June 30, 2018 we have \$131.0 million in outstanding borrowings under our credit facility.

At June 30, 2018, we have \$2.0 million of outstanding line of credit issuance costs that will be amortized over the life of the Third Amended Credit Agreement, which will terminate in February 2022. We recorded amortization expense of \$0.1 million for each of the three-month periods ended June 30, 2018 and 2017, and \$0.3 million and \$0.2 million for the six months ended June 30, 2018 and 2017, respectively, related to these deferred costs.

In March 2017, we entered into an interest rate swap to hedge the variable interest rate on \$75.0 million of our \$450.0 million revolving credit facility. See further discussion in Note 3, "Hedging Transactions and Derivative Financial Instruments."

Restriction on Payment of Dividends

Our Third Amended Credit Agreement generally permits us to pay cash dividends to our shareholders, provided that (i) no default or event of default has occurred and is continuing or would result from the dividend payment and (ii) our leverage ratio does not exceed 2.75 to 1.00. If our leverage ratio exceeds 2.75 to 1.00, we may nonetheless make up to \$20.0 million in restricted payments, including cash dividends, during the fiscal year, provided that no default or event of default has occurred and is continuing or would result from the payments. Our leverage ratio did not exceed 2.75 to 1.00 as of June 30, 2018.

Capital Leases

We have a capital lease obligation related to our manufacturing facility in Eschenbach, Germany. Under the terms of the leasing agreement, we have an option to purchase the property upon the expiration of the lease in 2021 at a price which is the greater of (i) the then-current market value or (ii) the residual book value of the land including the buildings and installations thereon. The total obligation recorded for the lease as of June 30, 2018 is \$5.3 million. Depreciation expense related to this capital lease was \$0.1 million for each of the three-month periods ended June 30, 2018 and 2017, and was \$0.2 million for each of the six-month periods ended June 30, 2018 and 2017. These expenses are included as depreciation expense in cost of sales on our condensed consolidated statements of operations. Accumulated depreciation at June 30, 2018 and December 31, 2017 was \$3.1 million and \$3.3 million, respectively. We also incurred interest expense on this capital lease of \$0.1 million for each of the three-month periods ended June 30, 2018 and 2017. Interest expense related to the debt recorded on the capital lease is included in interest expense on the condensed consolidated statements of statements of operations.

In 2017, we entered into two additional capital lease agreements for office related equipment in various worldwide locations. The total obligation recorded for the capital leases as of June 30, 2018 was \$0.7 million. Depreciation expense related to the capital leases was \$0.1 million for the three and six months ended June 30, 2018. These expenses are included as depreciation expense in selling, general and administrative expenses on the condensed consolidated statements of operations. Accumulated depreciation as of June 30, 2018 was \$0.2 million.

Note 13 – Goodwill and Other Intangible Assets

Goodwill

The changes in the carrying amount of goodwill for the period ending June 30, 2018, by operating segment, were as follows:

	Advanced	Elastomeric	Power			
(Dollars in thousands)	Connectivity	Material	Electronics	o Other	Total	
:	Solutions	Solutions	Solutions			
December 31, 2017	\$ 51,693	\$111,575	\$ 71,615	\$2,224	\$237,107	
Foreign currency translation adjustment		(707)	(2,113) —	(2,820)	
June 30, 2018	\$ 51,693	\$110,868	\$ 69,502	\$2,224	\$234,287	
Other Intangible Assets						
	June 30, 2	018		December	r 31, 2017	
	Gross	Accumulated	Net	Gross	Accumulated	Net
(Dollars in thousands)	Carrying	Amortization	Carrying	Carrying	Amortization	Carrying
	Amount	Amortization	Amount	Amount	Amortization	Amount
Customer relationships	\$127,885	\$ 25,815	\$102,070	\$128,907	\$ 22,514	\$106,393
Technology	72,374	35,175	37,199	73,891	33,491	40,400
Trademarks and trade names	10,180	2,649	7,531	10,213	2,157	8,056
Covenants not to compete	760	150	610	1,799	1,108	691
Total definite-lived other intangible asset	s 211,199	63,789	147,410	214,810	59,270	155,540
Indefinite-lived other intangible asset	4,599		4,599	4,738		4,738
Total other intangible assets	\$215,798	\$ 63,789	\$152,009	\$219,548	\$ 59,270	\$160,278

Gross and net carrying amounts and accumulated amortization may differ from prior periods due to foreign exchange rate fluctuations.

Amortization expense for the three and six months ended June 30, 2018 was approximately \$3.8 million and \$7.7 million, respectively. Amortization expense for the three and six months ended June 30, 2017 was approximately \$3.8 million and \$7.1 million, respectively. The estimated future amortization expense is \$7.6 million for the remainder of 2018 and \$15.0 million, \$11.7 million, \$11.0 million and \$10.6 million for 2019, 2020, 2021 and 2022, respectively. The indefinite-lived other intangible asset was acquired as part of the acquisition of Curamik Electronics GmbH. This asset is assessed for impairment annually, and between annual assessments if an event occurs or circumstances change that indicate the carrying value may not be recoverable.

The definite-lived other intangible assets are amortized using a fair value methodology that is based on the projected economic use of the related underlying asset. The weighted average remaining amortization period as of June 30, 2018, by definite-lived other intangible asset class, is presented in the table below:

Definite-Lived Other Intangible Asset Class Weighted Average Remaining Amortization Period

Customer relationships	8.9
Technology	4.8
Trademarks and trade names	5.9
Covenants not to compete	1.7
Total definite-lived other intangible assets	7.7

Note 14 - Commitments and Contingencies

Descriptions of the principal environmental and legal proceedings in which we are engaged are set forth below: Voluntary Corrective Action Program

Our location in Rogers, Connecticut is part of the Connecticut Voluntary Corrective Action Program (VCAP). As part of this program, we partnered with the Connecticut Department of Energy and Environmental Protection (CT DEEP) to determine the corrective actions to be taken at the site related to contamination issues. We evaluated this matter and completed internal due diligence work related to the site in the fourth quarter of 2015. Remediation activities on the site are ongoing and are recorded as reductions to the accrual as they are incurred. We have incurred aggregate remediation costs of \$0.7 million through June 30, 2018, and the accrual for future remediation efforts is \$1.7 million. PCB Contamination

We have been working with CT DEEP and the United States Environmental Protection Agency, Region I, in connection with certain polychlorinated biphenyl (PCB) contamination at our facility in Woodstock, Connecticut. The issue was originally discovered in the soil at the facility in the late 1990s, which has been remediated. Further contamination was later found in the groundwater beneath the property, which was addressed with the installation of a pump and treat system in 2011. The future costs related to the maintenance of the groundwater pump and treat system now in place at the site are expected to be minimal. We believe that the remaining remediation activity will continue for several more years and no time frame for completion can be estimated at the present time.

PCB contamination at this facility was also found in the buildings and courtyards original to the site, in addition to surrounding areas, including an on-site pond. We have completed remediation activities for the buildings and courtyards. We currently have a reserve of \$0.2 million for the pond remediation recorded in our condensed consolidated statements of financial position. We believe this reserve will be adequate to cover the remaining remediation work related to the pond contamination based on the information known at this time. However, if additional contamination is found, the cost of the remaining remediation may increase.

Asbestos Litigation

We, like many other industrial companies, have been named as a defendant in a number of lawsuits filed in courts across the country by persons alleging personal injury from exposure to products containing asbestos. We have never mined, milled, manufactured or marketed asbestos; rather, we made and provided to industrial users a limited number of products that contained encapsulated asbestos, but we stopped manufacturing these products in the late 1980s. Most of the claims filed against us involve numerous defendants, sometimes as many as several hundred.

The following table summarizes the change in number of asbestos claims outstanding during the six months ended June 30, 2018:

	Asbest	os
	Claims	
Claims outstanding at December 31, 2017	687	
New claims filed	126	
Pending claims concluded	(127)
Claims outstanding at June 30, 2018	686	
	10 1 1	

For the six months ended June 30, 2018, 110 claims were dismissed and 17 claims were settled. Settlements totaled approximately \$4.9 million for the six months ended June 30, 2018.

We recognize a liability for asbestos-related contingencies that are probable of occurrence and reasonably estimable. In connection with the recognition of liabilities for asbestos related matters, we record asbestos-related insurance receivables that are deemed probable. Our estimates of asbestos-related contingent liabilities and related insurance receivables are based on an independent actuarial analysis and an independent insurance usage analysis prepared annually by third parties. The actuarial analysis contains numerous assumptions, including general assumptions regarding the asbestos-related product liability litigation environment and company-specific assumptions regarding claims rates (including diseases alleged), dismissal rates, average settlement costs and average defense costs. The insurance usage analysis considers, among other things, applicable deductibles, retentions and policy limits, the solvency and historical payment experience of various insurance carriers, the likelihood of recovery as estimated by external legal counsel and existing insurance settlements.

We review our asbestos-related forecasts annually in the fourth quarter of each year unless facts and circumstances materially change during the year, at which time we would analyze these forecasts. During 2017, we reviewed the projections of our current and future asbestos claims, and determined it was appropriate to extend the liability projection period to cover all current and future claims through 2058. We based our conclusion on our history and experience with the claims data, the diminished volatility and consistency of observable claims data, the period of time that has elapsed since we stopped manufacturing products that contained encapsulated asbestos and an expectation of a downward trend in claims due to the average age of our claimants, which is approaching the average life expectancy. As a result, we believe we are now able to make a reasonable estimate of the actuarially determined liability for current and future asbestos claims through 2058, the expected end of our asbestos liability exposure. As of December 31, 2017, the balances of the asbestos-related claims and insurance receivables, which are projected to cover all current and future claims through 2058, were \$76.2 million and \$69.2 million, respectively. To date, the defense and settlement costs of our asbestos-related product liability litigation have been substantially covered by insurance. We have identified continuous coverage for primary, excess and umbrella insurance from the 1950s through the mid-1980s, except for a period in the early 1960s, with respect to which we have entered into an agreement for primary, but not excess or umbrella, coverage. In addition, we have entered into a cost sharing agreement with most of our primary, excess and umbrella insurance carriers to facilitate the ongoing administration and payment of claims by the carriers. The cost sharing agreement may be terminated by any party, but will continue until a party elects to terminate it. As of the filing date for this report, the agreement has not been terminated. During the first quarter of 2018, we received notice that primary coverage for a period of eight years and excess coverage for a period of two years had been exhausted, and as a result, we incurred indemnity and defense costs of \$0.2 million and \$0.5 million for the three and six months ended June 30, 2018, respectively. These costs reduced our existing asbestos-related liabilities to \$75.7 million as of June 30, 2018. We expect to exhaust individual primary, excess and umbrella coverages over time, and there is no assurance that such exhaustion will not accelerate due to additional claims, damages and settlements or that coverage will be available as expected.

The amounts recorded for the asbestos-related liabilities and the related insurance receivables described above were based on facts known at the time and a number of assumptions. However, projecting future events, such as the number of new claims to be filed each year, the average cost of disposing of such claims, the length of time it takes to dispose of such claims, coverage issues among insurers and the continuing solvency of various insurance companies, as well as the numerous uncertainties surrounding asbestos litigation in the United States could cause the actual liability and insurance recoveries for us to be higher or lower than those projected or recorded.

There can be no assurance that our accrued asbestos liabilities will approximate our actual asbestos-related settlement and defense costs, or that our accrued insurance recoveries will be realized. We believe that it is reasonably possible that we may incur additional charges for our asbestos liabilities and defense costs in the future, which could exceed existing reserves and insurance recovery, but we are unable to estimate the amount of such additional liabilities and costs. We will continue to vigorously defend ourselves and believe we have substantial unutilized insurance coverage to mitigate future costs related to this matter.

General Litigation

In addition to the above issues, the nature and scope of our business brings us in regular contact with the general public and a variety of businesses and government agencies. Such activities inherently subject us to the possibility of litigation, including environmental and product liability matters that are defended and handled in the ordinary course of business. We have established accruals for matters for which management considers a loss to be probable and reasonably estimable. It is the opinion of management that facts known at the present time do not indicate that such litigation, after taking into account insurance coverage and the aforementioned accruals, will have a material adverse impact on our results of operations, financial position or cash flows.

Note 15 – Share Repurchases

On August 6, 2015, we initiated a share repurchase program (the Program) of up to \$100.0 million of the Company's capital stock. We initiated the Program to mitigate dilutive effects of stock option exercises and vesting of restricted stock units granted by the Company, in addition to enhancing shareholder value. The Program has no expiration date, and may be suspended or discontinued at any time without notice. As of June 30, 2018, \$49.0 million remained

available for repurchase under the Program.

We repurchased the following shares of capital stock during the three and six months ended June 30, 2018:

	Three	Six
	Months	Months
	Ended	Ended
(Dollars in thousands)	June 30,	June 30,
	2018	2018
Shares of capital stock repurchased		23,138
Value of capital stock repurchased	\$ -	-\$ 2,999
All repurchases were made using ca	sh from c	operations.

Note 16 – Income Taxes

Our effective income tax rate was 32.6% and 33.9% for the three months ended June 30, 2018 and 2017, respectively. The decrease was primarily due to a lower U.S. effective tax rate, as a result of U.S. tax reform, and changes in pretax mix across jurisdictions with disparate tax rates, partially offset by an increase in current year accruals for uncertain tax positions. Our effective income tax rate was 23.2% and 33.0% for the six months ended June 30, 2018 and 2017, respectively. The decrease was primarily due to a lower U.S. effective tax rate, as a result of U.S. tax reform, changes in pretax mix across jurisdictions with disparate tax rates, excess tax deductions on equity compensation, R&D credits and a release of reserves for uncertain tax positions, partially offset by an increase in current year accruals for uncertain tax positions.

The total amount of unrecognized tax benefits as of June 30, 2018 was \$12.4 million, of which \$10.9 million would affect our effective tax rate if recognized. It is reasonably possible that approximately \$3.6 million of our unrecognized tax benefits as of June 30, 2018 will reverse within the next twelve months.

We recognize interest and penalties related to unrecognized tax benefits through income tax expense. As of June 30, 2018, we had \$0.7 million accrued for the payment of interest.

We are subject to taxation in the U.S. and various state and foreign jurisdictions. With few exceptions, we are no longer subject to examinations by tax authorities for years prior to 2013.

Note 17 - Restructuring and Impairment Charges

Global Headquarters Relocation

In the second quarter of 2017, we completed the physical relocation of our global headquarters from Rogers, Connecticut to Chandler, Arizona. We recorded \$0.1 million and \$1.1 million of expense related to this project in the three months ended June 30, 2018 and 2017, respectively and \$0.5 million and \$1.8 million in the six months ended June 30, 2018 and 2017, respectively. Severance activity related to the headquarters relocation is presented in the table below for the six months ended June 30, 2018:

(Dollars in thousands)	Severance	
	Related to	
	Headquarters	
	Relocation	
Balance at December 31, 2017	\$ 183	
Provisions	99	
Payments	(244)	
Balance at June 30, 2018	\$ 38	

The fair value of the total severance benefits to be paid (including payments already made) in connection with the relocation is \$1.1 million, of which we expensed \$0.0 million and \$0.1 million in the three months ended June 30, 2018 and 2017, respectively and \$0.1 million and \$0.3 million in the six months ended June 30, 2018 and 2017, respectively. The total severance costs are being expensed ratably over the required service period for the affected employees.

Facility Consolidation

On April 24, 2018, we made the decision to relocate our Santa Fe Springs, California operations to the Company's facilities in Carol Stream, Illinois and Bear, Delaware. We expect to incur restructuring expenses of approximately \$2.0 million in connection with the closure and transfer of production capabilities to the Carol Stream, Illinois and Bear, Delaware facilities. These costs include approximately \$0.8 million in severance and retention expenses and \$1.2 million of costs related to the relocation of equipment. The Company estimates that approximately \$1.5 million and \$0.5 million of the costs will be incurred in fiscal years 2018 and 2019, respectively. Completion of the transfer, and start-up of production at the Carol Stream, Illinois and Bear, Delaware facilities, is expected to require capital expenditures of approximately \$1.2 million to \$1.4 million. We recorded \$0.5 million of expense related to this project in the three and six months ended June 30, 2018, respectively. Severance activity related to the facility consolidation is presented in the table below for the six months ended June 30, 2018:

(Dollars in thousands)	Severance
	Related to
	Facility
	Consolidation
Balance at December 31, 2017	\$ —
Provisions	316
Payments	(14)
Balance at June 30, 2018	\$ 302

The fair value of the total severance benefits to be paid (including payments already made) in connection with the relocation is \$0.8 million. This total is being expensed ratably over the required service period for the affected employees. We incurred \$0.3 million of severance related expenses during the three and six months ended June 30, 2018.

Note 18 – Assets Held for Sale

In the second quarter of 2017, we began actively marketing for sale unutilized property in Chandler, Arizona, consisting of a building and two adjacent parcels of land with an aggregate net book value of \$0.9 million. In the second quarter of 2018, we completed the sale of the building and one parcel of land and recognized a gain on sale of approximately \$0.4 million in operating income. The remaining parcel of land being classified as held for sale has a net book value of \$0.4 million.

Note 19 – Revenue from Contracts with Customers

Revenue Recognition

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers, to achieve a consistent application of revenue recognition, resulting in a single revenue model to be applied by reporting companies under U.S. generally accepted accounting principles. Under the new model, recognition of revenue occurs when a customer obtains control of promised goods or services in an amount that reflects the consideration to which the providing entity expects to be entitled in exchange for those goods or services. In addition, the new standard requires that reporting companies disclose the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers.

We recognize revenue when all of the following criteria are met: (1) we have entered into a binding agreement, (2) the performance obligations have been identified, (3) the transaction price to the customer has been determined, (4) the transaction price has been allocated to the performance obligations in the contract, and (5) the performance obligations have been satisfied. The majority of our shipping terms permit us to recognize revenue at point of shipment. Some shipping terms require the goods to be through customs or be received by the customer before title passes. In those instances, revenue is not recognized until either the customer has received the goods or they have passed through customs, depending on the circumstances. Shipping and handling costs are treated as fulfillment costs. Sales tax or VAT are excluded from the measurement of the transaction price.

The Company manufactures some products to customer specifications which are customized to such a degree that it is unlikely that another entity would purchase these products or that we could modify these products for another customer. These products are deemed to have no alternative use to the Company whereby we have an enforceable

right to payment evidenced by contractual termination clauses. In accordance with ASC 606, for those circumstances we recognize revenue on an over-time basis. Revenue recognition does not occur until the product meets the definition of "no alternative use" and therefore, items that have not yet reached that point in the production process are not included in the population of items with over-time revenue recognition.

As appropriate, we record estimated reductions to revenue for customer returns, allowances, and warranty claims. Provisions for such reductions are made at the time of sale and are typically derived from historical trends and other relevant information.

Performance Obligations

Manufactured goods are our primary performance obligations. Revenue related to our performance obligations is predominantly recognized at a point in time consistent with our shipping terms. For certain products that meet the criteria of no alternative use whereby the Company has the right to payment, we recognize revenue on an over-time basis.

The selection of a method to measure progress toward completion of a contract requires judgment and is based on the nature of the products or services to be provided. We use the cost incurred method to measure the progress of our contracts with no alternative use products whereby the Company has the right to payment as we believe it is the best depiction of the transferring of value to the customer. Under the cost incurred method, the extent of progress toward completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the contract. Contract costs include labor, materials and subcontractors costs, as well as an allocation of indirect costs. Revenues, including estimated fees or profits, are recorded as costs are incurred.

Performance obligations are typically satisfied within three months of receipt of a customer order; therefore, a change in cost estimates will not have a material impact on the percentage of completion noted at the prior quarter end. Our typical payment terms with customers range from 30 days to 105 days. Product pricing is determined and negotiated on a standalone basis. Product pricing is determined without consideration for the pricing, margin, or other information specific to other products that the same customer or other parties related to that customer may also purchase, whether in the same or a different contract. Management allocates the transaction price to its performance obligations primarily based on stand-alone selling prices that may have been developed via specific customer quote for no alternative use products and non-standard products or standard price lists for standard products. The accounting for the estimate of variable consideration is consistent with our current practice.

Contract modifications occur when there is a change to the products, price, or both. Contract modifications are treated as a separate contract if there are additions to promised goods and services that are distinct and if the price for that separate performance obligation reflects the stand-alone selling price for those goods or services. However, if the obligations in the contract modification are not distinct and are part of a single performance obligation that is only partially satisfied, the contract is not determined to be a separate contract and is accounted for as a revision to an existing contract. These modifications are accounted for prospectively when remaining promises are distinct from those previously transferred, or through a cumulative catch-up adjustment.

Contract Balances

The Company has contract assets primarily related to unbilled revenue for revenue recognized related to products that are deemed to have no alternative use whereby we have the right to payment. Revenue is recognized in advance of billing to the customer in these circumstances as billing is typically performed at the time of shipment to the customer. The unbilled revenue is included in the contract assets on the condensed consolidated statements of financial position. The Company did not have any contract liabilities as of June 30, 2018.

The following table presents contract assets by operating segment as of June 30, 2018:

June 30, 2018

AElaatmonderic Power

(Dollars in thousands) Odianeritäivity Electronics Other Total

Solutitions Solutions

<u>-384</u> 18,126 3,423 21,933

No impairment losses were recognized during the three and six months ended June 30, 2018 on any receivables or contract assets arising from our contracts with customers.

Transition

Contract Assets

We adopted ASU 2014-09 in the first quarter of 2018 retrospectively with the cumulative effect of applying the standard recognized at the date of implementation and without restatement of comparative periods. This application of the new standard resulted in an increase to the January 1, 2018 balance of retained earnings of approximately \$4.2 million, net of tax.

The guidance was applied to all contracts that were not completed at the date of implementation. The primary reason for the impact of adoption is due to over-time revenue recognition.

If the criteria for over-time recognition are not met, revenue is recognized at a point in time. In considering at what point in time control of the product or service has transferred to the customer, we consider qualitative factors such as: 1) present right to payment; 2) legal title to the asset; 3) physical possession; 4) risks and rewards of ownership; and,

5) customer acceptance.

The impact of adoption using the modified retrospective method on the Company's condensed consolidated financial statements is as follows:

	As of			
Condensed Consolidated Statements of Financial Position:	December 31, January 1,			
Condensed Consolidated Statements of Financial Position.	2017	2018		
(Dollars in thousands)	Under Impact of ASC 605	Under ASC 606		
Contract assets	\$ \$ 18,099	\$ 18,099		
Inventories	1121,253707)	100,250		
Deferred income taxes	10, Г,ӨӨ О	12,286		
Retained earnings	68 4,240	688,752		

The following tables set forth the amount by which each financial statement line item is affected in the current reporting period by the application of ASC 606, as compared to the guidance that was in effect before its adoption. The impact of adoption on the condensed consolidated financial statements as of and for the three and six months ended June 30, 2018 is as follows:

	Three Months Ended				
Condensed Consolidated Statements of Operations: J			June 30,		
	2018		2018		
(In the second a success and share any success)	Under	Impact of	Under		
(In thousands, except per share amounts)	ASC 605	Adoption	ASC 606		
Net sales	\$214,782	\$ (107)	\$214,675		
Cost of sales	138,076	(73)	138,003		
Income tax expense	8,373		8,373		
Net income	17,363	(34)	17,329		
Basic earnings per share	\$0.94	\$ —	\$0.94		
Diluted earnings per share	\$0.93	\$ —	\$0.93		
	Six Months Ended				
Condensed Consolidated Statements of Operations:	June 30,		June 30,		
	2018		2018		
(In thousands, avaant nor share amounts)	Under	Impact of	Under		
(In thousands, except per share amounts)					
	ASC 605	Adoption	ASC 606		
Net sales		Adoption \$ 3,834	ASC 606		
Net sales Cost of sales		\$ 3,834	ASC 606 \$429,286		
	\$425,452	\$ 3,834 2,607	ASC 606 \$429,286 276,007		
Cost of sales	\$425,452 273,400	\$ 3,834 2,607 333	ASC 606 \$429,286 276,007		
Cost of sales Income tax expense	\$425,452 273,400 12,811	\$ 3,834 2,607 333	ASC 606 \$429,286 276,007 13,144		
Cost of sales Income tax expense	\$425,452 273,400 12,811	\$ 3,834 2,607 333	ASC 606 \$429,286 276,007 13,144		
Cost of sales Income tax expense Net income	\$425,452 273,400 12,811 42,571	\$ 3,834 2,607 333 894	ASC 606 \$429,286 276,007 13,144 43,465		

Condensed Consolidated Statements of Financial Position:	As of June 30, 2018	June 30, 2018
(Dollars in thousands)	Unlater pact of	Under
	AS Codoption	ASC

	605	606
Contract assets	\$ -\$ 21,933	\$21,933
Inventories	1321659314)	117,739
Deferred income taxes	1,518,913	3,501
Retained earnings	723,106	732,217

	Six Months Ended				
Condensed Consolidated Statements of Cash Flows: J		June 30,			
	2018	2018			
(Dollars in thousands)	Under	Impact of	Under		
(Dollars in thousands)	ASC 605	Adoption	ASC 606		
Cash provided by operating activities:					
Net income	\$42,571	\$ 894	\$43,465		
Deferred income taxes	3,546	333	3,879		
Contract assets		(21,933)	(21,933)		
Inventories	(21,403)	14,914	(6,489)		
Other, net	(2,505)	5,792	3,287		
Net cash provided by operating activities	22,818		22,818		
Practical Expedients					

The Company will recognize the incremental costs of obtaining a contract as an expense when incurred as the amortization period of the asset is expected to be one year or less. The Company will not adjust the promised amount of consideration for the effects of a significant financing component as we expect, at contract inception, that the period between when the transfer of goods to our customer occurs and when the customer fully pays for the goods will be one year or less. We do not disclose the Company's unsatisfied performance obligations as they are part of contracts that have an original expected duration of one year or less.

Note 20 - Supplemental Financial Information

The components of Other operating (income) expense, net are as follows:

	Three Months		Six Mont	hs
	Ended		Ended	
(Dellars in the user de)	June 30	"June 30,	June 30,	June 30,
(Dollars in thousands)	2018	2017	2018	2017
Gain from antitrust litigation settlement	\$—	\$ -	-\$(3,591)	\$ —
Gain on sale of long-lived assets	\$(383)	\$ -	-\$(383)	\$(942)
In the first quarter of 2018 we recorded	a gain f	rom the a	attlamant (of optitude

In the first quarter of 2018, we recorded a gain from the settlement of antitrust litigation in the amount of \$3.6 million as a result of the settlement of a class action lawsuit, filed in 2005, which alleged that Dow Chemical Company and other urethane raw material suppliers unlawfully agreed to fix, raise, maintain or stabilize the prices of Polyether Polyol Products sold in the United States from January 1, 1999 through December 31, 2004 in violation of the federal antitrust laws.

In the second quarter of 2018, we completed the sale of a building and a parcel of land in Arizona that had been classified as held for sale as of June 30, 2017 and recognized a gain on sale of approximately \$0.4 million. In the first quarter of 2017, we completed the sale of a parcel of land in Belgium that had been classified as held for sale as of December 31, 2016 and recognized a gain on sale of approximately \$0.9 million.

Note 21 - Recent Accounting Standards

In March 2018, the Financial Accounting Standards Board (FASB) issued ASU No. 2018-05, Income Taxes (Topic 740): Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118. This ASU adds guidance that answers questions regarding how certain income tax effects from the Tax Cuts and Jobs Act (the Act) should be applied to companies' financial statements. The guidance also lists which financial statement disclosures are required under a measurement period approach.

In February 2018, the FASB issued ASU No. 2018-02, Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income. This ASU allows for reclassification of stranded tax effects resulting from the Act from accumulated other comprehensive income to retained earnings. This ASU is effective for fiscal years beginning after December 15, 2018, with early adoption permitted. The Company is currently evaluating the method and impact the adoption of ASU 2018-02 will have on the Company's consolidated financial statements and disclosures.

In January 2018, the FASB released guidance on the accounting for tax on the Global Intangible Low Tax Income (GILTI) provisions of the Act. The GILTI provisions impose a tax on foreign income in excess of a deemed return on tangible assets of foreign corporations. The guidance indicates that either accounting for deferred taxes related to GILTI inclusions or to treat any taxes on GILTI inclusions as period costs are both acceptable methods subject to an accounting policy election. Effective in the first quarter of 2018, the Company has elected to treat any potential GILTI inclusions as a period cost.

In December 2017, Staff Accounting Bulletin No. 118 (SAB 118) was issued to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. In accordance with SAB 118, we recorded provisional estimates for the deferred tax expense recorded in connection with the remeasurement of certain deferred tax assets and tax expense associated with the mandatory deemed repatriation of foreign earnings at December 31, 2017. Management has continued to gather and analyze information associated with these provisional estimates and did not record any adjustments during the three and six months ended June 30, 2018. Any subsequent adjustment to these amounts will be recorded to tax expense in the quarter of 2018 when the analysis is complete.

In May 2017, the FASB issued ASU No. 2017-09, Compensation - Stock Compensation (Topic 718): Scope of Modification Accounting. This ASU clarifies which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting. ASU No. 2017-09 is effective for interim and annual reporting periods beginning after December 15, 2017. Adoption of this standard will be applied prospectively to awards modified on or after the adoption date. The impact of this new standard will depend on the extent and nature of future changes to the terms and conditions of the Company's share-based payment awards. The Company adopted this standard on January 1, 2018, which did not have a material effect on the condensed consolidated financial statements. In March 2017, the FASB issued ASU No. 2017-07, Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Post-Retirement Benefit Cost. The changes to the standard require employers to report the service cost component in the same line item as other compensation costs arising from services rendered by employees during the reporting period. The other components of net periodic pension benefit costs will be presented in the statement of operations separately from the service cost and outside of a subtotal of operating income from operations. In addition, only the service cost component may be eligible for capitalization where applicable. ASU 2017-07 became effective for annual periods beginning after December 15, 2017. The Company adopted this standard on January 1, 2018. In conjunction with the adoption of this guidance, the Company reclassified \$0.4 million and \$0.8 million in net periodic pension benefits from Selling, general and administrative expenses to Other income (expense), net for the three and six months ended June 30, 2017, respectively. In February 2016, the FASB issued ASU No. 2016-02, Leases, which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e., lessees and lessors). The new standard requires lessees to classify leases as either finance or operating leases and record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. An accounting policy election may be made to account for leases with a term of 12 months or less similar to existing guidance for operating leases today. ASU No. 2016-02 supersedes the existing guidance on accounting for leases. The standard is effective for interim and annual reporting periods for fiscal years beginning after December 15, 2018. Early adoption of this standard is permitted and it is to be adopted using a modified retrospective approach. The Company has established an inventory of existing leases and is in the process of evaluating the classification of each lease and quantifying the accounting impact in accordance with the new standard. The Company expects to adopt this accounting standard beginning in fiscal year 2019.

Note 22 - Subsequent Events

Acquisition

On July 6, 2018, we acquired 100% of the membership interests of Griswold LLC (Griswold), a leading manufacturer of a wide range of high-performance engineered cellular elastomer and microcellular polyurethane products and solutions, for a cash-free, debt-free purchase price of \$77.9 million plus an earn-out capped at \$3.0 million based on certain of Griswold's 2018 product sales. We used \$82.5 million in borrowings under our existing credit facility to fund the transaction. Griswold, headquartered in Moosup, Connecticut, sells to customers across the automotive, transportation, medical, office products, printing and electronics industries.

Due to the timing of the acquisition, disclosures relating to the acquisition, including the allocation of the purchase price, have been omitted because the initial accounting for the transaction was incomplete as of the filing date of this report.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations As used herein, the "Company," "Rogers," "we," "us," "our" and similar terms include Rogers Corporation and its subsidiaries unless the context indicates otherwise.

Forward-Looking Statements

This Quarterly Report on Form 10-Q includes "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements are generally accompanied by words such as "anticipate," "assume," "believe," "could," "estimate," "expect," "fore "goal," "intend," "may," "might," "plan," "potential," "predict," "project," "should," "seek," "target" or similar expressions that uncertainty as to future events or outcomes. Forward-looking statements are based on assumptions and beliefs that we believe to be reasonable; however, assumed facts almost always vary from actual results, and the differences between assumed facts and actual results could be material depending upon the circumstances. Where we express an expectation or belief as to future results, that expectation or belief is expressed in good faith and based on assumptions believed to have a reasonable basis. We cannot assure you, however, that the stated expectation or belief will occur or be achieved or accomplished. Among the factors that could cause our results to differ materially from those indicated by forward-looking statements are risks and uncertainties inherent in our business including, without limitation: failure to capitalize on, volatility within, or other adverse changes with respect to the Company's growth drivers, including advanced mobility and advanced connectivity, such as delays in adoption or implementation of new technologies;

uncertain business, economic and political conditions in the United States and abroad, particularly in China, South Korea, Germany, Hungary and Belgium, where we maintain significant manufacturing, sales or administrative operations;

changes in trade policy, tariff regulation or other trade restrictions;

fluctuations in foreign currency exchange rates;

our ability to develop innovative products and have them incorporated into end-user products and systems; the extent to which end-user products and systems incorporating our products achieve commercial success; the ability of our sole or limited source suppliers to deliver certain key raw materials, including commodities, to us in a timely or cost-effective manner;

intense global competition affecting both our existing products and products currently under development; failure to realize, or delays in the realization of, anticipated benefits of acquisitions and divestitures due to, among other things, the existence of unknown liabilities or difficulty integrating acquired businesses; our ability to attract and retain management and skilled technical personnel;

our ability to protect our proprietary technology from infringement by third parties and/or allegations that our technology infringes third party rights;

changes in effective tax rates or tax laws and regulations in the jurisdictions in which we operate;

failure to comply with financial and restrictive covenants in our credit agreement or restrictions on our operational and financial flexibility due to such covenants;

the outcome of ongoing and future litigation, including our asbestos-related product liability litigation;

changes in environmental laws and regulations applicable to our business; and

disruptions in, or breaches of, our information technology systems.

Our forward-looking statements are expressly qualified by these cautionary statements, which you should consider carefully, along with the risks discussed in this section and elsewhere in this report and our other reports filed with the Securities and Exchange Commission, including our Annual Report on Form 10-K for the year ended December 31, 2017 (the Annual Report), any of which could cause actual results to differ materially from historical results or anticipated results. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, unless required by law.

The following discussion and analysis of our financial condition and results of operations should be read together with our condensed consolidated financial statements and the related notes that appear elsewhere in this Form 10-Q along with our audited consolidated financial statements and the related notes thereto in our Annual Report. Executive Summary

Company Background and Strategy

Rogers Corporation designs, develops, manufactures and sells high-quality and high-reliability engineered materials and components for mission critical applications. We operate principally three strategic operating segments: Advanced Connectivity Solutions (ACS), Elastomeric Material Solutions (EMS) and Power Electronics Solutions (PES). We have a history of innovation and have established Innovation Centers for our leading research and development activities in Chandler, Arizona, Burlington, Massachusetts, Eschenbach, Germany and Suzhou, China. We are headquartered in Chandler, Arizona.

Our growth strategy is based upon the following principles: (1) market-driven organization, (2) innovation leadership, (3) synergistic mergers and acquisitions, and (4) operational excellence. As a market-driven organization, we are focused on growth drivers, including advanced mobility and advanced connectivity. More specifically, the key trends and markets that affect our business include the increased use of advanced driver assistance systems and adoption of electric and hybrid electric vehicles and new technology adoption in the telecom industry, including next generation wireless infrastructure. In addition to our focus on advanced mobility and advanced connectivity, we also sell into a variety of other end markets including renewable energy, aerospace and defense and diverse general industrial applications.

Our sales and marketing approach is based on addressing these trends, while our strategy focuses on factors for success as a manufacturer of engineered materials and components: quality, service, cost, efficiency, innovation and technology. We have expanded our capabilities through organic investment and acquisitions and strive to ensure high quality solutions for our customers. We continue to review and re-align our manufacturing and engineering footprint in an effort to attain a leading competitive position globally. We have established or expanded our capabilities in various locations in support of our customers' growth initiatives.

We seek to enhance our operational and financial performance by investing in research and development, manufacturing and materials efficiencies, and new product initiatives that respond to the needs of our customers. We strive to evaluate operational and strategic alternatives to improve our business structure and align our business with the changing needs of our customers and major industry trends affecting our business.

On July 6, 2018, we acquired 100% of the membership interests of Griswold LLC (Griswold), a leading manufacturer of a wide range of high-performance engineered cellular elastomer and microcellular polyurethane products and solutions.

2018 Second Quarter Executive Summary

In the second quarter of 2018 as compared to the second quarter of 2017, our net sales increased 6.6% to \$214.7 million, gross margin decreased 430 basis points to 35.7%, and operating margin decreased 430 basis points to 11.7%. The following key factors should be considered when reviewing our results of operations, financial condition and liquidity for the second quarter of 2018:

Our net sales increase in the second quarter of 2018 was attributable to increases in net sales across all three of our strategic business segments. Net sales were favorably impacted by \$8.4 million, or 4.2%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar. Net sales were also favorably impacted by higher demand in electric and hybrid electric vehicles, renewable energy, mass transit and variable frequency motor drives applications in the PES operating segment, partially offset by lower demand in portable electronics and wireless 4G LTE applications in the ACS operating segment. The adoption of new accounting guidance for revenue recognition unfavorably impacted net sales in the second quarter of 2018 by \$0.1 million. See Note 19, "Revenue from Contracts with Customers," as well as "Segment Sales and Operations" for further discussion.

Our gross margin decreased 430 basis points and our operating margin decreased 430 basis points in the second quarter of 2018. Our gross margin decreased to 35.7% in the second quarter of 2018 as a result of unfavorable absorption of fixed costs and increased costs for copper commodities, facility consolidation and multi-site product qualification, including freight.

Our operating income decreased to \$25.2 million in the second quarter of 2018, as compared to \$32.3 million in the second quarter of 2017, reflecting a decrease in gross margin, furthered by a \$2.5 million increase in selling, general & administrative (SG&A) expenses and a \$1.6 million increase in research and development (R&D) expenses. The increase in SG&A expenses was driven by strategic investments associated with future growth initiatives. SG&A expenses decreased slightly as a percentage of net sales from 19.9% in the second quarter of 2017 to 19.8% in the second quarter of 2018.

We are an innovation company, and in the second quarter of 2018 we continued our investment in R&D, with R&D expenses comprising 4.1% of our quarterly net sales. R&D expenses were \$8.8 million in the second quarter of 2018, which was an increase of \$1.6 million, an increase of 60 basis points as a percentage of net sales, from the second quarter of 2017. We have made concerted efforts to realign our R&D organization to better fit the future direction of our Company, including dedicating resources to focus on current product extensions and enhancements to meet our

expected short-term and long-term technology needs.

We acquired Griswold in July 2018, as we continue to execute on our synergistic acquisition strategy. Acquisitions are a core part of our growth strategy, and these particular acquisitions extend the product portfolio and technology capabilities of our EMS operating segment. Griswold is a leading manufacturer of a wide range of high-performance engineered cellular elastomer and microcellular polyurethane products and solutions across the automotive, transportation, medical, office products, printing and electronics industries. We financed our acquisition of Griswold with \$82.5 million in borrowings under our revolving credit facility in July 2018. As a result, borrowings under our credit facility will increase in the third quarter of 2018.

Results of Operations

The following table sets forth, for the periods indicated, selected operations data expressed as a percentage of net sales:

			Three Months Ended		Six Months Ended			ded				
			June	30,	June	30,	June	June 30, June 30,		30,		
			2018		2017		2018		2017			
Net sales			100.0) %	100.0) %	100.0) %	100.0) %		
Gross margin			35.7	%	40.0	%	35.7	%	39.7	%		
Selling, general and ad	lministrative e	expenses	19.8	%	19.9	%	19.4	%	18.4	%		
Research and developr	nent expenses	8	4.1	%	3.5	%	3.9	%	3.5	%		
Restructuring and impa	-		0.3	%	0.5	%	0.2	%	0.4	%		
Other operating (incon	-		(0.2)%		%	(0.9)%	(0.2)%		
Operating income			11.7	%	16.0	%	13.1	%	17.6	%		
F aulta in como in como			0.0	01	0.5	07	07	07	0.5	01		
Equity income in unco	0	nt ventures	0.8		0.5		0.7		0.5	% a		
Other income (expense	e), net		-		0.1		<u> </u>		0.3	% \%		
Interest expense, net	4						(0.6)%		
Income before income	tax expense		12.0	%	15.7	%	13.2	%	17.6	%		
Income tax expense			3.9	%	5.3	%	3.1	%	5.8	%		
Net income			8.1	%	10.4	%	10.1	%	11.8	%		
Net Sales and Gross M	-											
	Three Montl	hs Ended					Six M		s End	ed		
(Dollars in thousands)	June 30, 2018	June 30, 2017	Perc	cent	Chang	ore –	June 3 2018	0,	Jun 201	e 30, 7	Percent Cl	nange
Net sales	\$214,675	\$201,424	6.6%	%			\$429,2	286)5,252	5.9%	
Gross margin		40.0 %	6				35.7		% 39.	,	2	

Net sales increased by 6.6% in the second quarter of 2018 compared to the second quarter of 2017. The ACS, EMS and PES operating segments had net sales increases of 2.7%, 2.1% and 22.2%, respectively. The increase in net sales was primarily driven by favorable currency fluctuations of \$8.4 million, or 4.2%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar. Net sales were also favorably impacted by higher demand in electric and hybrid electric vehicles, renewable energy, mass transit and variable frequency motor drives applications in the PES operating segment, partially offset by lower demand in portable electronics and wireless 4G LTE applications in the ACS operating segment. The adoption of new accounting guidance for revenue recognition unfavorably impacted net sales in the second quarter of 2018 by \$0.1 million.

Net sales increased by 5.9% in the first half of 2018, compared to the first half of 2017. The EMS and PES operating segments had net sales increases of 1.9% and 28.7%, while the ACS operating segment had a net sales decrease of 2.0%. The increase in net sales was primarily driven by favorable currency fluctuations of \$17.8 million, or 4.4%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar. The adoption of new accounting guidance for revenue recognition favorably impacted net sales in the first half of 2018 by \$3.8 million, or 0.9%. Net sales were also favorably impacted by higher demand in electric and hybrid electric vehicles, renewable energy, mass transit and variable frequency motor drives applications in the PES operating segment, partially offset by lower demand in portable electronics and wireless 4G LTE applications in the ACS operating segment.

Gross margin as a percentage of net sales decreased 430 basis points to 35.7% in the second quarter of 2018 compared to 40.0% in the second quarter of 2017. Gross margin in the second quarter of 2018 was unfavorably impacted by lower absorption of fixed costs and increased costs for copper commodities, facility consolidation and multi-site

product qualification, including freight. The adoption of new accounting guidance for revenue recognition unfavorably impacted gross margin in the second quarter of 2018 by a de minimis amount. Gross margin as a percentage of net sales decreased 400 basis points to 35.7% in the first half of 2018 from 39.7% in the first half of 2017. Gross margin in the first half of 2018 was unfavorably impacted by lower absorption of fixed costs and increased costs for copper commodities, machine downtime, facility consolidation and multi-site product qualification, including freight. The adoption of new accounting guidance for revenue recognition favorably impacted gross margin in the first half of 2018 by \$1.2 million, or 0.3% as a percentage of net sales.

Selling, General and Administrative Expenses

	Three Months E	Six Months	Six Months Ended		
(Dollars in thousands)	June 30,June20182017	,	June 30, 2018	June 30, 2017	Percent Change
Selling, general and administrative expenses	\$42,540 \$40,	,012 6.3%	\$83,137	\$74,580	11.5%
Percentage of net sales	19.8 % 19.9	%	1911 /0	18.4 %	,

SG&A expenses increased 6.3% in the second quarter of 2018 from the second quarter of 2017, primarily due to a \$2.1 million increase in sales and marketing investments to support future growth initiatives, a \$0.9 million increase in severance expense, a \$0.7 million increase in acquisition expenses, partially offset by a \$1.2 million decrease in equity compensation expense. SG&A decreased as a percent of net sales to 19.8% in the second quarter of 2018 from 19.9% in the second quarter of 2017.

SG&A expenses increased 11.5% from the first half of 2017, primarily due to a \$4.2 million increase in sales and marketing investments to support future growth initiatives, a \$1.9 million increase in severance expense, a \$0.7 million increase in other intangible assets amortization, a \$0.5 million increase in equity compensation expense and a \$0.2 million increase in acquisition expenses. SG&A increased as a percent of net sales to 19.4% in the first half of 2018 from 18.4% in the first half of 2017.

Research and Development Expenses

				Six Month		
(Dollars in thousands)	June 30, 2018	June 30, 2017	Percent Change	June 30, 2018	June 30, 2017	Percent Change
Research and development expenses	\$8,750	\$7,141	22.5%	\$16,884	\$14,102	19.7%
Percentage of net sales	4.1 %	3.5 %		3.9 %	3.5 %	

R&D expenses increased 22.5% in the second quarter of 2018 from the second quarter of 2017, and increased 19.7% in the first half of 2018 from the first half of 2017. The increases are due to concerted efforts to realign our R&D organization to better fit the future direction of our Company, including dedicating resources to focus on current product extensions and enhancements to meet our expected short-term and long-term technology needs. Restructuring and Impairment Charges and Other Operating Expenses (Income), Net

	Three Months I	Ended	Six Months Ended		
(Dollars in thousands)	June 30June 30	Parcont Change	June 30	June 30, Percent Change	
(Donars in mousands)	2018 2017	Fercent Change	2018	2017 Fercent Change	
Restructuring and impairment charges	\$541 \$1,079	(49.9)%	\$963	\$1,805 (46.6)%	
Other operating (income) expense, net	(383) —	%	(3,974)	(942) 321.9%	

We incurred restructuring charges associated with the relocation of our global headquarters from Rogers, Connecticut to Chandler, Arizona and the relocation of our Santa Fe Springs, California operations to the Company's facilities in Carol Stream, Illinois and Bear, Delaware. We recognized \$0.1 million and \$0.5 million of restructuring charges associated with the headquarters relocation and the facility consolidation in the second quarter of 2018, respectively, and \$1.1 million of restructuring charges related to the headquarters relocation in the second quarter of 2017. We recognized \$0.5 million and \$0.5 million of restructuring charges related to the headquarters relocation in the second quarter of 2017. We recognized \$0.5 million and \$0.5 million of restructuring charges related to the headquarters relocation in the second quarter of 2017. We recognized \$0.5 million and \$0.5 million of restructuring charges associated with the headquarters relocation and facility consolidation in the first half of 2018, respectively, and \$1.8 million of restructuring charges related to the headquarters relocation during the six months ended June 30, 2018. We did not recognize any restructuring charges related to the facility consolidation in the three and six months ended June 30, 2017. We estimate that approximately \$1.0 million of additional costs will be incurred in the second half of 2018, with \$0.5 million of remaining costs expected to be incurred in 2019.

In the second quarter of 2018, we recognized other operating income of \$0.4 million as a result of the sale of a building and a parcel of land in Arizona that had been classified as held for sale as of June 30, 2017. Additionally, in the first half of 2018, we recorded a gain from the settlement of antitrust litigation in the amount of \$3.6 million. In the first half of 2017, we recognized other operating income of \$0.9 million as a result of the sale of a parcel of land in Belgium that had been classified as held for sale as of December 31, 2016.

Equity Income in Unconsolidated Joint Ventures

		Three Montl	hs Ended	Six Months Ended		
(Dollars in thousands)		June 30,June 2018 2017	e 30, 7 Percent Chan	ge June 30,June 30, 2018 2017 Percent Change		
Equity income in unconsolic	lated joint ventures	\$1,804 \$ 96	66 86.7%	\$2,811 \$1,976 42.3%		
Equity income in unconsolic	lated joint ventures	increased 86.7	7% in the second q	uarter of 2018 from the second quarter		
of 2017, and increased 42.39	% in the first half of	2018 from the	e first half of 2017.	The increases were due to higher		
demand, primarily in portable	le electronics applic	ations.				
Other Income (Expense), Ne	et .					
	Three Months End		Six Months Ende	d		
(Dollars in thousands)	June 30µne 30, 2018 2017 Pe	ercent Change	June Bune 30, 20182017 Per	rcent Change		
Other income (expense), net	\$(34) \$ 260 (1	13.1)%	\$32 \$1,379 (97	7.7)%		
Other income (expense), net	decreased 113.1%	in the second	quarter of 2018 fro	m the second quarter of 2017, and		
decreased 97.7% in the first	half of 2018 from th	ne first half of	2017. The decreas	es were due to declines in the value of		
our copper derivatives partia	ally offset by favoral	ble changes in	n foreign currency t	ransaction costs.		
Interest Expense, Net						
	e Months Ended		Six Months Ended			
(Dollars in thousands) June 2018	30, June 30, Perc 3 2017 Perc	cent Change $\frac{J}{2}$	June 30,June 30,20182017	Percent Change		
Interest expense, net \$(1,2)	292) \$(1,947) (33.	6)% \$	\$(2,503) \$(3,195)	(21.7)%		
Interest expense, net, decrea	sed by 33.6% in the	second quarte	er of 2018 from the	second quarter of 2017, and by		
				outstanding balances on our credit		
facilities resulting from the o	liscretionary payme	nts of \$50.0 n	nillion and \$60.0 m	illion, during the second and third		
quarters of 2017, respectivel	y, to reduce our out	standing borro	owings under our c	redit facility. We expect interest		
expense to increase during the remainder of the year as a result of the \$82.5 million increase in borrowings under our						
credit facility to fund the acc	uisition of Griswold	d in July 2018	3.			
Income Taxes						
Thre	e Months Ended		Six Months Ende	d		
T	20 June 20		June 20 June /	20		

111100	womme Ended	u	SIX MOIIIII	s Endeu		
(Dollars in thousands) June 3	30, June 30,	Democrat Change	June 30,	June 30,	Percent Change	
(Dollars in thousands) June 3 2018	2017	Percent Change	2018 2017		Percent Change	
Income tax expense \$8,37	3 \$10,697	(21.7)%	\$13,144	\$23,583	(44.3)%	
Effective tax rate 32.6	% 33.9 %	6	23.2 %	33.0 %	,	
	22.67		.1	1 1 7	20 2010 1 2017	

Our effective income tax rate was 32.6% and 33.9% for the three months ended June 30, 2018 and 2017, respectively. The decrease was primarily due to a lower U.S. effective tax rate, as a result of U.S. tax reform, and changes in pretax mix across jurisdictions with disparate tax rates, partially offset by an increase in current year accruals for uncertain tax positions. Our effective income tax rate was 23.2% and 33.0% for the six months ended June 30, 2018 and 2017, respectively. The decrease was primarily due to a lower U.S. effective tax rate, as a result of U.S. tax reform, changes in pretax mix across jurisdictions with disparate tax rates, excess tax deductions on equity compensation, R&D credits and a release of reserves for uncertain tax positions, partially offset by an increase in current year accruals for uncertain tax positions.

Segment Sales and Op	eration	ns	
Advanced Connectivit	y Solu	tions	5
	T 1	3.4	.1

	Three Months Ended		Six Months Ended		
(Dollars in thousands)	June 30,	June 30,	June 30,	June 30,	
(Dollars in thousands)	2018	2017	2018	2017	
Net sales	\$76,376	\$74,340	\$149,831	\$152,882	
Operating income	\$10,594	\$12,997	\$18,496	\$32,495	
	<i>.</i> •	•	1 61 1 6		

The ACS operating segment is comprised of high frequency circuit material products used for making circuitry that receives, processes and transmits high frequency communications signals, in a wide variety of applications and markets, including wireless communications, wired infrastructure, high reliability, automotive radar, and aerospace and defense, among others.

Q2 2018 versus Q2 2017

ACS net sales increased by 2.7% in the second quarter of 2018 compared to the second quarter of 2017. The increase was primarily driven by favorable currency fluctuations of \$1.9 million, or 2.5%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar, partially offset by lower demand in portable electronics and wireless 4G LTE applications. Net sales increased in aerospace and defense and automotive radar applications, while net sales decreased in portable electronics and wireless 4G LTE applications. The adoption of new accounting guidance for revenue recognition did not impact ACS net sales in the second quarter of 2018.

Operating income decreased by 18.5% in the second quarter of 2018 from the second quarter of 2017. As a percentage of net sales, operating income in the second quarter of 2018 was 13.9%, a 360 basis point decrease as compared to the 17.5% reported in the second quarter of 2017. The decrease in operating income is due to increased costs for copper commodities and multi-site product qualification, including freight, as well as higher overhead from strategic investments in infrastructure. The adoption of new accounting guidance for revenue recognition did not impact ACS operating income in the second quarter of 2018.

YTD 2018 versus YTD 2017

ACS net sales decreased by 2.0% in the first half of 2018 compared to the first half of 2017. The decrease in net sales was primarily driven by lower demand in portable electronics and wireless 4G LTE applications, partially offset by favorable currency fluctuations of \$3.7 million, or 2.4%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar. Net sales increased in aerospace and defense and automotive radar applications, while net sales decreased in wireless 4G LTE and portable electronics applications. The adoption of new accounting guidance for revenue recognition did not impact ACS net sales in the first half of 2018.

Operating income decreased by 43.1% in the first half of 2018 from the first half of 2017. As a percentage of net sales, the first half of 2018 operating income was 12.3%, an 900 basis point decrease as compared to the 21.3% reported in the first half of 2017. The decrease in operating income is due to lower net sales, increased costs for copper commodities and multi-site product qualification, including freight, lower capacity utilization due to process issues and machine downtime, unfavorable absorption of fixed costs, as well as investments in sales and marketing to support future growth initiatives. The adoption of new accounting guidance for revenue recognition did not impact ACS operating income in the first half of 2018.

Elastomeric Material Solutions

	Three Months Ended		Six Months Ended		
			SIX MOIIUIS EIIdeu		
(Dollars in thousands)	June 30,	June 30,	June 30,	June 30,	
(Donars in thousands)	2018	2017	2018	2017	
Net sales	\$79,216	\$77,585	\$157,299	\$154,434	
Operating income	\$8,421	\$13,934	\$22,581	\$26,724	

The EMS operating segment is comprised of polyurethane and silicone foam products, which are sold into a wide variety of applications and markets, including general industrial, portable electronics, automotive, mass transit and consumer applications. In July 2018, we acquired Griswold, a leading manufacturer of a wide range of

high-performance engineered cellular elastomer and microcellular polyurethane products and solutions. We are in the process of integrating Griswold into the EMS operating segment.

Q2 2018 versus Q2 2017

EMS net sales increased by 2.1% in the second quarter of 2018 compared to the second quarter of 2017. The increase in net sales over the second quarter of 2017 was primarily driven by favorable currency fluctuations of \$2.0 million, or 2.6%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar. Net sales increased in portable electronics, consumer, automotive and mass transit applications, while net sales decreased in general industrial applications. The adoption of new accounting guidance for revenue recognition favorably impacted EMS net sales in the second quarter of 2018 by \$0.1 million, or 0.1%.

Operating income decreased by 39.6% in the second quarter of 2018 from the second quarter of 2017. As a percentage of net sales, second quarter of 2018 operating income was 10.6%, a 740 basis point decrease as compared to the 18.0% reported in the second quarter of 2017. The decrease in operating income is primarily due to increased costs for raw materials, and increased freight costs related to capacity optimization and facility consolidation, unfavorable absorption of fixed costs, as well as investments in sales and marketing to support future growth initiatives. The adoption of new accounting guidance for revenue recognition favorably impacted EMS operating income in the second quarter of 2018 by a \$0.0 million, or 0.2%.

YTD 2018 versus YTD 2017

EMS net sales increased by 1.9% in the first half of 2018 compared to the first half of 2017. The increase in net sales was primarily driven by favorable currency fluctuations of \$4.0 million, or 2.6%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar. Net sales increased in portable electronics, consumer and automotive applications, while net sales decreased in general industrial and mass transit applications. The adoption of new accounting guidance for revenue recognition favorably impacted EMS net sales in the first half of 2018 by \$0.2 million, or 0.1%.

Operating income decreased by 15.5% in the first half of 2018 from the first half of 2017. As a percentage of net sales, the first half of 2018 operating income was 14.4%, a 290 basis point decrease as compared to the 17.3% reported in the first half of 2017. The decrease in operating income is primarily due to increased costs for raw materials and freight, unfavorable absorption of fixed costs, as well as investments in sales and marketing to support future growth initiatives, partially offset by a \$3.6 million gain on settlement from antitrust class action litigation, as discussed in Note 20, "Supplemental Financial Information." The adoption of new accounting guidance for revenue recognition favorably impacted EMS operating income in the first half of 2018 by \$0.0 million, or 0.2%. Power Electronics Solutions

	Three Months Ended		Six Months Ended		
(Dollars in thousands)	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017	
Net sales Operating income			\$111,360 \$11,260	. ,	

The PES operating segment is comprised of two product lines - curamik[®] direct-bonded copper (DBC) substrates that are used primarily in the design of intelligent power management devices, such as IGBT (insulated gate bipolar transistor) modules that enable a wide range of products including highly efficient industrial motor drives, wind and solar energy converters and electrical systems in automobiles, and ROLINX[®] busbars that are used primarily in power distribution systems products in electric and hybrid electric vehicles and clean technology applications. Q2 2018 versus Q2 2017

PES net sales increased by 22.2% in the second quarter of 2018 from the second quarter of 2017. Net sales increased in electric and hybrid electric vehicles, renewable energy, mass transit and variable frequency motor drives applications, primarily due to higher demand. The adoption of new accounting guidance for revenue recognition favorably impacted PES net sales in the second quarter of 2018 by \$0.4 million, or 0.8%. Net sales were also impacted by favorable currency fluctuations of \$4.3 million, or 9.8%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar.

Operating income for the quarter increased by 19.1% in the second quarter of 2018 from the second quarter of 2017. As a percentage of net sales, second quarter of 2018 operating income was 7.9%, a 20 basis point decrease as

compared to the 8.1% reported in the second quarter of 2017. The increase in operating income is primarily due to higher net sales from increased demand, partially offset by a provision for a commercial settlement, capacity optimization and facility consolidation efforts, as well as investments in sales and marketing to support future growth initiatives. The adoption of new accounting guidance for revenue recognition PES operating income in the second quarter of 2018 by \$0.1 million, or 3.3%.

YTD 2018 versus YTD 2017

PES net sales increased by 28.7% in the first half of 2018 from the first half of 2017. Net sales increased in electric and hybrid electric vehicles, renewable energy, mass transit and variable frequency motor drives applications, primarily due to higher demand. The adoption of new accounting guidance for revenue recognition favorably impacted PES net sales in the first half of 2018 by \$4.6 million, or 5.4%. Net sales were also impacted by favorable currency fluctuations of \$9.6 million, or 11.1%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar.

Operating income increased 34.0% in the first half of 2018 from the first half of 2017. As a percentage of net sales, the first half of 2018 operating income was 10.1%, a 40 basis point increase as compared to the 9.7% reported in the first half of 2017. The adoption of new accounting guidance for revenue recognition favorably impacted PES operating income in the first half of 2018 by \$1.5 million, or 17.7%. The increase in operating income is also due to higher net sales from increased demand, partially offset by a provision for a commercial settlement, process issues, capacity optimization and facility consolidation efforts, as well as investments in sales and marketing to support future growth initiatives.

Other

	Three Months		Six Months		
	Ended		Ended		
(Dollars in thousands)	June 30	"June 30,	June 30,	June 30,	
(Dollars in thousands)	2018	2017	2018	2017	
Net sales	\$5,436	\$5,594	\$10,796	\$11,379	
Operating income	\$1,970	\$1,823	\$3,932	\$3,728	
T 01		•	c 1	. 11	

The Other operating segment consists of our elastomer rollers and floats business, as well as our inverter distribution business.

Q2 2018 versus Q2 2017

Net sales in this segment decreased by 2.8% in the second quarter of 2018 from the second quarter of 2017. The decrease in net sales over the second quarter of 2017 was primarily driven by the adoption of new accounting guidance for revenue recognition, which resulted in a \$0.6 million unfavorable impact, or 10.0%. Currency fluctuations had a \$0.2 million favorable impact on net sales during the second quarter of 2018 due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar.

Operating income increased 8.1% in the second quarter of 2018 compared to the second quarter of 2017. As a percentage of net sales, second quarter of 2018 operating income was 36.2%, a 360 basis point increase as compared to the 32.6% reported in the second quarter of 2017. This increase was primarily driven by operational improvements and efficiency initiatives. Operating income in the second quarter of 2018 was unfavorably impacted by \$0.2 million, or 9.8%, from the adoption of new accounting guidance for revenue recognition.

YTD 2018 versus YTD 2017

Net sales in this segment decreased by 5.1% in the first half of 2018 from the first half of 2017. The decrease in net sales is primarily driven by the adoption of new accounting guidance for revenue recognition, which resulted in a \$1.0 million unfavorable impact, or 8.5%. Currency fluctuations had a \$0.5 million favorable impact on net sales during the first half of 2018 due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar.

Operating income increased by 5.5% in the first half of 2018 from the first half of 2017. As a percentage of net sales, second quarter of 2018 operating income was 36.4%, a 360 basis point increase as compared to the 32.8% reported in the second quarter of 2017. This increase is primarily due to operational improvements and efficiency initiatives. Operating income in the first half of 2018 was unfavorably impacted by \$0.3 million, or 8.3%, from the adoption of new accounting guidance for revenue recognition.

Liquidity, Capital Resources and Financial Position

We believe that our existing sources of liquidity and cash flows that are expected to be generated from our operations, together with our available credit facilities, will be sufficient to fund our operations, currently planned capital expenditures, research and development efforts and our debt service commitments. We regularly review and evaluate the adequacy of our cash flows, borrowing facilities and banking relationships seeking to ensure that we have the appropriate access to cash to fund both our near-term operating needs and our long-term strategic initiatives.

(Dollars in thousands)	June 30,	December 31
(Dollars in thousands)	2018	2017
Key Balance Sheet Accounts:		
Cash and cash equivalents	\$174,700	\$ 181,159
Accounts receivable, net	\$148,727	\$ 140,562
Contract assets	\$21,933	\$ —
Inventories	\$117,739	\$ 112,557
Borrowings under credit facility	\$130,982	\$ 130,982

As of June 30, 2018, cash and cash equivalents were \$174.7 million as compared to \$181.2 million as of December 31, 2017, a decrease of \$6.5 million, or 3.6%. This decrease was primarily due to \$20.2 million in capital expenditures, \$6.4 million in tax payments related to net share settlement of equity awards and \$3.0 million in repurchases of capital stock, partially offset by cash generated by operations during the first half of 2018. We financed our acquisition of Griswold with \$82.5 million in borrowings under our revolving credit facility in July 2018. As a result, borrowings under our credit facility will increase in the third quarter of 2018.

The following table illustrates the location of our cash and cash equivalents by our three major geographic areas as of the periods indicated:

*	June 30	December 31,	
(Dollars in thousands)	2018	2017	
United States	\$33,987	\$ 35,653	
Europe	43,386	41,307	
Asia	97,327	104,199	
	¢ 174 700	¢ 101 150	

Total cash and cash equivalents \$174,700 \$ 181,159

Approximately \$140.7 million of our cash and cash equivalents were held by non-U.S. subsidiaries as of June 30, 2018. As a result of U.S. tax reform, unremitted earnings as of December 31, 2017 were subjected to U.S. tax through the transition tax, but a portion could be subject to additional foreign income taxes if they are redeployed outside of their country of origin. With the exception of certain of our Chinese subsidiaries, we have historically asserted and continue to assert that foreign earnings are indefinitely reinvested. While we have not changed our assertion with respect to foreign earnings compared to prior years, we are currently evaluating the impact of U.S. tax reform on our global structure and any associated impacts it may have on our assertion on a go forward basis, and as such have not changed our assertion with respect to distribution of earnings that would require the accrual of additional deferred income taxes.

Significant changes in our balance sheet accounts from December 31, 2017 to June 30, 2018 were as follows: Accounts receivable increased 5.8% to \$148.7 million as of June 30, 2018, from \$140.6 million at December 31, 2017. The increase from year-end was primarily due to higher net sales at the end of the second quarter of 2018 compared to at the end of the 2017.

We recorded contract assets of \$21.9 million as of June 30, 2018 related to the adoption of ASU 2014-09. See further discussion in Note 19, "Revenue from Contracts with Customers" to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q.

Inventory increased 4.6% to \$117.7 million as of June 30, 2018, from \$112.6 million at December 31, 2017, primarily as a result of inventory buildup to meet future demand in anticipation of long supply lead times, supplier transition and planned machinery downtime, partially offset by the impact from the adoption of new accounting guidance for revenue recognition. See discussion in Note 19, "Revenue from Contracts with Customers."

Accrued employee benefits and compensation decreased to \$26.1 million as of June 30, 2018, from \$39.4 million at December 31, 2017. This decrease is primarily due to incentive compensation payouts of \$18.2 million that occurred in the first half of 2018, partially offset by \$3.6 million of accruals for projected incentive compensation payouts for the current performance year.

During the six months ended June 30, 2018, we repurchased 23,138 shares of our capital stock for \$3.0 million under a \$100.0 million share repurchase program approved by our Board of Directors on August 6, 2015. The share repurchase program has no expiration date and may be suspended or discontinued at any time without notice. As of June 30, 2018, \$49.0 million remained for repurchase under our share repurchase program. All purchases were made using cash from operations.

On February 17, 2017, we entered into a secured five year credit agreement with JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto (the Third Amended Credit Agreement), which increased the principal amount of our revolving credit facility to up to \$450.0 million borrowing capacity, with sublimits for multicurrency borrowings, letters of credit and swing-line notes, and provided an additional \$175.0 million accordion feature. Borrowings may be used to finance working capital needs, for letters of credit and for general corporate purposes in the ordinary course of business, including the financing of permitted acquisitions (as defined in the Third Amended Credit Agreement).

All revolving loans are due on the maturity date, February 17, 2022. We are not required to make any quarterly principal payments under the Third Amended Credit Agreement. As of June 30, 2018, we have \$131.0 million in outstanding borrowings under our credit facility.

Our Third Amended Credit Agreement generally permits us to pay cash dividends to our shareholders, provided that (i) no default or event of default has occurred and is continuing or would result from the dividend payment and (ii) our leverage ratio does not exceed 2.75 to 1.00. If our leverage ratio exceeds 2.75 to 1.00, we may nonetheless make up to \$20.0 million in restricted payments, including cash dividends, during the fiscal year, provided that no default or event of default has occurred and is continuing or would result from the payments. Our leverage ratio did not exceed 2.75 to 1.00 as of June 30, 2018.

During the second quarter of 2018, there were not any material new developments related to our capital leases. Refer to Note 12, "Debt" to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q for further discussion on liquidity matters.

Contingencies

During the second quarter of 2018, we did not become aware of any material new developments related to environmental matters or other contingencies or incur any material costs or capital expenditures related to environmental matters. Refer to Note 14, "Commitments and Contingencies" to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q for further discussion on ongoing environmental and other contingencies.

Off-Balance Sheet Arrangements

As of June 30, 2018, we did not have any off-balance sheet arrangements that have or are, in the opinion of management, likely to have a current or future material effect on our financial condition or results of operations. Critical Accounting Policies

Revenue Recognition

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers, to achieve a consistent application of revenue recognition, resulting in a single revenue model to be applied by reporting companies under U.S. generally accepted accounting principles. With the adoption of ASU 2017-09, we recognize revenue when all of the following criteria are met: (1) we have entered into a binding agreement, (2) the performance obligations have been identified, (3) the transaction price to the customer has been determined, (4) the transaction price has been allocated to the performance obligations in the contract, and (5) the performance obligations have been satisfied. The majority of our shipping terms permit us to recognize revenue at point of shipment. Some shipping terms require the goods to be through customs or be received by the customer before title passes. In those instances, revenue is not recognized until either the customer has received the goods or they have passed through customs, depending on the circumstances. Shipping and handling costs are treated as fulfillment costs. Sales tax or VAT are excluded from the measurement of the transaction price.

Recent Accounting Pronouncements

See Note 21, "Recent Accounting Standards" to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q for discussion of recent accounting pronouncements including expected dates of adoption.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes in our exposure to market risk during the second quarter of 2018. For discussion of our exposure to market risk, refer to Item 7A, Quantitative and Qualitative Disclosures About Market Risk, contained in our Annual Report.

Item 4. Controls and Procedures

EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

The Company, with the participation of our Chief Executive Officer and Principal Financial Officer, conducted an evaluation of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act), as of June 30, 2018. The Company's disclosure controls and procedures are designed (i) to ensure that information required to be disclosed by it in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (ii) to ensure that information required to be disclosed in the reports the Company files or submits under the Exchange Act is accumulated and communicated to its management, including its Chief Executive Officer and Principal Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Based on their evaluation, our Chief Executive Officer and Principal Financial Officer have concluded that the Company's disclosure controls and procedures were effective as of June 30, 2018.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There were no changes in the Company's internal control over financial reporting during its most recently completed fiscal quarter that have materially affected or are reasonably likely to materially affect the Company's internal control over financial reporting, as defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act.

Part II - Other Information

Item 1. Legal Proceedings

See a discussion of environmental, asbestos and other litigation matters in Note 14, "Commitments and Contingencies," to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q.

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

Items 2 (a) and (b) are not applicable

(c) Share Repurchases

(Dollars in thousands, except per share amounts)

Period	Total Number of Shares Purchased	Paid per	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet be Purchased under the Plans or Programs
March 1, 2018 to March 31, 2018	23,138	\$129.62	23,138	\$ 49,013
April 1, 2018 to April 30, 2018		\$—		\$ 49,013
May 1, 2018 to May 31, 2018		\$—		\$ 49,013
June 1, 2018 to June 30, 2018		\$—	_	\$ 49,013

During the six months ended June 30, 2018, we repurchased 23,138 shares of our capital stock for \$3.0 million under a \$100.0 million share repurchase program approved by our Board of Directors in 2015. The share repurchase program has no expiration date and may be suspended or discontinued at any time without notice. As of June 30, 2018, \$49.0 million remained for repurchase under the share repurchase program. All repurchases were made using cash from operations. Our share repurchases may occur from time to time through open market purchases, privately negotiated transactions or plans designed to comply with Rule 10b5-1 promulgated under the Securities Exchange Act of 1934, as amended.

Item 6. Exhibits List of Exhibits:

Restated Articles of Organization of Rogers Corporation, as amended, incorporated by reference to Exhibit 3a to

- 3.1 <u>the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2006 (the 2006 Form 10-K)</u> (File No. 001-04347).
- 3.2 <u>Amended and Restated Bylaws of Rogers Corporation, effective February 11, 2016, incorporated by reference to</u> <u>Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on February 26, 2016</u>.

Certification of President and Chief Executive Officer (Principal Executive Officer) pursuant to Rule 13a-14(a) of 31.1 the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.

31.2 <u>Certification of Principal Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as</u> adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.

32 <u>Certification of President and Chief Executive Officer (Principal Executive Officer) and Principal Financial</u> <u>Officer pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, as</u>

adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, furnished herewith.

The following materials from Rogers Corporation's Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2018 formatted in XBRL (Extensible Business Reporting Language): (i) Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2018 and June 30, 2017, (ii) Condensed

101 Consolidated Statements of Comprehensive Income (Loss) for the three and six months ended June 30, 2018 and June 30, 2017, (iii) Condensed Consolidated Statements of Financial Position at June, 30 2018 and December 31, 2017, (iv) Condensed Consolidated Statements of Cash Flows for the six months ended June 30, 2018 and June 30, 2017 and (v) Notes to Condensed Consolidated Financial Statements.

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.

ROGERS CORPORATION

(Registrant) /s/ Mark Weaver Mark Weaver Vice President, Principal Financial Officer, Chief Accounting Officer and Corporate Controller Dated: July 31, 2018