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

FORM 10-Q

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

For the quarterly period ended September 30, 2019
or

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

For the transition period from _______________ to _______________

Commission file number 1-4347

ROGERS CORPORATION
(Exact Name of Registrant as Specified in its Charter)

Massachusetts	**06-0513860**
(State or Other Jurisdiction of Incorporation or Organization)	(I. R. S. Employer Identification No.)

2225 W. Chandler Blvd., Chandler, Arizona 85224-6155
(Address of Principal Executive Offices) (Zip Code)

Registrant's telephone number, including area code: **(480) 917-6000**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $1.00 per share	**ROG**	**New York Stock Exchange**

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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

The number of shares outstanding of the registrant's capital stock as of October 25, 2019 was 18,572,454.

ROGERS CORPORATION
FORM 10-Q

September 30, 2019

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Forward-Looking Statements

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. Refer to "Forward-Looking Statements" in Item 2, Management's Discussion and Analysis of Results of Operations and Financial Position 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		Nine Months Ended	
	September 30, 2019	September 30, 2018	**September 30, 2019**	September 30, 2018
Net sales	**$ 221,842**	$ 226,863	**$ 704,492**	$ 656,149
Cost of sales	**142,975**	147,733	**454,403**	423,741
Gross margin	**78,867**	79,130	**250,089**	232,408
Selling, general and administrative expenses	**40,448**	39,943	**127,349**	123,080
Research and development expenses	**7,830**	7,630	**23,282**	24,514
Restructuring and impairment charges	**580**	1,052	**2,485**	2,015
Other operating (income) expense, net	**124**	863	**1,075**	(3,111)
Operating income	**29,885**	29,642	**95,898**	85,910
Equity income in unconsolidated joint ventures	**1,498**	1,642	**4,077**	4,453
Other income (expense), net	**(918)**	(680)	**(915)**	(647)
Interest expense, net	**(1,747)**	(2,000)	**(5,723)**	(4,503)
Income before income tax expense	**28,718**	28,604	**93,337**	85,213
Income tax expense	**5,331**	8,870	**17,258**	22,014
Net income	**$ 23,387**	$ 19,734	**$ 76,079**	$ 63,199
Basic earnings per share	**$ 1.26**	$ 1.07	**$ 4.10**	$ 3.44
Diluted earnings per share	**$ 1.25**	$ 1.06	**$ 4.07**	$ 3.39
Shares used in computing:				
Basic earnings per share	**18,581**	18,403	**18,569**	18,360
Diluted earnings per share	**18,724**	18,678	**18,715**	18,649

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

	Three Months Ended		Nine Months Ended	
	September 30, 2019	September 30, 2018	**September 30, 2019**	September 30, 2018
Net income	**$ 23,387**	$ 19,734	**$ 76,079**	$ 63,199
Foreign currency translation adjustment	**(10,187)**	(1,608)	**(12,262)**	(9,901)
Derivative instrument designated as cash flow hedge:				
Change in unrealized gain (loss) before reclassifications, net of tax (Note 4)	**(158)**	263	**(1,362)**	1,416
Unrealized (gain) reclassified into earnings, net of tax (Note 4)	**(32)**	(52)	**(188)**	(108)
Pension and other postretirement benefits:				
Amortization of loss, net of tax (Note 4)	**172**	44	**485**	131
Other comprehensive income (loss)	**(10,205)**	(1,353)	**(13,327)**	(8,462)
Comprehensive income	**$ 13,182**	$ 18,381	**$ 62,752**	$ 54,737

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

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

	September 30, 2019	December 31, 2018
Assets		
Current assets		
Cash and cash equivalents	$ 140,747	$ 167,738
Accounts receivable, less allowance for doubtful accounts of $1,353 and $1,354	138,532	144,623
Contract assets	24,070	22,728
Inventories	137,908	132,637
Prepaid income taxes	3,761	3,093
Asbestos-related insurance receivables, current portion	4,138	4,138
Other current assets	9,336	10,829
Total current assets	458,492	485,786
Property, plant and equipment, net of accumulated depreciation of $333,882 and $317,414	252,393	242,759
Investments in unconsolidated joint ventures	15,033	18,667
Deferred income taxes	12,166	8,236
Goodwill	260,552	264,885
Other intangible assets, net of amortization	162,939	177,008
Pension assets	20,236	19,273
Asbestos-related insurance receivables, non-current portion	60,247	59,685
Other long-term assets	7,660	3,045
Total assets	$ 1,249,718	$ 1,279,344
Liabilities and Shareholders' Equity		
Current liabilities		
Accounts payable	$ 38,608	$ 40,321
Accrued employee benefits and compensation	31,722	30,491
Accrued income taxes payable	9,642	7,032
Asbestos-related liabilities, current portion	5,547	5,547
Other accrued liabilities	19,670	23,789
Total current liabilities	105,189	107,180
Borrowings under revolving credit facility	130,482	228,482
Pension and other postretirement benefits liabilities	1,739	1,739
Asbestos-related liabilities, non-current portion	65,104	64,799
Non-current income tax	9,296	8,418
Deferred income taxes	8,556	10,806
Other long-term liabilities	14,718	9,596
Commitments and contingencies (Note 13)		
Shareholders' equity		
Capital stock - $1 par value; 50,000 authorized shares; 18,572 and 18,395 shares issued and outstanding	18,572	18,395
Additional paid-in capital	135,761	132,360
Retained earnings	852,462	776,403
Accumulated other comprehensive loss	(92,161)	(78,834)
Total shareholders' equity	914,634	848,324
Total liabilities and shareholders' equity	$ 1,249,718	$ 1,279,344

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

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

	Nine Months Ended	
	September 30, 2019	September 30, 2018
Operating Activities:		
Net income	**$ 76,079**	$ 63,199
Adjustments to reconcile net income to cash provided by operating activities:		
Depreciation and amortization	**37,176**	35,320
Equity compensation expense	**9,294**	8,536
Deferred income taxes	**(5,565)**	(17)
Equity in undistributed income of unconsolidated joint ventures	**(4,077)**	(4,453)
Dividends received from unconsolidated joint ventures	**5,375**	4,431
Pension and other postretirement benefits	**(503)**	(1,193)
Asbestos-related charges	**67**	—
Loss (gain) on sale or disposal of property, plant and equipment	**278**	(161)
Impairment charges	**1,537**	477
Provision (benefit) for doubtful accounts	**16**	(264)
Changes in assets and liabilities:		
Accounts receivable	**3,668**	(14,012)
Contract assets	**(1,342)**	(20,260)
Inventories	**(7,788)**	(11,840)
Pension and postretirement benefit contributions	**(16)**	(25,347)
Other current assets	**641**	146
Accounts payable and other accrued expenses	**(2,552)**	(4,354)
Other, net	**3,384**	3,216
Net cash provided by operating activities	**115,672**	33,424
Investing Activities:		
Acquisition of business, net of cash received	—	(78,571)
Isola asset acquisition	—	(43,434)
Capital expenditures	**(38,827)**	(36,557)
Proceeds from the sale of property, plant and equipment, net	**9**	1,027
Return of capital from unconsolidated joint ventures	**2,625**	—
Net cash used in investing activities	**(36,193)**	(157,535)
Financing Activities:		
Proceeds from borrowings under revolving credit facility	—	102,500
Repayment of debt principal and finance lease obligations	**(98,294)**	(1,046)
Payments of taxes related to net share settlement of equity awards	**(7,309)**	(6,492)
Proceeds from the exercise of stock options, net	**344**	734
Proceeds from issuance of shares to employee stock purchase plan	**1,249**	1,082
Share repurchases	—	(2,999)
Net cash (used in) provided by financing activities	**(104,010)**	93,779
Effect of exchange rate fluctuations on cash	**(2,460)**	(1,271)
Net decrease in cash and cash equivalents	**(26,991)**	(31,603)
Cash and cash equivalents at beginning of period	**167,738**	181,159
Cash and cash equivalents at end of period	**$ 140,747**	$ 149,556
Supplemental Disclosures:		
Accrued capital additions	**$ 1,999**	$ 2,099
Cash paid during the year for:		
Interest, net of amounts capitalized	**$ 6,449**	$ 4,662
Income taxes	**$ 16,018**	$ 23,357

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

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

	Three Months Ended		Nine Months Ended	
	September 30, 2019	September 30, 2018	**September 30, 2019**	September 30, 2018
Capital Stock				
Balance, beginning of period	**$ 18,559**	$ 18,380	**$ 18,395**	$ 18,255
Shares issued for vested restricted stock units, net of cancellations for tax withholding	**2**	2	**139**	115
Stock options exercised	**1**	1	**11**	19
Shares issued for employee stock purchase plan	**8**	6	**15**	12
Shares issued to directors	**2**	1	**12**	12
Shares repurchased	**—**	—	**—**	(23)
Balance, end of period	**18,572**	18,390	**18,572**	18,390
Additional Paid-In Capital				
Balance, beginning of period	**131,836**	126,452	**132,360**	128,933
Shares issued for vested restricted stock units, net of cancellations for tax withholding	**113**	(67)	**(7,448)**	(6,607)
Stock options exercised	**16**	35	**333**	715
Shares issued for employee stock purchase plan	**647**	518	**1,234**	1,070
Shares issued to directors	**(2)**	(1)	**(12)**	(12)
Equity compensation expense	**3,151**	2,722	**9,294**	8,536
Shares repurchased	**—**	—	**—**	(2,976)
Balance, end of period	**135,761**	129,659	**135,761**	129,659
Retained Earnings				
Balance, beginning of period	**829,075**	732,217	**776,403**	684,540
Net income	**23,387**	19,734	**76,079**	63,199
Cumulative-effect adjustment for lease accounting	**—**	—	**(20)**	—
Cumulative-effect adjustment of revenue recognition	**—**	—	**—**	4,212
Balance, end of period	**852,462**	751,951	**852,462**	751,951
Accumulated Other Comprehensive Loss				
Balance, beginning of period	**(81,956)**	(72,264)	**(78,834)**	(65,155)
Other comprehensive income (loss)	**(10,205)**	(1,353)	**(13,327)**	(8,462)
Balance, end of period	**(92,161)**	(73,617)	**(92,161)**	(73,617)
Total Shareholders' Equity	**$ 914,634**	$ 826,383	**$ 914,634**	$ 826,383

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

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.

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 year ended December 31, 2018.

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, include:

	Derivative Instruments at Fair Value as of September 30, 2019			
(Dollars in thousands)	**Level 1**	**Level 2**	**Level 3**	**Total**
Foreign currency contracts	**$ —**	**$ 189**	**$ —**	**$ 189**
Copper derivative contracts	**$ —**	**$ 518**	**$ —**	**$ 518**
Interest rate swap	**$ —**	**$ (1,524)**	**$ —**	**$ (1,524)**

	Derivative Instruments at Fair Value as of December 31, 2018			
(Dollars in thousands)	Level 1	Level 2	Level 3	Total
Foreign currency contracts	$ —	$ 522	$ —	$ 522
Copper derivative contracts	$ —	$ 583	$ —	$ 583
Interest rate swap	$ —	$ 461	$ —	$ 461

For further discussion on our derivative contracts, refer to "Note 3 – Hedging Transactions and Derivative Financial Instruments."

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, which are collectively a function of five primary variables: price of the underlying instrument, time to expiration, strike price, interest rate and volatility. 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 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.
- *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 September 30, 2019 and 2018, only our interest rate swap qualified for hedge accounting treatment as a cash flow hedge, and the hedge was highly effective.

Foreign Currency

During the three months ended September 30, 2019, we entered into Chinese Renminbi, Euro, Korean Won, and Japanese Yuan 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 in the period in which the adjustment occurred.

As of September 30, 2019, the notional values of the remaining foreign currency forward contracts were:

Notional Values of Foreign Currency Derivatives

USD/CNY	$	6,506,000
KRW/USD	₩	5,979,000,000

Commodity

As of September 30, 2019, we had 27 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 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 occurred. As of September 30, 2019, the volume of our copper contracts outstanding was as follows:

Volume of Copper Derivatives

October 2019 - December 2019	195 metric tons per month
January 2020 - March 2020	202 metric tons per month
April 2020 - June 2020	202 metric tons per month
July 2020 - September 2020	201 metric tons per month
October 2020 - December 2020	201 metric tons per month

Interest Rates

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. This transaction has been designated as a cash flow hedge and qualifies for hedge accounting treatment. For additional information regarding our revolving credit facility, refer to "Note 10 – Debt."

Effects on Financial Statements

(Dollars in thousands)	Location	The Effect of Current Derivative Instruments on the Financial Statements for the Period Ended September 30, 2019 — Gain (Loss) — Three Months Ended	Nine Months Ended	Fair Values of Derivative Instruments as of September 30, 2019 — Other Assets/ (Other Liabilities)[1]
Foreign Currency Contracts				
Contracts not designated as hedging instruments	Other income (expense), net	**$ 181**	**$ (406)**	**$ 189**
Copper Derivative Contracts				
Contracts not designated as hedging instruments	Other income (expense), net	**$ (543)**	**$ (1,008)**	**$ 518**
Interest Rate Swap				
Contract designated as hedging instrument	Other comprehensive income (loss)	**$ (240)**	**$ (1,985)**	**$ (1,524)**

(Dollars in thousands)	Location	The Effect of Current Derivative Instruments on the Financial Statements for the Period Ended September 30, 2018 — Gain (Loss) — Three Months Ended	Nine Months Ended	Fair Values of Derivative Instruments as of September 30, 2018 — Other Assets/(Other Liabilities)[1]
Foreign Currency Contracts				
Contracts not designated as hedging instruments	Other income (expense), net	$ 29	$ (95)	$ 342
Copper Derivative Contracts				
Contracts not designated as hedging instruments	Other income (expense), net	$ (453)	$ (1,637)	$ 631
Interest Rate Swap				
Contract designated as hedging instrument	Other comprehensive income (loss)	$ 270	$ 1,669	$ 1,710

[1] All balances were recorded in the "Other current assets" or "Other accrued liabilities" line items in the consolidated statements of financial position, except the 2019 interest rate swap balance, which was recorded in the "Other long-term liabilities" line item in the condensed consolidated statements of financial position.

Note 4 – Accumulated Other Comprehensive Loss

The changes in accumulated other comprehensive loss by component for the nine months ended September 30, 2019 and 2018 were as follows:

(Dollars and accompanying footnotes in thousands)	Foreign Currency Translation Adjustments	Pension and Other Postretirement Benefits(1)	Derivative Instrument Designated as Cash Flow Hedge(2)	Total
Balance as of December 31, 2018	**$ (30,488)**	**$ (48,700)**	**$ 354**	**$ (78,834)**
Other comprehensive income (loss) before reclassifications	**(12,262)**	**—**	**(1,362)**	**(13,624)**
Amounts reclassified from accumulated other comprehensive loss	**—**	**485**	**(188)**	**297**
Net current-period other comprehensive income (loss)	**(12,262)**	**485**	**(1,550)**	**(13,327)**
Balance as of September 30, 2019	**$ (42,750)**	**$ (48,215)**	**$ (1,196)**	**$ (92,161)**
Balance as of December 31, 2017	$ (17,983)	$ (47,198)	$ 26	$ (65,155)
Other comprehensive income (loss) before reclassifications	(9,901)	—	1,416	(8,485)
Amounts reclassified from accumulated other comprehensive loss	—	131	(108)	23
Net current-period other comprehensive income (loss)	(9,901)	131	1,308	(8,462)
Balance as of September 30, 2018	$ (27,884)	$ (47,067)	$ 1,334	$ (73,617)

(1) Net of tax benefits of $9,851 and $9,984 as of September 30, 2019 and December 31, 2018, respectively. Net of tax benefits of $9,523 and $9,563 as of September 30, 2018 and December 31, 2017, respectively.

(2) Net of tax benefits (expenses) of $329 and ($106) as of September 30, 2019 and December 31, 2018, respectively. Net of tax expenses of ($375) and ($15) as of September 30, 2018 and December 31, 2017, respectively.

Note 5 – Acquisitions

Griswold LLC

On July 6, 2018, we acquired 100% of the membership interests in Griswold LLC (Griswold) for an aggregate purchase price of $78.0 million, net of cash acquired.

Pro Forma Financial Information

The following unaudited pro forma financial information presents the combined results of operations of Rogers and Griswold as if the Griswold acquisition had occurred on January 1, 2017. The unaudited pro forma financial information is not intended to represent or be indicative of our consolidated results of operations that would have been reported had the Griswold acquisition been completed as of January 1, 2017, and should not be taken as indicative of our future consolidated results of operations.

(Dollars in thousands)	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2018
Net sales	$ 226,863	$ 670,936
Net income	20,765	63,201

Note 6 – Inventories

Inventories are valued at the lower of cost or net realizable value. Inventories consisted of the following:

(Dollars in thousands)	**September 30, 2019**	December 31, 2018
Raw materials	**$ 67,150**	$ 59,321
Work-in-process	**32,247**	30,086
Finished goods	**38,511**	43,230
Total inventories	**$ 137,908**	$ 132,637

Note 7 – Goodwill and Other Intangible Assets

Goodwill

The changes in the carrying amount of goodwill from December 31, 2018 to September 30, 2019 by operating segment, were as follows:

(Dollars in thousands)	Advanced Connectivity Solutions	Elastomeric Material Solutions	Power Electronics Solutions	Other	Total
December 31, 2018	$ 51,693	$ 142,589	$ 68,379	$ 2,224	$ 264,885
Foreign currency translation adjustment	—	(1,073)	(3,260)	—	(4,333)
September 30, 2019	**$ 51,693**	**$ 141,516**	**$ 65,119**	**$ 2,224**	**$ 260,552**

Other Intangible Assets

The gross carrying amount, accumulated amortization and net carrying amount of other intangible assets as of September 30, 2019 and December 31, 2018 by classification type, were as follows:

	September 30, 2019			December 31, 2018		
(Dollars in thousands)	**Gross Carrying Amount**	**Accumulated Amortization**	**Net Carrying Amount**	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Customer relationships	**$ 148,800**	**$ 36,413**	**$ 112,387**	$ 149,753	$ 30,078	$ 119,675
Technology	**80,163**	**42,736**	**37,427**	81,535	38,624	42,911
Trademarks and trade names	**11,970**	**4,053**	**7,917**	12,019	3,213	8,806
Covenants not to compete	**1,340**	**441**	**899**	1,340	249	1,091
Total definite-lived other intangible assets	**242,273**	**83,643**	**158,630**	244,647	72,164	172,483
Indefinite-lived other intangible asset	**4,309**	**—**	**4,309**	4,525	—	4,525
Total other intangible assets	**$ 246,582**	**$ 83,643**	**$ 162,939**	$ 249,172	$ 72,164	$ 177,008

In the table above, gross carrying amounts and accumulated amortization may differ from prior periods due to foreign exchange rate fluctuations.

Amortization expense for the three and nine months ended September 30, 2019 was approximately $4.4 million and $13.3 million, respectively. Amortization expense for the three and nine months ended September 30, 2018 was approximately $4.4 million and $12.1 million, respectively. The estimated future amortization expense is $4.4 million for the remainder of 2019 and $14.5 million, $13.8 million, $13.3 million and $12.7 million for 2020, 2021, 2022 and 2023, respectively.

The weighted average amortization period as of September 30, 2019, 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	7.4 years
Technology	4.2 years
Trademarks and trade names	4.9 years
Covenants not to compete	1.7 years
Total definite-lived other intangible assets	**6.4 years**

Note 8 – Earnings Per Share

Basic earnings per share is based on the weighted average number of common shares outstanding. Diluted earnings per share is based on the weighted average number of common shares outstanding and all dilutive potential common shares outstanding.

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

	Three Months Ended		Nine Months Ended	
(In thousands, except per share amounts)	**September 30, 2019**	September 30, 2018	**September 30, 2019**	September 30, 2018
Numerator:				
Net income	**$ 23,387**	$ 19,734	**$ 76,079**	$ 63,199
Denominator:				
Weighted-average shares outstanding - basic	**18,581**	18,403	**18,569**	18,360
Effect of dilutive shares	**143**	275	**146**	289
Weighted-average shares outstanding - diluted	**18,724**	18,678	**18,715**	18,649
Basic earnings per share	**$ 1.26**	$ 1.07	**$ 4.10**	$ 3.44
Diluted earnings per share	**$ 1.25**	$ 1.06	**$ 4.07**	$ 3.39

Dilutive shares are calculated using the treasury stock method and primarily include unvested restricted stock units. Anti-dilutive shares are excluded from the calculation of diluted shares and diluted earnings per share. For the three months ended September 30, 2019 and 2018, 3,173 shares and 37,700 shares were excluded, respectively.

Note 9 – Capital Stock and Equity Compensation

Equity Compensation

Performance-Based Restricted Stock Units

As of September 30, 2019, we had performance-based restricted stock units from 2019, 2018 and 2017 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 outstanding awards have one measurement criterion: the three year total shareholder return (TSR) on our capital stock as compared to that of a specified group of peer companies. The TSR measurement criterion of the awards is considered a market condition. As such, the fair value of this measurement criterion 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 are the assumptions used in the Monte Carlo calculation on the respective grant dates for awards granted in 2019 and 2018:

	June 3, 2019	**February 7, 2019**	September 17, 2018	February 8, 2018
Expected volatility	**39.7%**	**36.7%**	36.6%	34.8%
Expected term (in years)	**2.6**	**2.9**	3.0	3.0
Risk-free interest rate	**1.78%**	**2.43%**	2.85%	2.28%

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

Expected term – We use the vesting 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 nine months ended September 30, 2019:

	Performance-Based Restricted Stock Units
Awards outstanding as of December 31, 2018	142,434
Awards granted	112,160
Stock issued	(131,650)
Awards forfeited	(11,549)
Awards outstanding as of September 30, 2019	**111,395**

We recognized $1.5 million and $3.5 million of compensation expense for performance-based restricted stock units during the three and nine months ended September 30, 2019, respectively. We recognized $1.3 million and $3.1 million of compensation expense for performance-based restricted stock units during the three and nine months ended September 30, 2018, respectively.

Time-Based Restricted Stock Units

As of September 30, 2019, we had time-based restricted stock unit awards from 2019, 2018 and 2017 outstanding. The outstanding awards all ratably vest on the first, second and third anniversaries of the original grant date. 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 subsequent to the last grant anniversary date. Each time-based restricted stock unit represents a right to receive one share of 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.

A summary of activity of the outstanding time-based restricted stock units for the nine months ended September 30, 2019 is presented below:

	Time-Based Restricted Stock Units
Awards outstanding as of December 31, 2018	117,476
Awards granted	61,455
Stock issued	(65,887)
Awards forfeited	(7,815)
Awards outstanding as of September 30, 2019	**105,229**

We recognized $1.5 million and $4.4 million of compensation expense for time-based restricted stock units during the three and nine months ended September 30, 2019, respectively. We recognized $1.4 million and $4.2 million of compensation expense for time-based restricted stock units during the three and nine months ended September 30, 2018, 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 nine months ended September 30, 2019:

	Deferred Stock Units
Awards outstanding as of December 31, 2018	8,400
Awards granted	5,950
Stock issued	(7,200)
Awards outstanding as of September 30, 2019	**7,150**

We recognized no compensation expense related to deferred stock units during the three months ended September 30, 2019 and 2018, respectively. We recognized $1.1 million and $0.9 million of compensation expense related to deferred stock units during the nine months ended September 30, 2019 and 2018, respectively.

Stock Options

Stock options have been granted under various equity compensation plans. The maximum contractual term for all options is normally 10 years. All outstanding options are fully vested and exercisable. We have not granted any stock options since the first quarter of 2012.

During the nine months ended September 30, 2019, 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 $1.6 million, and the total amount of cash received from the exercise of these options was $0.3 million.

A summary of the activity under our stock option plans for the nine months ended September 30, 2019 is presented below:

	Options Outstanding	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life in Years	Aggregate Intrinsic Value
Options outstanding, vested and exercisable as of December 31, 2018	10,950	$ 31.99	2.0	$ 734,469
Options exercised	(10,650)	$ 32.21		
Options expired	(300)	$ 23.86		
Options outstanding, vested and exercisable as of September 30, 2019	—	**$ —**	**0.0**	**$ —**

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 model. We recognized an immaterial amount of equity compensation expense associated with the ESPP during each of the three- and nine-month periods ended September 30, 2019 and 2018.

Note 10 – Debt

In 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).

In 2018, we borrowed $82.5 million under our revolving credit facility to fund the acquisition of Griswold and an additional $20.0 million to fund the Rogers Corporation Defined Benefit Pension Plan (Merged Plan) as part of the proposed plan termination process.

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 at 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. 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. Based on our leverage ratio as of September 30, 2019, the spread was 137.5 basis points.

We incurred interest expense on our outstanding debt of $1.8 million and $1.8 million during the three months ended September 30, 2019 and 2018, respectively, and $6.1 million and $3.8 million during the nine months ended September 30, 2019 and 2018, respectively.

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. We incurred immaterial unused commitment fees in each of the three- and nine-month periods ended September 30, 2019 and 2018.

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 September 30, 2019 we had $130.5 million in outstanding borrowings under our revolving credit facility. However, we made discretionary principal payments totaling $98.0 million on our revolving credit facility during the nine months ended September 30, 2019.

As of September 30, 2019, we had $1.3 million of outstanding line of credit issuance costs that will be amortized over the life of the Third Amended Credit Agreement. We recognized an immaterial amount of amortization expense for each of the three- and nine-month periods ended September 30, 2019 and 2018, 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. For further information regarding the interest rate swap, refer to “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 September 30, 2019.

Note 11 - Leases

We have a finance lease obligation related to our manufacturing facility in Eschenbach, Germany. Under the terms of the lease 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. Our finance lease obligation related to this facility was $4.5 million and $5.0 million as of September 30, 2019 and December 31, 2018, respectively. The finance lease right-of-use asset balance for this facility was $6.2 million and $6.7 million as of September 30, 2019 and December 31, 2018, respectively. All other finance lease obligations and finance lease right-of-use assets were cumulatively immaterial as of September 30, 2019 and December 31, 2018. Accumulated amortization related to our finance lease right-of-use assets was $3.6 million and $3.5 million as of September 30, 2019 and December 31, 2018, respectively.

Amortization expense related to our finance lease right-of-use assets, which is primarily included in the “Cost of sales” line item of the condensed consolidated statements of operations, was immaterial for each of the three- and nine-month periods ended September 30, 2019 and 2018. Interest expense related to our finance lease obligations, which is included in the “Interest expense, net” line item of the condensed consolidated statements of operations, was immaterial for each of the three- and nine-month periods ended September 30, 2019 and 2018. Payments made on the principal portion of our finance lease obligations were immaterial for each of the three-and nine-month periods ended September 30, 2019 and 2018.

We have operating leases primarily related to building space and vehicles. Renewal options are included in the lease term to the extent we are reasonably certain to exercise the option. The exercise of lease renewal options is at our sole discretion. We account for lease components separately from non-lease components. The incremental borrowing rate represents our ability to borrow on a collateralized basis over a similar lease term.

The following table includes our expenses and payments for operating leases for the three and nine months ended September 30, 2019:

(Dollars in thousands)	Three Months Ended	Nine Months Ended
	September 30, 2019	**September 30, 2019**
Operating leases expense	**843**	**2,336**
Short-term leases expense	**68**	**150**
Payments on operating lease obligations	**719**	**2,243**

As of September 30, 2019 and December 31, 2018, our assets and liabilities balances related to finance and operating leases were as follows:

(Dollars in thousands)	**Location in Statements of Financial Position**	**September 30, 2019**	December 31, 2018
Finance lease right-of-use assets	Property, plant and equipment, net	**$ 6,186**	$ 6,750
Operating lease right-of-use assets	Other long-term assets	**$ 5,461**	$ —
Finance lease obligations, current portion	Other accrued liabilities	**$ 404**	$ 420
Finance lease obligations, non-current portion	Other long-term liabilities	**$ 4,119**	$ 4,629
Total finance lease obligations		**$ 4,523**	$ 5,049
Operating lease obligations, current portion	Other accrued liabilities	**$ 2,449**	$ —
Operating lease obligations, non-current portion	Other long-term liabilities	**$ 3,031**	$ —
Total operating lease obligations		**$ 5,480**	$ —

Net Future Minimum Lease Payments

The following table includes future minimum lease payments under finance and operating leases together with the present value of the net future minimum lease payments as of September 30, 2019:

(Dollars in thousands)	**Finance**	**Operating**		
	Leases	**Leases Signed**	**Less: Leases Not Yet Commenced**	**Leases**
2019	$ 143	$ 696	$ —	$ 696
2020	500	2,630	—	2,630
2021	4,072	1,546	—	1,546
2022	—	802	—	802
2023	—	229	—	229
Thereafter	—	31	—	31
Total Lease Payments	4,715	5,934	—	5,934
Less: Interest	(192)	(454)	—	(454)
Present Value of Net Future Minimum Lease Payments	$ 4,523	$ 5,480	$ —	$ 5,480

The following table includes information regarding the lease term and discount rates utilized in the calculation of the present value of net future minimum lease payments:

	Finance Leases	**Operating Leases**
Weighted Average Remaining Lease Term	2.0 years	2.6 years
Weighted Average Discount Rate	3.00%	6.08%

Transition

We adopted Accounting Standards Codification (ASC) 842, *Leases*, in the first quarter of 2019 using the optional transition method, which applies the new lease requirements through a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption without restatement of comparative periods. The guidance was applied to all leases that were not completed at the date of implementation. The adoption primarily affected our condensed consolidated statements of financial position through the recognition of $6.2 million of operating lease right-of-use assets and $6.2 million of operating lease obligations, as well as an immaterial impact to retained earnings, as of January 1, 2019. We recognized an immaterial amount of operating lease right-of-use assets and an immaterial amount of operating lease obligations during the three months ended September 30, 2019. We recognized an additional $0.8 million of operating lease right-of-use assets and $0.8 million operating lease obligations during the nine months ended September 30, 2019. The total operating lease right-of use assets and operating lease obligations recognized was $7.0 million and $7.0 million, respectively.

Practical Expedients

We have elected to recognize lease payments in the condensed consolidated statements of operations on a straight-line basis over the term of the lease for short-term leases. We also elected the package of practical expedients that allows us to carry forward the historical lease classification and accounting for indirect costs for any existing leases.

Note 12 – Pension Benefits and Other Postretirement Benefit Plans

As of September 30, 2019, we had two qualified noncontributory defined benefit pension plans: 1) the Rogers Corporation Employees' Pension Plan (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 Merged 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 31st for each respective plan year.

We are required, as an employer, to: (a) recognize in our consolidated statements of financial position an asset for a plan's overfunded status or a liability for a plan's underfunded status; (b) measure a plan's assets and our obligations that determine our funded status as of the end of the year; and (c) recognize changes in the funded status of a defined benefit postretirement plan in the year in which the changes occur and report these changes in accumulated other comprehensive loss. In addition, actuarial gains and losses that are not immediately recognized as net periodic pension cost are recognized as a component of accumulated other comprehensive loss and amortized into net periodic pension cost in future periods.

Pension Plan Proposed Termination

During the second quarter of 2019, following receipt of a determination letter from the Internal Revenue Service (IRS), the Company amended the Merged Plan to (a) terminate the Merged Plan (subject to discretionary approval by the Company's Chief Executive Officer) and (b) add a lump sum distribution option in connection with the termination of the Merged Plan, if approved. The Company subsequently provided participants of the Merged Plan an option to elect either a lump sum distribution or an annuity. As of September 30, 2019, the Merged Plan was fully funded on a GAAP basis, the Company intended to terminate the Merged Plan (subject to final approval), and there were no plans to terminate the Union Plan.

On October 17, 2019, the Company's Chief Executive Officer approved the termination of the Merged Plan. The Company purchased a group annuity contract with an insurance company for all participants who did not elect a lump sum distribution, for approximately $124 million, with a cash settlement date of October 24, 2019. The insurance company will be responsible for administering and paying pension benefit payments effective January 1, 2020. The lump sum distributions, which totaled approximately $39 million, were paid out commencing on October 21, 2019, with the majority of payments completed as of October 30, 2019. The Company estimates it will make an additional $1 million of monthly pension benefit payments subsequent to the annuity purchase date during a transition period ending December 31, 2019. The Merged Plan has sufficient assets to satisfy all transaction obligations. The Company further anticipates that it will have approximately $7 million to $11 million of assets remaining in the Merged Plan after settlement of all of its obligations.

In addition, the Company expects to record a total non-cash pre-tax settlement charge in connection with the termination of the Merged Plan of approximately $52 million to $56 million during the fourth quarter of 2019. This settlement charge includes the immediate recognition into expense of the related unrecognized losses within "Accumulated other comprehensive loss" on the consolidated statements of financial position as of the plan termination date. The settlement charge will be recognized in "Other income (expense), net" on the consolidated statements of operations.

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			
	Three Months Ended September 30,		Nine Months Ended September 30,		Three Months Ended September 30,		Nine Months Ended September 30,	
(Dollars in thousands)	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Service cost	**$ —**	$ —	**$ —**	$ —	**$ 12**	$ 17	**$ 48**	$ 55
Interest cost	**1,790**	1,692	**5,359**	5,064	**14**	16	**44**	47
Expected return of plan assets	**(2,187)**	(2,164)	**(6,571)**	(6,497)	**—**	—	**—**	—
Amortization of prior service credit	**—**	—	**—**	—	**(252)**	(400)	**(758)**	(1,201)
Amortization of net loss	**476**	457	**1,386**	1,370	**—**	—	**—**	—
Net periodic cost (benefit)	**$ 79**	$ (15)	**$ 174**	$ (63)	**$ (226)**	$ (367)	**$ (666)**	$ (1,099)

Employer Contributions

There were no required contributions to our qualified defined benefit pension plans for the three- or nine-month periods ended September 30, 2019 and 2018, and we are not required to make additional contributions to these plans for the remainder of 2019. No voluntary contributions were made to our qualified defined benefit pension plans for each of the three- and nine-month periods ended September 30, 2019 and we made a $25.0 million voluntary contribution to the Merged Plan during the three- and nine-month periods ended September 30, 2018.

As there is no funding requirement for the Nonqualified Plans or the Retiree Health and Life Insurance benefit plans, we fund the amount of benefit payments made during the year, which were immaterial for each of the three- and nine-month periods ended September 30, 2019 and 2018.

Note 13 – Commitments and Contingencies

We are currently engaged in the following environmental and legal proceedings:

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 incurred an immaterial amount of aggregate remediation costs through September 30, 2019, and the accrual for future remediation efforts is $1.6 million.

Asbestos

Overview

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 nine months ended September 30, 2019:

	Asbestos Claims
Claims outstanding as of December 31, 2018	745
New claims filed	228
Pending claims concluded[1]	(147)
Claims outstanding as of September 30, 2019	**826**

[1]For the nine months ended September 30, 2019, 123 claims were dismissed and 24 claims were settled. Settlements totaled approximately $2.2 million for the nine months ended September 30, 2019.

Impact on Financial Statements

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.

The liability projection period covers all current and future claims through 2058, which represents the expected end of our asbestos liability exposure with no further ongoing claims expected beyond that date. This conclusion was based 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 expected downward trend in claims due to the average age of our claimants, which is approaching the average life expectancy.

To date, the defense and settlement costs of our asbestos-related product liability litigation have been substantially covered by insurance. Although we have exhausted coverage under some of our insurance policies, we believe that we have applicable primary, excess and/or umbrella coverage for claims arising with respect to most of the years during which we manufactured and marketed asbestos-containing products. 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 covered 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, and no carrier had informed us it intended to terminate the agreement. We expect to continue 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. We are responsible for uninsured defense, indemnity and settlement costs, and we incurred an immaterial amount of expenses for each of the three- and nine-month periods ended September 30, 2019 and 2018, respectively, related primarily to such costs.

The amounts recorded for the asbestos-related liability and the related insurance receivables are 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.

As of September 30, 2019 and December 31, 2018, our projected asbestos-related claims and insurance receivables were as follows:

(Dollars in millions)	**September 30, 2019**	December 31, 2018
Asbestos-related claims	**$ 70.7**	$ 70.3
Asbestos-related insurance receivables	**$ 64.4**	$ 63.8

General

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 will have a material adverse impact on our results of operations, financial position or cash flows.

Note 14 – Income Taxes

Our effective income tax rate was 18.6% and 31.0% for the three months ended September 30, 2019 and 2018, respectively. The decrease from the third quarter of 2018 was primarily due to the beneficial impact of the international tax provisions from U.S. tax reform as a result of administrative guidance issued during the second half of 2018, changes in valuation allowance related to R&D credits, changes in pretax mix across jurisdictions with disparate tax rates and a lower tax impact on unremitted foreign earnings and profits, partially offset by an increase in taxes on foreign distributions. Our effective income tax rate was 18.5% and 25.8% for the nine months ended September 30, 2019 and 2018, respectively. The decrease from the first nine months of 2018 was primarily due to the beneficial impact of the international tax provisions from U.S. tax reform as a result of administrative guidance issued during the second half of 2018, changes in valuation allowances related to R&D credits and a lower tax impact on unremitted foreign earnings and profits.

The total amount of unrecognized tax benefits as of September 30, 2019 was $9.2 million, of which $8.9 million would affect our effective tax rate if recognized.

We recognize interest and penalties related to unrecognized tax benefits through income tax expense. As of September 30, 2019, we had $0.6 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 2014.

Note 15 – Segment Information

Our reporting structure is comprised of the following strategic operating segments: ACS, EMS and PES. The remaining operations, which represent 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 Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers*. For additional information regarding the impacts of this accounting guidance, refer to "Note 16 – Revenue from Contracts with Customers." We sell products to fabricators and distributors who then sell directly into various end markets. End markets within our ACS operating segment include wireless infrastructure, aerospace and defense, automotive, connected devices, wired infrastructure and consumer electronics. End markets within our EMS operating segment include portable electronics, mass transit, automotive, consumer and general industrial. End markets within our PES operating segment include e-mobility, industrial, renewable energy, mass transit, and micro channel coolers. End markets in our Other operating segment include automotive and industrial.

The following table presents a disaggregation of revenue from contracts with customers and other pertinent financial information, 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 September 30, 2019					
Net sales - recognized over time	**$ —**	**$ 3,429**	**$ 42,906**	**$ 4,504**	**$ 50,839**
Net sales - recognized at a point in time	**78,983**	**91,511**	**225**	**284**	**171,003**
Total net sales	**$ 78,983**	**$ 94,940**	**$ 43,131**	**$ 4,788**	**$ 221,842**
Operating income	**$ 13,778**	**$ 17,995**	**$ (3,358)**	**$ 1,470**	**$ 29,885**
Three Months Ended September 30, 2018					
Net sales - recognized over time	$ —	$ 1,790	$ 54,797	$ 3,067	$ 59,654
Net sales - recognized at a point in time	71,854	93,998	425	932	167,209
Total net sales	$ 71,854	$ 95,788	$ 55,222	$ 3,999	$ 226,863
Operating income	$ 8,451	$ 15,924	$ 4,067	$ 1,200	$ 29,642
Nine Months Ended September 30, 2019					
Net sales - recognized over time	**$ —**	**$ 9,400**	**$ 153,827**	**$ 13,421**	**$ 176,648**
Net sales - recognized at a point in time	**251,982**	**272,196**	**780**	**2,886**	**527,844**
Total net sales	**$ 251,982**	**$ 281,596**	**$ 154,607**	**$ 16,307**	**$ 704,492**
Operating income	**$ 45,301**	**$ 46,752**	**$ (976)**	**$ 4,821**	**$ 95,898**
Nine Months Ended September 30, 2018					
Net sales - recognized over time	$ —	$ 3,731	$ 165,248	$ 12,332	$ 181,311
Net sales - recognized at a point in time	221,685	249,356	1,334	2,463	474,838
Total net sales	$ 221,685	$ 253,087	$ 166,582	$ 14,795	$ 656,149
Operating income	$ 26,946	$ 38,505	$ 15,328	$ 5,131	$ 85,910

Information relating to our segment operations by geographic area for the three months ended September 30, 2019 and 2018 was as follows:

(Dollars in thousands)	Net Sales [1]				
Region/Country	Advanced Connectivity Solutions	Elastomeric Material Solutions	Power Electronics Solutions	Other	Total
September 30, 2019					
United States	**$ 17,671**	**$ 41,232**	**$ 8,115**	**$ 1,237**	**$ 68,255**
Other Americas	**807**	**2,452**	**11**	**271**	**3,541**
Total Americas	**18,478**	**43,684**	**8,126**	**1,508**	**71,796**
China	**37,398**	**26,461**	**7,642**	**908**	**72,409**
Other APAC	**13,813**	**14,385**	**6,269**	**675**	**35,142**
Total APAC	**51,211**	**40,846**	**13,911**	**1,583**	**107,551**
Germany	**4,251**	**3,868**	**10,528**	**171**	**18,818**
Other EMEA	**5,043**	**6,542**	**10,566**	**1,526**	**23,677**
Total EMEA	**9,294**	**10,410**	**21,094**	**1,697**	**42,495**
Total net sales	**$ 78,983**	**$ 94,940**	**$ 43,131**	**$ 4,788**	**$ 221,842**
September 30, 2018					
United States	$ 12,889	$ 37,691	$ 10,738	$ 1,029	$ 62,347
Other Americas	674	8,196	145	138	9,153
Total Americas	13,563	45,887	10,883	1,167	71,500
China	34,798	30,849	10,432	811	76,890
Other APAC	14,962	11,807	6,348	666	33,783
Total APAC	49,760	42,656	16,780	1,477	110,673
Germany	3,515	2,019	15,464	159	21,157
Other EMEA	5,016	5,226	12,095	1,196	23,533
Total EMEA	8,531	7,245	27,559	1,355	44,690
Total net sales	$ 71,854	$ 95,788	$ 55,222	$ 3,999	$ 226,863

[1] Net sales are allocated to countries based on the location of the customer. The table above lists individual countries with 10% or more of net sales for the periods indicated.

Information relating to our segment operations by geographic area for the nine months ended September 30, 2019 and 2018 was as follows:

(Dollars in thousands)	Net Sales [1]				
Region/Country	Advanced Connectivity Solutions	Elastomeric Material Solutions	Power Electronics Solutions	Other	Total
September 30, 2019					
United States	**$ 47,014**	**$ 126,067**	**$ 23,800**	**$ 3,606**	**$ 200,487**
Other Americas	**2,598**	**6,725**	**260**	**668**	**10,251**
Total Americas	**49,612**	**132,792**	**24,060**	**4,274**	**210,738**
China	**129,220**	**72,726**	**29,989**	**4,374**	**236,309**
Other APAC	**44,980**	**44,407**	**18,232**	**2,244**	**109,863**
Total APAC	**174,200**	**117,133**	**48,221**	**6,618**	**346,172**
Germany	**12,674**	**10,775**	**46,780**	**447**	**70,676**
Other EMEA	**15,496**	**20,896**	**35,546**	**4,968**	**76,906**
Total EMEA	**28,170**	**31,671**	**82,326**	**5,415**	**147,582**
Total net sales	**$ 251,982**	**$ 281,596**	**$ 154,607**	**$ 16,307**	**$ 704,492**
September 30, 2018					
United States	$ 39,615	$ 111,160	$ 27,595	$ 3,151	$ 181,521
Other Americas	2,257	12,176	826	694	15,953
Total Americas	41,872	123,336	28,421	3,845	197,474
China	100,337	75,714	28,794	3,539	208,384
Other APAC	48,888	29,291	19,891	2,108	100,178
Total APAC	149,225	105,005	48,685	5,647	308,562
Germany	14,588	7,356	46,697	491	69,132
Other EMEA	16,000	17,390	42,779	4,812	80,981
Total EMEA	30,588	24,746	89,476	5,303	150,113
Total net sales	$ 221,685	$ 253,087	$ 166,582	$ 14,795	$ 656,149

[1] Net sales are allocated to countries based on the location of the customer. The table above lists individual countries with 10% or more of net sales for the periods indicated.

Note 16 – Revenue from Contracts with Customers

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 September 30, 2019 or December 31, 2018.

The following table presents contract assets by operating segment as of September 30, 2019 and December 31, 2018:

(Dollars in thousands)	**September 30, 2019**	December 31, 2018
Advanced Connectivity Solutions	**$ —**	$ —
Elastomeric Material Solutions	**1,347**	943
Power Electronics Solutions	**20,965**	19,738
Other	**1,758**	2,047
Total contract assets	**$ 24,070**	$ 22,728

No impairment losses were recognized for each of the three- and nine-month periods ended September 30, 2019 and 2018 on any receivables or contract assets arising from our contracts with customers.

Note 17 – Restructuring and Impairment Charges

In 2018, we made the decision to consolidate our Santa Fe Springs, California operations into the Company's facilities in Carol Stream, Illinois and Bear, Delaware. We recorded no expense for the three months ended September 30, 2019, and $0.9 million of expense for the nine months ended September 30, 2019, related to the facility consolidation. We recorded $0.5 million and $1.0 million of expense related to this project in the three and nine months ended September 30, 2018, respectively. The fair value of the total severance benefits paid in connection with the facility consolidation was $0.5 million. The total severance costs were expensed ratably over the required service period for the affected employees. All severance expenses were recorded as of December 31, 2018, and the final severance payments were made in the first quarter of 2019.

The following table presents severance activity related to the facility consolidation for the nine months ended September 30, 2019:

(Dollars in thousands)	Severance Related to Facility Consolidation
Balance as of December 31, 2018	$ 523
Provisions	—
Payments	(523)
Balance as of September 30, 2019	**$ —**

We recognized $0.6 million and $1.5 million in impairment charges for the three and nine months ended September 30, 2019, respectively, primarily related to certain assets in connection with the Isola USA Corp. (Isola) asset acquisition.

Note 18 – Supplemental Financial Information

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

	Three Months Ended		Nine Months Ended	
(Dollars in thousands)	**September 30, 2019**	September 30, 2018	**September 30, 2019**	September 30, 2018
Gain from antitrust litigation settlement	**$ —**	$ —	**$ —**	$ (3,591)
Loss (gain) on sale of property, plant and equipment	**2**	222	**278**	(161)
Lease income	**(57)**	(237)	**(932)**	(237)
Depreciation on leased assets	**179**	878	**1,729**	878
Total other operating (income) expense, net	**$ 124**	$ 863	**$ 1,075**	$ (3,111)

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.

With respect to other operating (income) expense, net, in connection with the transitional leaseback of a portion of the facility and certain machinery and equipment acquired from Isola in August 2018. We recognized lease income and related depreciation on leased assets of approximately $0.1 million and $0.2 million, respectively, in the three months ended September 30, 2019, and approximately $0.2 million and $0.9 million, respectively, in the three months ended September 30, 2018. We recognized lease income and related depreciation on leased assets of approximately $0.9 million and $1.7 million, respectively, in the nine months ended September 30, 2019, and approximately $0.2 million and $0.9 million, respectively, in the nine months ended September 30, 2018.

Note 19 – Recent Accounting Standards

Recently Issued Standards

In August 2018, the Financial Accounting Standards Board (FASB) issued ASU 2018-14, *Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715-20): Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans*, which modifies the disclosure requirements for employers that sponsor defined benefit plans or other postretirement plans. This ASU is effective for our fiscal year ending December 31, 2020, with early adoption permitted. ASU 2018-14 is required to be applied on a retrospective basis to all periods presented. The Company is currently evaluating the potential impact of adopting this guidance on our consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*. This ASU modifies the disclosure requirements for fair value measurements by removing the requirement to disclose the amount and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy and the policy for timing of such transfers. This ASU expands the disclosure requirements for Level 3 fair value measurements, primarily focused on changes in unrealized gains and losses included in other comprehensive income (loss). This ASU is effective for our fiscal year ending December 31, 2020 and for the interim periods within that year. Early adoption is permitted. ASU 2018-13 is generally required to be applied retrospectively to all periods presented upon their effective date with the exception of certain amendments, that should be applied prospectively to the most recent interim or annual period presented in the year of adoption. The Company is currently evaluating the potential impact of adopting this guidance on our consolidated financial statements.

Recently Adopted Standards Reflected in Our 2019 Financial Statements

In October 2018, the FASB issued ASU 2018-16, *Derivatives and Hedging (Topic 815): Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes*, which permits the use of the OIS rate based on the SOFR as a U.S. benchmark interest rate for hedge accounting purposes. The amendments in this update were effective for the Company on January 1, 2019 and the Company will apply the amendments in this update to qualifying new or redesignated hedging relationships.

In August 2018, the FASB issued ASU 2018-15, *Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract*, which aligns the requirements for capitalizing costs incurred in the implementation of a hosting arrangement that is a service contract with the requirements for capitalizing costs incurred to develop or obtain internal use software. The Company adopted this ASU on January 1, 2019 on a prospective basis and it did not have a material impact on our condensed consolidated financial statements.

In February 2018, the FASB issued ASU 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 U.S. Tax Reform from accumulated other comprehensive loss to retained earnings but it does not require this reclassification. The Company adopted this ASU on January 1, 2019 and elected to not reclassify the stranded tax effects resulting from U.S. Tax Reform. As a result of that election, the adoption of ASU 2018-02 did not have an impact on the Company's consolidated financial statements and disclosures.

In February 2016, the FASB issued ASU 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 2016-02 supersedes the existing guidance on accounting for leases. In July 2018, the FASB issued ASU 2018-11, *Leases (Topic 842): Targeted Improvements*, which allowed for an optional transition method for the adoption of Topic 842. The two permitted transition methods are now the modified retrospective approach, which applies the new lease requirements at the beginning of the earliest period presented, and the optional transition method, which applies the new lease requirements through a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. The Company adopted this standard on January 1, 2019 using the optional transition method. The Company elected to use the practical expedients that allow us to carry forward the historical lease classification. For additional information regarding the impact of the adoption of this standard, refer to "Note 11 - Leases."

Note 20 – Share Repurchases

In 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 potentially dilutive effects of stock options and shares of restricted stock 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. No share repurchases were made during the three and nine months ended September 30, 2019 and during the three months ended September 30, 2018. During the nine months ended September 30, 2018, we repurchased 23,138 shares of our capital stock for $3.0 million. As of September 30, 2019, $49.0 million remained of our $100.0 million share repurchase program.

Item 2. Management's Discussion and Analysis of Results of Operations and Financial Position

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," "foresee," "goal," "intend," "may," "might," "plan," "potential," "predict," "project," "should," "seek," "target" or similar expressions that convey 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;
- the ongoing trade policy dispute between the United States and China, as well as adverse changes in trade policy, tariff regulation or other trade restrictions, including trade restrictions on Huawei Technologies Co., Ltd.;
- fluctuations in foreign currency exchange rates;
- our ability to develop innovative products and the extent to which they are 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 and 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;
- uncertainties with regard to the expense associated with the termination and settlement of the Rogers Corporation Defined Benefit Pension Plan (Merged Plan); 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, our Annual Report on Form 10-K for the year ended December 31, 2018 (the Annual Report) and our subsequent reports filed with the Securities and Exchange Commission, 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 three strategic operating segments: Advanced Connectivity Solutions (ACS), Elastomeric Material Solutions (EMS) and Power Electronics Solutions (PES). The remaining operations, which represent our non-core businesses, are reported in our Other operating segment. We have a history of innovation and have established

Innovation Centers for our research and development (R&D) 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 connectivity and advanced mobility. More specifically, the key trends currently affecting our business include the increasing use of advanced driver assistance systems (ADAS) and increasing electrification of automotive vehicles, including electric and hybrid electric vehicles (EV/HEV), in the automotive industry and new technology adoption in the telecommunications industry, including next generation wireless infrastructure. In addition to our focus on advanced mobility and advanced connectivity in the automotive and telecommunications industries, we sell into a variety of other end markets including renewable energy, consumer electronics, 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, technology and product performance. 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.

Results of Operations

In the third quarter of 2019 as compared to the third quarter of 2018, our net sales decreased 2.2% to $221.8 million, gross margin increased approximately 70 basis points to 35.6%, and operating margin increased approximately 40 basis points to 13.5%. In the first nine months of 2019 as compared to the first nine months of 2018, our net sales increased 7.4% to $704.5 million, gross margin increased approximately 10 basis points to 35.5%, and operating margin increased approximately 50 basis points to 13.6%.

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

	Three Months Ended		**Nine Months Ended**	
	September 30, 2019	September 30, 2018	**September 30, 2019**	September 30, 2018
Net sales	**100.0 %**	100.0 %	**100.0 %**	100.0 %
Gross margin	**35.6 %**	34.9 %	**35.5 %**	35.4 %
Selling, general and administrative expenses	**18.2 %**	17.6 %	**18.1 %**	18.8 %
Research and development expenses	**3.5 %**	3.4 %	**3.3 %**	3.7 %
Restructuring and impairment charges	**0.3 %**	0.5 %	**0.4 %**	0.3 %
Other operating (income) expense, net	**0.1 %**	0.4 %	**0.1 %**	(0.5)%
Operating income	**13.5 %**	13.1 %	**13.6 %**	13.1 %
Equity income in unconsolidated joint ventures	**0.7 %**	0.7 %	**0.6 %**	0.7 %
Other income (expense), net	**(0.5)%**	(0.3)%	**(0.2)%**	(0.1)%
Interest expense, net	**(0.8)%**	(0.9)%	**(0.8)%**	(0.7)%
Income before income tax expense	**12.9 %**	12.6 %	**13.2 %**	13.0 %
Income tax expense	**2.4 %**	3.9 %	**2.4 %**	3.4 %
Net income	**10.5 %**	8.7 %	**10.8 %**	9.6 %

Net Sales and Gross Margin

	Three Months Ended			Nine Months Ended		
(Dollars in thousands)	**September 30, 2019**	September 30, 2018	Percent Change	**September 30, 2019**	September 30, 2018	Percent Change
Net sales	**$ 221,842**	$ 226,863	(2.2)%	**$ 704,492**	$ 656,149	7.4%

Net sales decreased by 2.2% in the third quarter of 2019 compared to the third quarter of 2018. Our PES and EMS operating segments had net sales decreases of 21.9% and 0.9%, respectively, partially offset by a net sales increase in our ACS operating segment of 9.9%. The decrease in net sales was primarily driven by lower net sales in EV/HEV and industrial applications in our PES operating segment. Net sales were also unfavorably impacted by lower net sales in our general industrial and automotive applications in our EMS operating segment, partially offset by higher net sales in aerospace and defense and automotive radar applications in our ACS operating segment, higher net sales in portable electronics applications in our EMS operating segment and higher net sales in mass transit applications in our PES operating segment. Net sales were impacted by unfavorable foreign currency impacts of $4.0 million, or 1.8%, due to the depreciation in value of the Renminbi, Euro and Korean Won relative to the U.S. dollar.

Net sales increased by 7.4% in the first nine months of 2019 compared to the first nine months of 2018. Our ACS and EMS operating segments had net sales increases of 13.7% and 11.3%, respectively, partially offset by a net sales decrease in our PES operating segment of 7.2%. The increase in net sales was primarily driven by higher net sales in 5G wireless infrastructure in our ACS operating segment and the $15.0 million of net sales in the first half of the year related to Griswold, which we acquired in July 2018. Net sales were also favorably impacted by higher net sales in aerospace and defense, automotive radar and portable electronics applications in our ACS operating segment, higher net sales in portable electronics and mass transit applications in our EMS operating segment and higher net sales in mass transit applications in our PES operating segment, partially offset by lower net sales in industrial, EV/HEV and renewable energy applications in our PES operating segment and lower net sales in general industrial applications in our EMS operating segment. Net sales were impacted by unfavorable foreign currency impacts of $18.2 million, or 2.8%, due to the depreciation in value of the Euro, Renminbi and Korean Won relative to the U.S. dollar.

Gross margin as a percentage of net sales increased approximately 70 basis points to 35.6% in the third quarter of 2019 compared to 34.9% in the third quarter of 2018. Gross margin in the third quarter of 2019 was favorably impacted by favorable product mix and productivity improvements in our ACS and EMS operating segments. This was partially offset by unfavorable absorption of fixed costs and lower productivity in our PES operating segment, as well as an increase in freight expenses, including tariffs and duties, incurred by our ACS and EMS operating segments.

Gross margin as a percentage of net sales increased approximately 10 basis points to 35.5% in the first nine months of 2019 compared to 35.4% in the first nine months of 2018. Gross margin in the third quarter of 2019 was favorably impacted by higher net sales, favorable product mix, increased absorption of fixed overhead costs and productivity improvements in our ACS and EMS operating segments and increased asset utilization in our ACS operating segment, as well as the resolution of certain process issues that had negatively impacted gross margin in the first nine months of 2018. This was partially offset by unfavorable absorption of fixed costs, lower productivity, higher fixed overhead costs and an increase in freight expenses in our PES operating segment, as well as an increase in freight expenses, including tariffs and duties, incurred by our ACS and EMS operating segments.

Selling, General and Administrative Expenses

	Three Months Ended			Nine Months Ended		
(Dollars in thousands)	**September 30, 2019**	September 30, 2018	Percent Change	**September 30, 2019**	September 30, 2018	Percent Change
Selling, general and administrative expenses	**$ 40,448**	$ 39,943	1.3%	**$ 127,349**	$ 123,080	3.5%
Percentage of net sales	**18.2%**	17.6%		**18.1%**	18.8%	

Selling, general and administrative (SG&A) expenses increased 1.3% in the third quarter of 2019 from the third quarter of 2018, primarily due to a $2.3 million increase in total compensation and benefits, partially offset by a $1.5 million decrease in depreciation and a $0.3 million decrease in T&E.

SG&A expenses increased 3.5% in the first nine months of 2019 from the first nine months of 2018, primarily due to a $5.9 million increase in total compensation and benefits, a $1.2 million increase in other intangible assets amortization, most of which was related to our acquisition of Griswold, and a $0.7 million increase in other SG&A expenses related to Griswold in the first half of 2019. This was partially offset by a $2.4 million decrease in professional service costs and a $1.2 million decrease in T&E.

Research and Development Expenses

(Dollars in thousands)	Three Months Ended			Nine Months Ended		
	September 30, 2019	September 30, 2018	Percent Change	**September 30, 2019**	September 30, 2018	Percent Change
Research and development expenses	**$ 7,830**	$ 7,630	2.6%	**$ 23,282**	$ 24,514	(5.0)%
Percentage of net sales	**3.5%**	3.4%		**3.3%**	3.7%	

R&D expenses increased 2.6% in the third quarter of 2019 from the third quarter of 2018, due to the timing of new product initiatives. R&D expenses decreased 5.0% in the first nine months of 2019 from the first nine months of 2018, due to the timing of new product initiatives and lower compensation and benefits costs.

Restructuring and Impairment Charges and Other Operating Expenses (Income), Net

(Dollars in thousands)	Three Months Ended			Nine Months Ended		
	September 30, 2019	September 30, 2018	Percent Change	**September 30, 2019**	September 30, 2018	Percent Change
Restructuring and impairment charges	**$ 580**	$ 1,052	(44.9)%	**$ 2,485**	$ 2,015	23.3%
Other operating (income) expense, net	**124**	863	(85.6)%	**1,075**	(3,111)	(134.6)%

We incurred restructuring charges associated with the relocation of our global headquarters from Rogers, Connecticut to Chandler, Arizona and the consolidation of our Santa Fe Springs, California operations with the Company's facilities in Carol Stream, Illinois and Bear, Delaware. We recognized no restructuring charges associated with the facility consolidation in the third quarter of 2019, and we recognized $0.6 million of restructuring charges related to the global headquarters relocation and facility consolidation in the third quarter of 2018. We recognized $0.9 million of restructuring charges associated with the facility consolidation in the first nine months of 2019 and $1.0 million of restructuring charges related to the headquarters relocation and facility consolidation in the first nine months of 2018. Additionally, we recognized $0.6 million and $1.5 million in impairment charges on certain assets in connection with the Isola USA Corp. (Isola) asset acquisition and other fixed assets for the three and nine months ended September 30, 2019, respectively.

With respect to other operating (income) expense, net, in connection with the transitional leaseback of a portion of the facility and certain machinery and equipment acquired from Isola in August 2018, we recognized lease income and related depreciation on leased assets of approximately $0.1 million and $0.2 million, respectively, in the third quarter of 2019, and approximately $0.2 million and $0.9 million, respectively in third quarter of 2018. We recognized lease income and related depreciation on leased assets of approximately $0.9 million and $1.7 million, respectively, in the first nine months of 2019 and approximately $0.2 million and $0.9 million, respectively, in the first nine months of 2018. In the first nine months of 2018, we recognized a $3.6 million gain from the settlement of antitrust litigation in other operating income.

Equity Income in Unconsolidated Joint Ventures

(Dollars in thousands)	Three Months Ended			Nine Months Ended		
	September 30, 2019	September 30, 2018	Percent Change	**September 30, 2019**	September 30, 2018	Percent Change
Equity income in unconsolidated joint ventures	**$ 1,498**	$ 1,642	(8.8)%	**$ 4,077**	$ 4,453	(8.4)%

As of September 30, 2019, we had two unconsolidated joint ventures, each 50% owned: Rogers INOAC Corporation (RIC) and Rogers INOAC Suzhou Corporation (RIS). Equity income in those unconsolidated joint ventures decreased 8.8% in the third quarter of 2019 from the third quarter of 2018, and decreased 8.4% in the first nine months of 2019 from the first nine months of 2018. The decrease, on both a quarter-to-date and year-to-date basis, was due to lower net sales for RIC and RIS in portable electronics applications and unfavorable foreign currency impacts on RIS.

Other Income (Expense), Net

(Dollars in thousands)	Three Months Ended **September 30, 2019**	September 30, 2018	Percent Change	Nine Months Ended **September 30, 2019**	September 30, 2018	Percent Change
Other income (expense), net	**$ (918)**	$ (680)	35.0%	**$ (915)**	$ (647)	41.4%

Other income (expense), net decreased to $0.9 million in the third quarter of 2019 compared to $0.7 million in the third quarter of 2018, and decreased to $0.9 million the first nine months of 2019 compared to $0.6 million the first nine months of 2018. On a quarter-to-date basis, the increase in expense was due to higher defined benefit plan costs and unfavorable year-over-year impacts from our copper derivative contracts, partially offset by favorable year-over-year impacts of foreign currency transactions. On a year-to-date basis, the increase in expense was due to higher defined benefit plan costs and unfavorable year-over-year impacts from our foreign currency transactions, partially offset by favorable year-over-year impacts from our copper derivatives contracts.

On October 17, 2019, the Company's Chief Executive Officer approved the termination of the Merged Plan. The Company purchased a group annuity contract with an insurance company for all participants who did not elect a lump sum distribution, for approximately $124 million, with a cash settlement date of October 24, 2019. The insurance company will be responsible for administering and paying pension benefit payments effective January 1, 2020. The lump sum distributions, which totaled approximately $39 million, were paid out commencing on October 21, 2019, with the majority of payments completed as of October 30, 2019. The Company estimates it will make an additional $1 million of monthly pension benefit payments subsequent to the annuity purchase date during a transition period ending December 31, 2019. The Merged Plan has sufficient assets to satisfy all transaction obligations. The Company further anticipates that it will have approximately $7 million to $11 million of assets remaining in the Merged Plan after settlement of all of its obligations.

In addition, the Company expects to record a total non-cash pre-tax settlement charge in connection with the termination of the Merged Plan of approximately $52 million to $56 million during the fourth quarter of 2019. This settlement charge includes the immediate recognition into expense of the related unrecognized losses within "Accumulated other comprehensive loss" on the consolidated statements of financial position as of the plan termination date. The settlement charge will be recognized in "Other income (expense), net" on the consolidated statements of operations.

Interest Expense, Net

(Dollars in thousands)	Three Months Ended **September 30, 2019**	September 30, 2018	Percent Change	Nine Months Ended **September 30, 2019**	September 30, 2018	Percent Change
Interest expense, net	**$ (1,747)**	$ (2,000)	(12.7)%	**$ (5,723)**	$ (4,503)	27.1%

Interest expense, net, decreased by 12.7% in the third quarter of 2019 from the third quarter of 2018, due to an increase in interest income. Interest expense, net increased by 27.1% in the first nine months of 2019 from the first nine months of 2018, primarily due to a higher average outstanding balance on our revolving credit facility for the first nine months of 2019 compared to the first nine months of 2018. This is a result of $102.5 million of new borrowing under our revolving credit facility during the third quarter of 2018 to fund the acquisition of Griswold and our voluntary pension contribution in connection with the proposed plan termination process. This was partially offset by $103.0 million of discretionary principal payments on our revolving credit facility since the end of the third quarter of 2018, of which, $65.0 million and $98.0 million occurred during the third quarter of 2019 and first nine months of 2019, respectively, as well as an increase in interest income.

Income Taxes

(Dollars in thousands)	Three Months Ended **September 30, 2019**	September 30, 2018	Percent Change	Nine Months Ended **September 30, 2019**	September 30, 2018	Percent Change
Income tax expense	**$ 5,331**	$ 8,870	(39.9)%	**$ 17,258**	$ 22,014	(21.6)%
Effective tax rate	**18.6%**	31.0%		**18.5%**	25.8%	

Our effective income tax rate was 18.6% and 31.0% for the three months ended September 30, 2019 and 2018, respectively. The decrease from the third quarter of 2018 was primarily due to the beneficial impact of the international tax provisions from U.S. tax reform as a result of administrative guidance issued during the second half of 2018, changes in valuation allowance related to R&D credits, changes in pretax mix across jurisdictions with disparate tax rates, and a lower tax impact on unremitted foreign earnings and profits, partially offset by an increase in taxes on foreign distributions. Our effective income tax rate was 18.5% and 25.8% for the nine months ended September 30, 2019 and 2018, respectively. The decrease from the first nine months of 2018 was primarily due to the beneficial impact of the international tax provisions from U.S. tax reform as a result of administrative guidance issued during the second half of 2018, changes in valuation allowances related to R&D credits, and a lower tax impact on unremitted foreign earnings.

Operating Segment Net Sales and Operating Income

Advanced Connectivity Solutions

(Dollars in thousands)	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Net sales	**$ 78,983**	$ 71,854	**$ 251,982**	$ 221,685
Operating income	**$ 13,778**	$ 8,451	**$ 45,301**	$ 26,946

Our ACS operating segment designs, develops, manufactures and sells circuit materials and solutions enabling high-performance and high-reliability connectivity for applications in wireless infrastructure (e.g., power amplifiers, antennas, small cells and distributed antenna systems), automotive (e.g., active safety, advanced driver assistance systems, telematics and thermal management), aerospace and defense, connected devices (e.g., mobile internet devices and Internet of Things), wired infrastructure (e.g., computing and IP infrastructure) and consumer electronics. In August 2018, we purchased assets from Isola to expand capacity in our ACS operating segment in an effort to prepare for potential demand from our 5G customers.

Q3 2019 versus Q3 2018

ACS net sales increased by 9.9% in the third quarter of 2019 compared to the third quarter of 2018. The increase in net sales over the third quarter of 2018 was primarily driven by higher net sales in aerospace and defense and automotive radar applications. Net sales were unfavorably impacted by $1.3 million, or 1.9%, due to the depreciation in value of the Renminbi and Euro relative to the U.S. dollar.

Operating income increased by 63.0% in the third quarter of 2019 from the third quarter of 2018. As a percentage of net sales, operating income in the third quarter of 2019 was 17.4%, an approximately 560 basis point increase as compared to the 11.8% reported in the third quarter of 2018. The increase in operating income was primarily due to higher net sales and productivity improvements, partially offset by an increase in freight expenses, including tariffs and duties, incurred and $0.6 million in impairment charges on certain assets in connection with the Isola asset acquisition and other fixed assets.

YTD 2019 versus YTD 2018

ACS net sales increased by 13.7% in the first nine months of 2019 compared to the first nine months of 2018. The increase in net sales over the first nine months of 2018 was primarily driven by higher net sales in 5G wireless infrastructure, as well as aerospace and defense, automotive radar and portable electronics applications. Net sales were unfavorably impacted by $5.6 million, or 2.5%, due to the depreciation in value of the Renminbi and Euro relative to the U.S. dollar.

Operating income increased by 68.1% in the first nine months of 2019 from the first nine months of 2018. As a percentage of net sales, operating income in the first nine months of 2019 was 18.0%, an approximately 580 basis point increase as compared to the 12.2% reported in the first nine months of 2018. The increase in operating income was primarily due to higher net sales, favorable product mix, productivity improvements and increased asset utilization, as well as the resolution of certain process issues that had negatively impacted gross margin in the first nine months of 2018, partially offset by an increase in freight expenses, including tariffs and duties, incurred and a $1.5 million in impairment charges on certain assets in connection with the Isola asset acquisition and other fixed assets.

Elastomeric Material Solutions

(Dollars in thousands)	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Net sales	**$ 94,940**	$ 95,788	**$ 281,596**	$ 253,087
Operating income	**$ 17,995**	$ 15,924	**$ 46,752**	$ 38,505

Our EMS operating segment designs, develops, manufactures and sells engineered material solutions for a wide variety of applications and end markets. These applications and end markets include polyurethane and silicone materials used in critical cushioning, sealing and vibration management applications for portable electronics (e.g., smart phones), automotive including for EVs/HEVs, aerospace, rail, footwear and printing end markets; customized silicones used in flex heater and semiconductor thermal applications; polytetrafluoroethylene and ultra-high molecular weight polyethylene materials used in wire and cable, pressure-sensitive tapes and automotive applications.

Q3 2019 versus Q3 2018

EMS net sales decreased by 0.9% in the third quarter of 2019 compared to the third quarter of 2018. The decrease in net sales over the third quarter of 2018 was primarily driven by lower net sales in general industrial and automotive applications, partially offset by higher net sales in portable electronics applications. Net sales were unfavorably impacted by $1.4 million, or 1.5%, due to the depreciation in value of the Renminbi, Korean Won and Euro relative to the U.S. dollar.

Operating income increased by 13.0% in the third quarter of 2019 from the third quarter of 2018. As a percentage of net sales, third quarter of 2019 operating income was 19.0%, an approximately 240 basis point increase as compared to the 16.6% reported in the third quarter of 2018. The increase in operating income was primarily due to favorable product mix and raw material cost improvements.

YTD 2019 versus YTD 2018

EMS net sales increased by 11.3% in the first nine months of 2019 compared to the first nine months of 2018. The increase in net sales over the first nine months of 2018 was primarily driven by the $15.0 million of net sales in the first half of the year related to Griswold, which we acquired in July 2018, as well as higher net sales in portable electronics and mass transit applications, partially offset by lower net sales in general industrial applications. Net sales were unfavorably impacted by $5.1 million, or 2.0%, due to the depreciation in value of the Renminbi, Korean Won and Euro relative to the U.S. dollar.

Operating income increased by 21.4% in the first nine months of 2019 from the first nine months of 2018. As a percentage of net sales, the first nine months of 2019 operating income was 16.6%, an approximately 140 basis point increase as compared to the 15.2% reported in the first nine months of 2018. The increase in operating income was primarily due to higher net sales, favorable product mix and productivity improvements, partially offset by the non-recurring $3.6 million gain from the settlement of antitrust litigation in the first nine months of 2018.

Power Electronics Solutions

	Three Months Ended		Nine Months Ended	
(Dollars in thousands)	**September 30, 2019**	September 30, 2018	**September 30, 2019**	September 30, 2018
Net sales	**$ 43,131**	$ 55,222	**$ 154,607**	$ 166,582
Operating income (loss)	**$ (3,358)**	$ 4,067	**$ (976)**	$ 15,328

Our PES operating segment designs, develops, manufactures and sells ceramic substrate materials for power module applications (e.g., variable frequency drives, vehicle electrification and renewable energy), laminated busbars for power inverter and high power interconnect applications (e.g., mass transit, hybrid-electric and electric vehicles, renewable energy and variable frequency drives) and micro-channel coolers (e.g., laser cutting equipment). We sell our ceramic substrate materials and micro-channel coolers under the curamik® trade name, and our busbars under the ROLINX® trade name.

Q3 2019 versus Q3 2018

PES net sales decreased by 21.9% in the third quarter of 2019 from the third quarter of 2018. The decrease in net sales over the third quarter of 2018 was primarily driven by lower net sales in EV/HEV and industrial applications, partially offset by higher net sales in mass transit applications. Net sales were impacted by unfavorable currency fluctuations of $1.2 million, or 2.1%, due to the depreciation in value of the Euro and Renminbi relative to the U.S. dollar.

Operating income decreased by 182.6% in the third quarter of 2019 from the third quarter of 2018. As a percentage of net sales, third quarter of 2019 operating loss was 7.8% as compared to the 7.4% for operating income reported in the third quarter of 2018. The decrease in operating income was primarily due to lower net sales, unfavorable absorption of fixed overhead costs, lower productivity and higher fixed overhead expenses.

YTD 2019 versus YTD 2018

PES net sales decreased by 7.2% in the first nine months of 2019 compared to the first nine months of 2018. The decrease in net sales over the first nine months of 2018 was primarily driven by lower net sales in industrial, EV/HEV and renewable energy applications, partially offset by higher net sales in mass transit applications. Net sales were impacted by unfavorable currency fluctuations of $7.1 million, or 4.3%, due to the depreciation in value of the Euro and Renminbi relative to the U.S. dollar.

Operating income decreased by 106.4% in the first nine months of 2019 from the first nine months of 2018. As a percentage of net sales, the first nine months of 2019 operating loss was 0.6% as compared to the 9.2% for operating income reported in the first nine months of 2018. The decrease in operating income was primarily due to lower net sales, unfavorable absorption of fixed overhead costs, lower productivity, higher fixed overhead expenses and an increase in freight expenses.

Other

(Dollars in thousands)	Three Months Ended		Nine Months Ended	
	September 30, 2019	September 30, 2018	**September 30, 2019**	September 30, 2018
Net sales	**$ 4,788**	$ 3,999	**$ 16,307**	$ 14,795
Operating income	**$ 1,470**	$ 1,200	**$ 4,821**	$ 5,131

Our Other operating segment consists of elastomer components for applications in ground transportation, office equipment, consumer and other markets; elastomer floats for level sensing in fuel tanks, motors, and storage tanks; and inverters for portable communications and automotive markets. Trade names for our elastomer components include: NITROPHYL® floats for level sensing in fuel tanks, motors, and storage tanks and ENDUR® elastomer rollers.

Q3 2019 versus Q3 2018

Net sales in this segment increased by 19.7% in the third quarter of 2019 from the third quarter of 2018. The increase in net sales over the third quarter of 2018 was primarily driven by higher net sales for our ENDUR® product line. Net sales were impacted by unfavorable currency fluctuations of $0.1 million, or 2.6%, due to the depreciation in value of the Renminbi relative to the U.S. dollar.

Operating income increased 22.5% in the third quarter of 2019 compared to the third quarter of 2018. This increase in operating income was primarily driven by a favorable sales volume impact. As a percentage of net sales, third quarter of 2019 operating income was 30.7%, an approximately 70 basis point increase as compared to the 30.0% reported in the third quarter of 2018.

YTD 2019 versus YTD 2018

Net sales in this segment increased by 10.2% in the first nine months of 2019 from the first nine months of 2018. The increase in net sales over the first nine months of 2018 was primarily driven by a last-time buy in the Durel business and higher net sales for our ENDUR® product line, partially offset by lower net sales in our floats business. Net sales were impacted by unfavorable currency fluctuations of $0.4 million, or 2.7%, due to the depreciation in value of the Renminbi relative to the U.S. dollar.

Operating income decreased 6.0% in the first nine months of 2019 compared to the first nine months of 2018. This decrease in operating income was primarily driven by unfavorable absorption of fixed overhead costs and unfavorable product mix, partially offset by higher net sales. As a percentage of net sales, the first nine months of 2019 operating income was 29.6%, an approximately 510 basis point decrease as compared to the 34.7% reported in the first nine months of 2018.

Liquidity, Capital Resources and Financial Position

We believe that our existing sources of liquidity and cash flows that we expect to generate 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, for at least the next 12 months. We regularly review and evaluate the adequacy of our cash flows, borrowing facilities and banking relationships in an effort to ensure that we have the appropriate access to cash to fund both our near-term operating needs and our long-term strategic initiatives.

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

(Dollars in thousands)	September 30, 2019	December 31, 2018
United States	**$ 36,805**	$ 41,833
Europe	**27,978**	31,244
Asia	**75,964**	94,661
Total cash and cash equivalents	**$ 140,747**	$ 167,738

Approximately $103.9 million of our cash and cash equivalents were held by non-U.S. subsidiaries as of September 30, 2019. The Company did not make any changes in the first nine months of 2019 to its position on the permanent reinvestment of its earnings from foreign operations. With the exception of certain of our Chinese subsidiaries, where a substantial portion of our Asia cash and cash equivalents are held, we continue to assert that historical foreign earnings are indefinitely reinvested.

(Dollars in thousands)	**September 30, 2019**	December 31, 2018
Key Financial Position Accounts:		
Cash and cash equivalents	**$ 140,747**	$ 167,738
Accounts receivable, net	**$ 138,532**	$ 144,623
Contract assets	**$ 24,070**	$ 22,728
Inventories	**$ 137,908**	$ 132,637
Borrowings under revolving credit facility	**$ 130,482**	$ 228,482

Changes in key financial position accounts and other significant changes in our statements of financial position from December 31, 2018 to September 30, 2019 were as follows:

- Accounts receivable, net decreased 4.2% to $138.5 million as of September 30, 2019, from $144.6 million as of December 31, 2018. The decrease from year-end was primarily due to a reduction in our income taxes receivable as of the end of the third quarter of 2019 compared to the end of the 2018.
- Contract assets increased 5.9% to $24.1 million as of September 30, 2019, from $22.7 million as of December 31, 2018, as a result of an increase in no-alternative-use inventory, mainly attributable to the increase in no alternative use inventory for which we have the right to payment in our PES operating segment.
- Inventories increased 4.0% to $137.9 million as of September 30, 2019, from $132.6 million as of December 31, 2018, primarily driven by higher raw material purchases in our ACS and PES operating segments during the third quarter of 2019 to satisfy anticipated increases in demand through the first half of 2020.
- Borrowings under revolving credit facility decreased 42.9% to $130.5 million as of September 30, 2019, from $228.5 million as of December 31, 2018, as a result of $98.0 million of principal payments made in the first nine months of 2019.

(Dollars in thousands)	**Nine Months Ended**	
Key Cash Flow Measures:	**September 30, 2019**	September 30, 2018
Net cash provided by operating activities	**$ 115,672**	$ 33,424
Net cash used in investing activities	**(36,193)**	(157,535)
Net cash (used in) provided by financing activities	**(104,010)**	93,779

As of September 30, 2019, cash and cash equivalents were $140.7 million as compared to $167.7 million as of December 31, 2018, a decrease of $27.0 million, or 16.1%. This decrease was primarily due to $38.8 million in capital expenditures, $98.0 million of principal payments made on our outstanding borrowings under our revolving credit facility and $7.3 million in tax payments related to net share settlement of equity awards, partially offset by cash flows generated by operations.

Revolving Credit Facility

In 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 amended and restated the Second Amended Credit Agreement. The Third Amended Credit Agreement refinanced the Second Amended Credit Agreement, eliminated the term loan under the Second Amended Credit Agreement, increased the principal amount of our revolving credit facility to up to $450.0 million of borrowing capacity, with sublimits for multicurrency borrowings, letters of credit and swing-line notes, and provided an additional $175.0 million accordion feature.

All revolving loans under the Third Amended Credit Agreement 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 September 30, 2019, we had $130.5 million in outstanding borrowings under our revolving credit facility.

Restrictions 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 September 30, 2019.

Contingencies

During the third quarter of 2019, we did not become aware of any material developments related to environmental matters disclosed in our Annual Report, our asbestos litigation or other material contingencies previously disclosed or incur any material costs or capital expenditures related to such matters. Refer to "Note 13 – Commitments and Contingencies" to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q for further discussion of these contingencies.

Off-Balance Sheet Arrangements

As of September 30, 2019, we did not have any off-balance sheet arrangements that have or are, in the opinion of management, reasonably likely to have a current or future material effect on our results of operations or financial position.

Critical Accounting Policies

Leases

In February 2016, the FASB issued ASU 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). In our adoption of ASU 2016-02, we applied the practical expedients to recognize lease payments in the condensed consolidated statements of operations on a straight-line basis over the term of the lease for short-term leases. Additionally, we elected the package of practical expedients that allows us to carry forward the historical lease classification and accounting for indirect costs for any existing leases. Refer to "Note 11 - Leases" to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q.

Recent Accounting Pronouncements

Refer to "Note 19 – 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 third quarter of 2019. 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 Chief 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 September 30, 2019. 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 Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Based on their evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures were effective as of September 30, 2019.

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

Refer to the discussion of certain environmental, asbestos and other litigation matters in "Note 13 – Commitments and Contingencies" to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q.

Item 6. Exhibits

List of Exhibits:

3.1	Restated Articles of Organization of Rogers Corporation, as amended, incorporated by reference to Exhibit 3a to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2006.
3.2	Amended and Restated Bylaws of Rogers Corporation, effective February 11, 2016, incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on February 26, 2016.
10.1	Amended and Restated Employment Agreement between the Company and Helen Zhang, dated October 7, 2019, filed herewith.
31.1	Certification of President and Chief Executive Officer (Principal Executive Officer) pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.
31.2	Certification of Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer) pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.
32	Certification of President and Chief Executive Officer (Principal Executive Officer) and Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer) pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, furnished herewith.
101	The following materials from Rogers Corporation's Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2019 formatted in iXBRL (Inline Extensible Business Reporting Language): (i) Condensed Consolidated Statements of Operations for the three and nine months ended September 30, 2019 and September 30, 2018, (ii) Condensed Consolidated Statements of Comprehensive Income (Loss) for the three and nine months ended September 30, 2019 and September 30, 2018, (iii) Condensed Consolidated Statements of Financial Position at September 30, 2019 and December 31, 2018, (iv) Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2019 and September 30, 2018, (v) Condensed Consolidated Statements of Shareholders' Equity for the three and nine months ended September 30, 2019 and September 30, 2018, (vi) Notes to Condensed Consolidated Financial Statements and (vii) Cover Page.
104	The cover page from Rogers Corporation's Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2019, formatted in iXBRL and contained in Exhibit 101.

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/ Michael M. Ludwig

Michael M. Ludwig

Senior Vice President, Chief Financial Officer and Treasurer
Principal Financial Officer

Dated: 10/30/2019