

**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 **March 31, 2021**

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

(State or Other Jurisdiction of
Incorporation or Organization)

06-0513860

(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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer", "smaller reporting company", and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 April 26, 2021 was 18,712,154.

ROGERS CORPORATION
FORM 10-Q

March 31, 2021

TABLE OF CONTENTS

Part I – Financial Information

<u>Item 1.</u>	<u>Condensed Consolidated Financial Statements (Unaudited):</u>	
	<u>Condensed Consolidated Statements of Operations</u>	<u>3</u>
	<u>Condensed Consolidated Statements of Comprehensive Income (Loss)</u>	<u>4</u>
	<u>Condensed Consolidated Statements of Financial Position</u>	<u>5</u>
	<u>Condensed Consolidated Statements of Cash Flows</u>	<u>6</u>
	<u>Condensed Consolidated Statements of Shareholders' Equity</u>	<u>7</u>
	<u>Notes to Condensed Consolidated Financial Statements</u>	<u>8</u>
<u>Item 2.</u>	<u>Management's Discussion and Analysis of Results of Operations and Financial Position</u>	<u>22</u>
<u>Item 3.</u>	<u>Quantitative and Qualitative Disclosures About Market Risk</u>	<u>31</u>
<u>Item 4.</u>	<u>Controls and Procedures</u>	<u>31</u>

Part II – Other Information

<u>Item 1.</u>	<u>Legal Proceedings</u>	<u>32</u>
<u>Item 6.</u>	<u>Exhibits</u>	<u>32</u>
	<u>Signatures</u>	<u>33</u>

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	
	March 31, 2021	March 31, 2020
Net sales	\$ 229,265	\$ 198,810
Cost of sales	139,766	133,180
Gross margin	89,499	65,630
Selling, general and administrative expenses	42,413	40,330
Research and development expenses	7,172	7,805
Restructuring and impairment charges	1,506	—
Other operating (income) expense, net	1,215	20
Operating income	37,193	17,475
Equity income in unconsolidated joint ventures	2,181	1,218
Other income (expense), net	2,968	(786)
Interest expense, net	(607)	(1,207)
Income before income tax expense	41,735	16,700
Income tax expense	10,517	3,441
Net income	\$ 31,218	\$ 13,259
Basic earnings per share	\$ 1.67	\$ 0.71
Diluted earnings per share	\$ 1.66	\$ 0.71
Shares used in computing:		
Basic earnings per share	18,712	18,669
Diluted earnings per share	18,774	18,691

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

ROGERS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Unaudited)

(Dollars in thousands)

	Three Months Ended	
	March 31, 2021	March 31, 2020
Net income	\$ 31,218	\$ 13,259
Foreign currency translation adjustment	(13,259)	(6,894)
Pension and other postretirement benefits:		
Amortization of loss, net of tax (Note 4)	63	66
Derivative instrument designated as cash flow hedge:		
Change in unrealized loss before reclassifications, net of tax (Note 4)	—	(1,249)
Unrealized gain reclassified into earnings, net of tax (Note 4)	—	(67)
Other comprehensive income (loss)	(13,196)	(8,144)
Comprehensive income	\$ 18,022	\$ 5,115

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)

	<u>March 31, 2021</u>	<u>December 31, 2020</u>
Assets		
Current assets		
Cash and cash equivalents	\$ 199,109	\$ 191,785
Accounts receivable, less allowance for credit losses of \$1,310 and \$1,682	144,049	134,421
Contract assets	30,936	26,575
Inventories	106,706	102,360
Prepaid income taxes	2,854	2,960
Asbestos-related insurance receivables, current portion	2,986	2,986
Other current assets	19,140	13,088
Total current assets	505,780	474,175
Property, plant and equipment, net of accumulated depreciation of \$364,239 and \$365,844	267,041	272,378
Investments in unconsolidated joint ventures	14,948	15,248
Deferred income taxes	28,018	28,667
Goodwill	266,437	270,172
Other intangible assets, net of amortization	114,373	118,026
Pension assets	5,486	5,278
Asbestos-related insurance receivables, non-current portion	63,807	63,807
Other long-term assets	16,330	16,254
Total assets	<u>\$ 1,282,220</u>	<u>\$ 1,264,005</u>
Liabilities and Shareholders' Equity		
Current liabilities		
Accounts payable	\$ 52,342	\$ 35,987
Accrued employee benefits and compensation	42,331	41,708
Accrued income taxes payable	7,629	8,558
Asbestos-related liabilities, current portion	3,615	3,615
Other accrued liabilities	23,645	21,641
Total current liabilities	129,562	111,509
Borrowings under revolving credit facility	4,000	25,000
Pension and other postretirement benefits liabilities	1,635	1,612
Asbestos-related liabilities, non-current portion	69,559	69,620
Non-current income tax	15,572	16,346
Deferred income taxes	9,229	8,375
Other long-term liabilities	11,808	10,788
Commitments and contingencies (Note 10 and Note 12)		
Shareholders' equity		
Capital stock - \$1 par value; 50,000 authorized shares; 18,712 and 18,677 shares issued and outstanding	18,712	18,677
Additional paid-in capital	150,004	147,961
Retained earnings	904,910	873,692
Accumulated other comprehensive loss	(32,771)	(19,575)
Total shareholders' equity	1,040,855	1,020,755
Total liabilities and shareholders' equity	<u>\$ 1,282,220</u>	<u>\$ 1,264,005</u>

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

ROGERS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited)

(Dollars in thousands)

	Three Months Ended	
	March 31, 2021	March 31, 2020
Operating Activities:		
Net income	\$ 31,218	\$ 13,259
Adjustments to reconcile net income to cash provided by operating activities:		
Depreciation and amortization	10,325	10,926
Equity compensation expense	4,006	3,127
Deferred income taxes	1,570	(851)
Equity in undistributed income of unconsolidated joint ventures	(2,181)	(1,218)
Dividends received from unconsolidated joint ventures	1,754	1,785
Pension and other postretirement benefits	(79)	(50)
(Gain) loss on sale or disposal of property, plant and equipment	(89)	20
UTIS fire fixed asset and inventory write-offs	1,171	—
Provision (benefit) for credit losses	(345)	128
Changes in assets and liabilities:		
Accounts receivable	(11,397)	(22,981)
Contract assets	(4,361)	2,276
Inventories	(6,894)	4,095
Pension and postretirement benefit contributions	(147)	(64)
Other current assets	(6,132)	(1,558)
Accounts payable and other accrued expenses	17,967	(733)
Other, net	135	472
Net cash provided by operating activities	<u>36,521</u>	<u>8,633</u>
Investing Activities:		
Capital expenditures	(3,602)	(11,160)
Net cash used in investing activities	<u>(3,602)</u>	<u>(11,160)</u>
Financing Activities:		
Proceeds from borrowings under revolving credit facility	—	150,000
Repayment of debt principal and finance lease obligations	(21,253)	(96)
Payments of taxes related to net share settlement of equity awards	(2,632)	(4,997)
Proceeds from issuance of shares to employee stock purchase plan	704	664
Net cash (used in) provided by financing activities	<u>(23,181)</u>	<u>145,571</u>
Effect of exchange rate fluctuations on cash	(2,414)	(1,616)
Net increase in cash and cash equivalents	7,324	141,428
Cash and cash equivalents at beginning of period	191,785	166,849
Cash and cash equivalents at end of period	\$ 199,109	\$ 308,277
Supplemental Disclosures:		
Accrued capital additions	\$ 2,814	\$ 2,525
Cash paid during the year for:		
Interest, net of amounts capitalized	\$ 607	\$ 1,386
Income taxes	\$ 9,337	\$ 13,218

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

ROGERS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(Unaudited)

(Dollars and shares in thousands)

	Three Months Ended	
	March 31, 2021	March 31, 2020
Capital Stock		
Balance, beginning of period	\$ 18,677	\$ 18,577
Shares issued for vested restricted stock units, net of shares withheld for taxes	28	79
Shares issued for employee stock purchase plan	7	6
Balance, end of period	<u>18,712</u>	<u>18,662</u>
Additional Paid-In Capital		
Balance, beginning of period	147,961	138,526
Shares issued for vested restricted stock units, net of shares withheld for taxes	(2,660)	(5,076)
Shares issued for employee stock purchase plan	697	658
Equity compensation expense	4,006	3,127
Balance, end of period	<u>150,004</u>	<u>137,235</u>
Retained Earnings		
Balance, beginning of period	873,692	823,702
Net income	31,218	13,259
Balance, end of period	<u>904,910</u>	<u>836,961</u>
Accumulated Other Comprehensive Loss		
Balance, beginning of period	(19,575)	(46,905)
Other comprehensive income (loss)	(13,196)	(8,144)
Balance, end of period	<u>(32,771)</u>	<u>(55,049)</u>
Total Shareholders' Equity	<u>\$ 1,040,855</u>	<u>\$ 937,809</u>

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

ROGERS CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1 – Basis of Presentation

As used herein, the terms “Company,” “Rogers,” “we,” “us,” “our” and similar terms mean Rogers Corporation and its consolidated 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 (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 balances and 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, 2020. Refer to the discussion below for our restructuring activities significant accounting policy.

Through the fourth quarter of 2020, we operated three strategic operating segments: Advanced Connectivity Solutions (ACS), Elastomeric Material Solutions (EMS) and Power Electronics Solutions (PES), with the remaining operations, which represented our non-core businesses, being reported in a fourth operating segment, the Other operating segment. In the first quarter of 2021, we completed the realignment of our strategic business segments to reflect the combination of our ACS and PES businesses resulting in a new strategic business segment, Advanced Electronics Solutions (AES). The combination of these two complementary businesses with capabilities in both high power and high frequency applications is expected to enhance our overall value proposition to customers in multiple high-growth markets. As a result of our organizational and reporting structure changes, we re-evaluated the chief operating decision maker’s review and assessment of the Company’s operating performance for purposes of performance monitoring and resource allocation. We determined, based on the financial data utilized by the chief operating decision maker to assess segment performance and allocate resources among the Company’s strategic business segments, that we now have three operating segments under this new organizational and reporting structure: AES, EMS and Other. Reported results for the AES operating segment prior to 2021 represent the aggregation of the results for our former ACS and PES operating segments.

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.

As a result of our pension termination and settlement efforts in late 2019 and the first half of 2020, we have a pension surplus investment balance, which is now accounted for as an available-for-sale investment as of June 2020. For additional information regarding this balance, refer to “Note 11 – Pension Benefits and Other Postretirement Benefits.” Available-for-sale investments measured at fair value on a recurring basis, categorized by the level of inputs used in the valuation, were as follows:

Available-for-Sale Investment at Fair Value as of March 31, 2021				
<i>(Dollars in thousands)</i>	Level 1	Level 2	Level 3	Total
Pension surplus investment⁽¹⁾	\$ 6,417	\$ 2,389	\$ —	\$ 8,806

Available-for-Sale Investment at Fair Value as of December 31, 2020				
<i>(Dollars in thousands)</i>	Level 1	Level 2	Level 3	Total
Pension surplus investment⁽¹⁾	\$ 6,706	\$ 2,400	\$ —	\$ 9,106

⁽¹⁾ This balance was invested in funds comprised of short-term cash and fixed income securities, and was recorded in the “Other long-term assets” line item in the condensed consolidated statements of financial position. As of March 31, 2021, the fair value of these investments approximated its carrying value.

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

Derivative Instruments at Fair Value as of March 31, 2021					
<i>(Dollars in thousands)</i>	Level 1	Level 2	Level 3	Total ⁽¹⁾	
Foreign currency contracts	\$ —	\$ (58)	\$ —	\$	(58)
Copper derivative contracts	\$ —	\$ 6,076	\$ —	\$	6,076

Derivative Instruments at Fair Value as of December 31, 2020					
<i>(Dollars in thousands)</i>	Level 1	Level 2	Level 3	Total ⁽¹⁾	
Foreign currency contracts	\$ —	\$ (130)	\$ —	\$	(130)
Copper derivative contracts	\$ —	\$ 4,785	\$ —	\$	4,785

⁽¹⁾ All balances were recorded in the “Other current assets” or “Other accrued liabilities” line items in the condensed consolidated statements of financial position.

For additional information on 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). We do not use derivative 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.

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 condensed consolidated 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) in the condensed consolidated statements of 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.

Foreign Currency

During the three months ended March 31, 2021, we entered into U.S. dollar, Korean won, and euro 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 March 31, 2021, the notional values of the remaining foreign currency forward contracts were as follows:

Notional Values of Foreign Currency Derivatives

USD/CNH	\$	20,477,033
KRW/USD	₩	11,317,100,000
EUR/USD	€	6,788,458

Commodity

As of March 31, 2021, we had 14 outstanding contracts to hedge exposure related to the purchase of copper in our AES operating segment. 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 March 31, 2021, the volume of our copper contracts outstanding was as follows:

Volume of Copper Derivatives

April 2021 - June 2021	256 metric tons per month
July 2021 - September 2021	222 metric tons per month
October 2021 - December 2021	222 metric tons per month
January 2022 - March 2022	213 metric tons per month

Effects on Financial Statements

The impacts from our derivative instruments on the statement of operations and statements of comprehensive income (loss) were as follows:

<i>(Dollars in thousands)</i>	Financial Statement Line Item	Three Months Ended	
		March 31, 2021	March 31, 2020
Foreign Currency Contracts			
Contracts not designated as hedging instruments	Other income (expense), net	\$ (822)	\$ (528)
Copper Derivative Contracts			
Contracts not designated as hedging instruments	Other income (expense), net	\$ 2,547	\$ (1,135)
Interest Rate Swap			
Contract designated as hedging instrument	Other comprehensive income (loss)	\$ —	\$ (1,690)

Note 4 – Accumulated Other Comprehensive Loss

The changes in accumulated other comprehensive loss by component were as follows:

<i>(Dollars and accompanying footnotes in thousands)</i>	Foreign Currency Translation Adjustments	Pension and Other Postretirement Benefits ⁽¹⁾	Derivative Instrument Designated as Cash Flow Hedge ⁽²⁾	Total
Balance as of December 31, 2020	\$ (10,571)	\$ (9,004)	\$ —	\$ (19,575)
Other comprehensive income (loss) before reclassifications	(13,259)	—	—	(13,259)
Amounts reclassified from accumulated other comprehensive loss	—	63	—	63
Net current-period other comprehensive income (loss)	(13,259)	63	—	(13,196)
Balance as of March 31, 2021	<u>\$ (23,830)</u>	<u>\$ (8,941)</u>	<u>\$ —</u>	<u>\$ (32,771)</u>
Balance as of December 31, 2019	\$ (35,478)	\$ (10,455)	\$ (972)	\$ (46,905)
Other comprehensive loss before reclassifications	(6,894)	—	(1,249)	(8,143)
Amounts reclassified from accumulated other comprehensive loss	—	66	(67)	(1)
Net current-period other comprehensive income (loss)	(6,894)	66	(1,316)	(8,144)
Balance as of March 31, 2020	<u>\$ (42,372)</u>	<u>\$ (10,389)</u>	<u>\$ (2,288)</u>	<u>\$ (55,049)</u>

⁽¹⁾ Net of taxes of \$1,940 and \$1,951 as of March 31, 2021 and December 31, 2020, respectively. Net of taxes of \$2,349 and \$2,368 as of March 31, 2020 and December 31, 2019, respectively.

⁽²⁾ Net of taxes of \$0 as of both March 31, 2021 and December 31, 2020. Net of taxes of \$656 and \$282 as of March 31, 2020 and December 31, 2019, respectively.

Note 5 – Inventories

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

<i>(Dollars in thousands)</i>	March 31, 2021	December 31, 2020
Raw materials	\$ 47,197	\$ 44,976
Work-in-process	29,243	25,291
Finished goods	30,266	32,093
Total inventories	<u>\$ 106,706</u>	<u>\$ 102,360</u>

Note 6 – Goodwill and Other Intangible Assets

Goodwill

The changes in the net carrying amount of goodwill by operating segment were as follows:

<i>(Dollars in thousands)</i>	Advanced Electronics Solutions	Elastomeric Material Solutions	Other	Total
December 31, 2020	\$ 124,927	\$ 143,021	\$ 2,224	\$ 270,172
Foreign currency translation adjustment	(3,075)	(660)	—	\$ (3,735)
March 31, 2021	<u>\$ 121,852</u>	<u>\$ 142,361</u>	<u>\$ 2,224</u>	<u>\$ 266,437</u>

Other Intangible Assets

The gross and net carrying amounts, as well as the accumulated amortization of other intangible assets were as follows:

	March 31, 2021			December 31, 2020		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
<i>(Dollars in thousands)</i>						
Customer relationships	\$ 150,060	\$ 73,022	\$ 77,039	\$ 150,863	\$ 72,014	\$ 78,849
Technology	80,208	51,671	28,536	83,469	53,540	29,929
Trademarks and trade names	12,009	8,316	3,693	12,039	8,149	3,890
Covenants not to compete	1,340	877	463	1,340	827	513
Total definite-lived other intangible assets	243,617	133,886	109,731	247,711	134,530	113,181
Indefinite-lived other intangible asset	4,642	—	4,642	4,845	—	4,845
Total other intangible assets	\$ 248,259	\$ 133,886	\$ 114,373	\$ 252,556	\$ 134,530	\$ 118,026

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

Amortization expense was \$3.1 million and \$3.7 million for the three months ended March 31, 2021 and 2020, respectively. The estimated future amortization expense is \$9.3 million for the remainder of 2021 and \$11.8 million, \$11.3 million, \$10.0 million and \$8.5 million for 2022, 2023, 2024 and 2025, respectively.

The weighted average amortization period as of March 31, 2021, by definite-lived other intangible asset class, was as follows:

Definite-Lived Other Intangible Asset Class	Weighted Average Remaining Amortization Period
Customer relationships	7.6 years
Technology	3.8 years
Trademarks and trade names	4.9 years
Covenants not to compete	1.1 years
Total definite-lived other intangible assets	6.5 years

Note 7 – 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:

	Three Months Ended	
	March 31, 2021	March 31, 2020
<i>(Dollars and shares in thousands, except per share amounts)</i>		
Numerator:		
Net income	\$ 31,218	\$ 13,259
Denominator:		
Weighted-average shares outstanding - basic	18,712	18,669
Effect of dilutive shares	62	22
Weighted-average shares outstanding - diluted	18,774	18,691
Basic earnings per share	\$ 1.67	\$ 0.71
Diluted earnings per share	\$ 1.66	\$ 0.71

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 March 31, 2021 and 2020, 44,792 shares and 127,106 shares were excluded, respectively.

Note 8 – Capital Stock and Equity Compensation

Equity Compensation

Performance-Based Restricted Stock Units

As of March 31, 2021, we had performance-based restricted stock units from 2021, 2020, 2019 and 2018 outstanding. These awards generally cliff vest at the end of a three-year measurement period. However, employees whose employment terminates

during the measurement period due to death, disability, or, in certain cases, retirement may receive a pro-rata payout based on the number of days they were employed during the measurement period, except as noted below in *Chief Executive Officer's 2021 Equity Award Grants*. 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.

The following table sets forth the assumptions used in the Monte Carlo calculation for each material award granted in 2021 and 2020:

	February 10, 2021	February 12, 2020
Expected volatility	51.0%	41.0%
Expected term (in years)	2.9	2.9
Risk-free interest rate	0.18%	1.41%

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.

A summary of activity of the outstanding performance-based restricted stock units for the three months ended March 31, 2021 is presented below:

	Performance-Based Restricted Stock Units
Awards outstanding as of December 31, 2020	111,059
Awards granted	38,570
Stock issued	—
Awards cancelled	(20,493)
Awards outstanding as of March 31, 2021	129,136

We recognized \$2.1 million and \$1.5 million of compensation expense for performance-based restricted stock units for the three months ended March 31, 2021 and 2020, respectively.

Time-Based Restricted Stock Units

As of March 31, 2021, we had time-based restricted stock unit awards from 2021, 2020, 2019 and 2018 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, except as noted below in *Chief Executive Officer's 2021 Equity Award Grants*. 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 three months ended March 31, 2021 is presented below:

	Time-Based Restricted Stock Units
Awards outstanding as of December 31, 2020	102,142
Awards granted	45,173
Stock issued	(43,078)
Awards cancelled	(627)
Awards outstanding as of March 31, 2021	103,610

We recognized \$1.8 million and \$1.5 million of compensation expense for time-based restricted stock units for the three months ended March 31, 2021 and 2020, respectively.

Chief Executive Officer's 2021 Equity Award Grants

The terms of the performance-based and time-based restricted stock unit awards granted to our Chief Executive Officer (CEO), Bruce Hoechner, in February 2021 were modified from the standard language provisions from prior year awards to allow for accelerated vesting of the full awards provided certain criteria are met. Accounting Standards Codification (ASC) Topic 718: *Compensation—Stock Compensation* requires companies that allow for accelerated vesting of employees' unvested equity upon retirement to recognize the expense from the date of grant to the date the employee becomes eligible to retire – regardless of whether or not the employee actually retires when he or she is eligible to. As a result, the \$4.0 million of expense related to the awards granted on February 10, 2021 to our CEO, which provide for immediate vesting upon retirement, will be expensed from the date of the grant, February 10, 2021, through his retirement eligibility date, November 9, 2021.

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.

A summary of activity of the outstanding deferred stock units for the three months ended March 31, 2021 is presented below:

	Deferred Stock Units
Awards outstanding as of December 31, 2020	12,450
Awards granted	—
Stock issued	—
Awards outstanding as of March 31, 2021	12,450

We recognized no compensation expense related to deferred stock units for each of the three-month periods ended March 31, 2021 and 2020, respectively.

Note 9 – Debt

On October 16, 2020, we entered into the Fourth Amended and Restated Credit Agreement with JPMorgan Chase Bank, N.A, as administrative agent, and the lenders party thereto (the Fourth Amended Credit Agreement). The Fourth Amended Credit Agreement amends and restates the Third Amended Credit Agreement, and provides for a revolving credit facility with up to a \$450.0 million borrowing capacity, with sublimits for multicurrency borrowings, letters of credit and swing-line notes, in addition to a \$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 Fourth Amended Credit Agreement). The Fourth Amended Credit Agreement extends the maturity, the date on which all amounts borrowed or outstanding under the Fourth Amended Credit Agreement are due, from February 17, 2022 to March 31, 2024.

All obligations under the Fourth Amended Credit Agreement are guaranteed by each of our existing and future material domestic subsidiaries, as defined in the Fourth Amended Credit Agreement (the Guarantors). The obligations are also secured by a Fourth Amended and Restated Pledge and Security Agreement, dated as of October 16, 2020, 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 our and the Guarantors' non-real estate assets. These assets include, but are not limited to, receivables, equipment, intellectual property, inventory, and stock in certain subsidiaries.

Borrowings under the Fourth 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 62.5 to 100.0 basis points, depending on our leverage ratio. The base reference rate is the greatest of (a) the prime rate in effect on such day, (b) the Federal Reserve Bank of New York rate in effect on such day plus ½ of 1%, and (c) the adjusted LIBOR for a one month interest period in dollars on such day (or if such day is not a business day, the immediately preceding business day) plus 1%. Euro-currency loans bear interest based on adjusted LIBOR plus a spread of 162.5 to 200.0 basis points, depending on our leverage ratio. Based on our leverage ratio on March 31, 2021, the spread was 162.5 basis points.

In addition to interest payable on the principal amount of indebtedness outstanding from time to time under the Fourth Amended Credit Agreement, we are required to pay a quarterly fee of 25 to 35 basis points (based upon our leverage ratio) of the unused amount of the lenders' commitments under the Fourth Amended Credit Agreement.

The Fourth Amended Credit Agreement contains customary representations and 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 total net leverage ratio of no more than 3.25 to 1.00, subject to a one-time election to increase the maximum total net 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. We are permitted to net up to \$50.0 million of unrestricted domestic cash and cash equivalents against indebtedness in the calculation of the total net leverage ratio.

The Fourth 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 total net leverage ratio does not exceed 2.75 to 1.00. If our total net 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 total net leverage ratio did not exceed 2.75 to 1.00 as of March 31, 2021.

We did not borrow anything under the Fourth Amended Credit Agreement for the three months ended March 31, 2021. During the three months ended March 31, 2020, we borrowed \$150.0 million under the Third Amended Credit Agreement (prior to its restatement) as a precautionary measure in order to increase our cash position and preserve financial flexibility given current uncertainty in the global markets resulting from the COVID-19 pandemic. We are not required to make any quarterly principal payments under the Fourth Amended Credit Agreement. We made \$21.0 million of discretionary principal payments on our revolving credit facility for the three months ended March 31, 2021.

We had \$4.0 million and \$25.0 million in outstanding borrowings under our revolving credit facility as of March 31, 2021 and December 31, 2020, respectively. We had \$2.1 million and \$2.3 million of outstanding line of credit issuance costs as of March 31, 2021 and December 31, 2020, respectively, which will be amortized over the life of the Fourth Amended Credit Agreement.

Note 10 - 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 on June 30, 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. We expect to exercise this purchase option. Our finance lease obligation related to this facility was \$4.2 million and \$4.5 million as of March 31, 2021 and December 31, 2020, respectively. The finance lease right-of-use asset balance for this facility was \$6.2 million and \$6.5 million as of March 31, 2021 and December 31, 2020, respectively. Accumulated amortization related to this finance lease right-of-use asset was \$4.3 million and \$4.5 million as of March 31, 2021 and December 31, 2020, respectively. The aggregate of all other finance lease obligations, finance lease right-of-use assets and related accumulated amortization, were immaterial as of March 31, 2021 and December 31, 2020.

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 months ended March 31, 2021 and 2020. 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-month periods ended March 31, 2021 and 2020. Payments made on the principal portion of our finance lease obligations were immaterial for each of the three-month periods ended March 31, 2021 and 2020.

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.

Our expenses and payments for operating leases were as follows:

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Operating leases expense	\$ 681	\$ 728
Short-term leases expense	\$ 74	\$ 123
Payments on operating lease obligations	\$ 670	\$ 746

Our assets and liabilities balances related to finance and operating leases reflected in the condensed consolidated statements of financial position were as follows:

<i>(Dollars in thousands)</i>	Location in Statements of Financial Position	March 31, 2021	December 31, 2020
Finance lease right-of-use assets	Property, plant and equipment, net	\$ 6,618	\$ 7,017
Operating lease right-of-use assets	Other long-term assets	\$ 4,802	\$ 4,216
Finance lease obligations, current portion	Other accrued liabilities	\$ 4,453	\$ 4,755
Finance lease obligations, non-current portion	Other long-term liabilities	\$ 184	\$ 322
Total finance lease obligations		\$ 4,637	\$ 5,077
Operating lease obligations, current portion	Other accrued liabilities	\$ 2,187	\$ 2,275
Operating lease obligations, non-current portion	Other long-term liabilities	\$ 2,644	\$ 2,219
Total operating lease obligations		\$ 4,831	\$ 4,494

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 March 31, 2021:

<i>(Dollars in thousands)</i>	Finance	Operating		
	Leases in Effect	Leases Signed	Less: Leases Not Yet Commenced	Leases in Effect
2021	4,308	1,818	(52)	1,766
2022	194	1,930	(85)	1,845
2023	188	1,166	(49)	1,117
2024	—	306	(20)	286
2025	—	38	—	38
Thereafter	—	3	—	3
Total lease payments	4,690	5,261	(206)	5,055
Less: Interest	(53)	(228)	4	(224)
Present Value of Net Future Minimum Lease Payments	4,637	5,033	(202)	4,831

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	0.5 years	2.5 years
Weighted Average Discount Rate	3.06%	3.61%

Note 11 – Pension Benefits and Other Postretirement Benefits

Pension and Other Postretirement Benefit Plans

As of March 31, 2021, we had one qualified noncontributory defined benefit pension plan, the Rogers Corporation Employees' Pension Plan (the Union Plan), which was frozen and ceased accruing benefits in 2013.

Additionally, we sponsor other postretirement benefit plans, including 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.

Pension Termination Surplus Funds

On October 17, 2019, our Chief Executive Officer approved the termination of the Rogers Corporation Defined Benefit Pension Plan (following its merger with the Hourly Employees Pension Plan of Arlon LLC, Microwave Material and Silicone Technologies Divisions, Bear, Delaware (collectively, the Merged Plan)). We provided participants of the Merged Plan an option to elect either a lump sum distribution or an annuity. A group annuity contract was purchased with an insurance company for all participants who did not elect a lump sum distribution. The insurance company became responsible for administering and paying pension benefit payments effective January 1, 2020.

Upon completion of the pension termination and settlement processes for the Merged Plan, we had a \$9.7 million remaining pension surplus investment balance. In July 2020, we transferred \$7.4 million of the pension surplus investment balance to a suspense account held within a trust for the Rogers Employee Savings and Investment Plan (RESIP), a 401(k) plan for domestic employees. The investment balance not transferred to the trust suspense account will be used to pay any final plan expenses, after which the remainder of these funds will be moved to the RESIP trust suspense account. The funds in the RESIP trust suspense account have been, and will continue to be, used to fund certain employer contributions. In the second quarter of 2021, we will use \$0.9 million of the pension surplus investment balance to pay a discretionary contribution to RESIP eligible employees, which was recognized to expense in the first quarter of 2021. As of March 31, 2021, the combined remaining pension surplus investment balance was approximately \$8.8 million.

Components of Net Periodic Benefit (Credit) Cost

The components of net periodic benefit (credit) cost were as follows:

	Pension Benefits		Other Postretirement Benefits	
	Three Months Ended		Three Months Ended	
	March 31,		March 31,	
<i>(Dollars in thousands)</i>	2021	2020	2021	2020
Service cost	\$ —	\$ —	\$ 15	\$ 17
Interest cost	184	231	6	10
Expected return of plan assets	(390)	(393)	—	—
Amortization of prior service credit	—	—	(24)	(28)
Amortization of net loss	98	114	—	—
Net periodic benefit (credit) cost	\$ (108)	\$ (48)	\$ (3)	\$ (1)

Employer Contributions

There were no required or voluntary contributions made to the Union Plan or the Merged Plan for the three months ended March 31, 2021 and 2020. Additionally, we are not required to make additional contributions to the Union Plan for the remainder of 2021.

As there is no funding requirement for the other postretirement benefit plans, we funded these benefit payments as incurred, which were immaterial for each of the three-month periods ended March 31, 2021 and 2020, using cash from operations.

Note 12 – Commitments and Contingencies

We are currently engaged in the following material 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 \$1.7 million of aggregate remediation costs through March 31, 2021, and the accrual for future remediation efforts is \$0.9 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 for the three months ended March 31, 2021:

	Asbestos Claims
Claims outstanding as of January 1, 2020	561
New claims filed	27
Pending claims concluded ⁽¹⁾	(39)
Claims outstanding as of March 31, 2021	549

⁽¹⁾ For the three months ended March 31, 2021, 37 claims were dismissed and 2 claims were settled. Settlements totaled approximately \$0.1 million for the three months ended March 31, 2021.

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 indemnity and defense costs through 2064, 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 indemnity and defense 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 indemnity and defense costs, and we incurred an immaterial amount of expenses for each of the three months ended March 31, 2021 and 2020, respectively, related 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.

Changes recorded in the estimated liability and estimated insurance recovery based on projections of asbestos litigation and corresponding insurance coverage, result in the recognition of expense or income.

Our projected asbestos-related liabilities and insurance receivables were as follows:

<i>(Dollars in thousands)</i>	March 31, 2021	December 31, 2020
Asbestos-related liabilities	\$ 73,174	\$ 73,235
Asbestos-related insurance receivables	\$ 66,793	\$ 66,793

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 13 – Income Taxes

Our effective income tax rate was 25.2% and 20.6% for the three months ended March 31, 2021 and 2020, respectively. The increase from the first quarter of 2020 was primarily due to the decrease in the current quarter valuation allowance release and

decrease in current quarter reversals of unrecognized tax benefits.

The total amount of unrecognized tax benefits as of March 31, 2021 was \$14.3 million, of which \$13.8 million would affect our effective tax rate if recognized. Additionally, the balance of unrecognized tax benefits as of March 31, 2021 also included \$0.5 million of tax benefits that, if recognized, would result in adjustments to other tax accounts, primarily deferred taxes.

We recognize interest and penalties related to unrecognized tax benefits through income tax expense. As of March 31, 2021, we had \$1.3 million accrued for the payment of interest.

We are subject to taxation in the U.S. and various state and foreign jurisdictions. Our tax years from 2016 through 2020 are subject to examination by the tax authorities. With few exceptions, we are no longer subject to U.S. federal, state, local and foreign examinations by tax authorities for the years before 2016.

Note 14 – Operating Segment Information

Our reporting structure is comprised of the following strategic operating segments: AES and EMS. The remaining operations, which represent our non-core businesses, are reported in the Other operating segment.

Our AES operating segment designs, develops, manufactures and sells circuit materials, ceramic substrate materials, busbars and cooling solutions for applications in electric and hybrid electric vehicles (EV/HEV), wireless infrastructure (i.e., power amplifiers, antennas and small cells), automotive (i.e., advanced driver assistance systems (ADAS), telematics and thermal solutions), aerospace and defense (i.e., antenna systems, communication systems and phased array radar systems), mass transit, clean energy (i.e., variable frequency drives, renewable energy), connected devices (i.e., mobile internet devices and thermal solutions) and wired infrastructure (i.e., computing and IP infrastructure) markets.

Our EMS operating segment designs, develops, manufactures and sells engineered material solutions for a wide variety of applications and markets. These include polyurethane and silicone materials used in cushioning, gasketing and sealing, and vibration management applications for general industrial, portable electronics, automotive, EV/HEV, mass transit, aerospace and defense, footwear and impact mitigation and printing markets; customized silicones used in flex heater and semiconductor thermal applications for general industrial, portable electronics, automotive, EV/HEV, mass transit, aerospace and defense and medical markets; polytetrafluoroethylene and ultra-high molecular weight polyethylene materials used in wire and cable protection, electrical insulation, conduction and shielding, hose and belt protection, vibration management, cushioning, gasketing and sealing, and venting applications for general industrial, automotive, EV/HEV and aerospace and defense markets.

Our Other operating segment consists of elastomer components for applications in general industrial market, as well as elastomer floats for level sensing in fuel tanks, motors, and storage tanks applications in the general industrial and automotive markets. We sell our elastomer components under our ENDUR[®] trade name and our floats under our NITROPHYL[®] trade name.

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:

<i>(Dollars in thousands)</i>	Advanced Electronics Solutions	Elastomeric Material Solutions	Other	Total
Three Months Ended March 31, 2021				
Net sales - recognized over time	\$ 54,814	\$ 2,687	\$ 5,212	\$ 62,713
Net sales - recognized at a point in time	77,078	89,162	312	166,552
Total net sales	\$ 131,892	\$ 91,849	\$ 5,524	\$ 229,265
Operating income	\$ 14,849	\$ 20,077	\$ 2,267	\$ 37,193
Three Months Ended March 31, 2020				
Net sales - recognized over time	\$ 46,401	\$ 2,827	\$ 3,650	\$ 52,878
Net sales - recognized at a point in time	64,873	80,699	360	145,932
Total net sales	\$ 111,274	\$ 83,526	\$ 4,010	\$ 198,810
Operating income	\$ 4,778	\$ 11,517	\$ 1,180	\$ 17,475

Net sales by operating segment and by geographic area were as follows:

Region/Country	Net Sales ⁽¹⁾			Total
	Advanced Electronics Solutions	Elastomeric Material Solutions	Other	
<i>(Dollars in thousands)</i>				
Three Months Ended March 31, 2021				
United States	\$ 23,797	\$ 37,732	\$ 672	\$ 62,201
Other Americas	594	2,494	216	3,304
Total Americas	24,391	40,226	888	65,505
China	58,423	27,831	1,393	87,647
Other APAC	23,372	9,288	720	33,380
Total APAC	81,795	37,119	2,113	121,027
Germany	5,163	10,276	134	15,573
Other EMEA	20,543	4,228	2,389	27,160
Total EMEA	25,706	14,504	2,523	42,733
Total net sales	\$ 131,892	\$ 91,849	\$ 5,524	\$ 229,265
Three Months Ended March 31, 2020				
United States	\$ 22,625	\$ 38,567	\$ 979	\$ 62,171
Other Americas	1,053	2,449	311	3,813
Total Americas	23,678	41,016	1,290	65,984
China	32,933	18,375	225	51,533
Other APAC	19,679	12,953	548	33,180
Total APAC	52,612	31,328	773	84,713
Germany	16,729	3,634	149	20,512
Other EMEA	18,255	7,548	1,798	27,601
Total EMEA	34,984	11,182	1,947	48,113
Total net sales	\$ 111,274	\$ 83,526	\$ 4,010	\$ 198,810

⁽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.

Revenue from Contracts with Customers

We have 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 contract assets on the condensed consolidated statements of financial position.

Contract assets by operating segment were as follows:

	March 31, 2021	December 31, 2020
Advanced Electronics Solutions	\$ 27,486	\$ 24,199
Elastomeric Material Solutions	1,102	887
Other	2,348	1,489
Total contract assets	\$ 30,936	\$ 26,575

We did not have any contract liabilities as of March 31, 2021 or December 31, 2020. No impairment losses were recognized for the three-month periods ended March 31, 2021 and 2020, respectively, on any receivables or contract assets arising from our contracts with customers.

Note 15 – Supplemental Financial Information

Restructuring and Impairment Charges

The components of “Restructuring and impairment charges” line item in the condensed consolidated statements of operations, which contains restructuring charges and related expenses, as well as impairment charges, were as follows:

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Restructuring charges		
Manufacturing footprint optimization	1,506	—
Total restructuring charges	1,506	—
Total restructuring and impairment charges	\$ 1,506	\$ —

Our AES and EMS operating segments incurred \$1.5 million and an immaterial amount of restructuring and impairment charges, respectively, for the three months ended March 31, 2021.

Restructuring Charges & Related Expenses - Manufacturing Footprint Optimization

During the third quarter of 2020, we commenced manufacturing footprint optimization plans involving certain Europe and Asia manufacturing locations, primarily impacting our AES operating segment, in order to achieve greater cost competitiveness as well as align capacity with end market demand. We expect the majority of the restructuring activities to be completed by the end of the first half of 2021. We incurred restructuring charges and related expenses of \$1.5 million for the three months ended March 31, 2021, of which \$0.5 million related to severance and related benefits. Severance and related benefits activity related to the manufacturing footprint optimization plan is presented in the table below for the three months ended March 31, 2021:

<i>(Dollars in thousands)</i>	Manufacturing Footprint Optimization Restructuring Severance
Balance as of December 31, 2020	\$ 11,003
Provisions	508
Payments	(779)
Foreign currency translation adjustment	(438)
Balance as of March 31, 2021	\$ 10,294

Other Operating (Income) Expense, Net

The components of “Other operating (income) expense, net” line item in the condensed consolidated statements of operations, were as follows:

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
UTIS fire		
Fixed assets write-offs	891	—
Inventory charges	280	—
Professional services	522	—
Lease obligations	486	—
Compensation & benefits	244	—
Insurance recoveries	(1,119)	—
Total UTIS fire	1,304	—
(Gain) loss on sale or disposal of property, plant and equipment	(89)	20
Total other operating (income) expense, net	\$ 1,215	\$ 20

In early February 2021, there was a fire at our UTIS manufacturing facility in Ansan, South Korea, which manufactures eSorba® polyurethane foams used in portable electronics and display applications. The site was safely evacuated and there were no reported injuries; however, there was extensive damage to the manufacturing site and some damage to nearby property. The cause of the fire is still under investigation. Operations at this facility will be disrupted into at least late 2021. We are currently evaluating alternative facility options.

We recognized fixed asset write-offs and inventory charges of \$0.9 million and \$0.3 million, respectively, related to property destroyed in the fire for the three months ended March 31, 2021. Additionally, we recognized a \$0.5 million contingent liability pertaining to our obligations for the fire damage to the building in connection with the underlying lease agreement. We have incurred \$0.5 million of fees for various professional services for the three months ended March 31, 2021, in connection with the assessment of the fire and the efforts to rebuild and resume operations. Further, we incurred \$0.2 million of compensation and benefits for UTIS manufacturing employees, subsequent to the fire, for the three months ended March 31, 2021. In connection with the UTIS fire, we have recognized anticipated insurance recoveries of \$1.1 million related to our ongoing insurance claim for property damage and compensation and benefits of hourly employees, less the applicable \$0.3 million deductible, for the three months ended March 31, 2021.

Based on the facts and circumstances known to us as of our filing, while we are aware of other potential liabilities, we are unable presently to estimate the probability or amount of any further contingent liabilities associated with damages to nearby property or other potential costs due to the fire at our UTIS manufacturing facility. As such, no further reserves have been established at this time. We will continue to re-assess as additional information becomes available.

Interest Expense, Net

The components of “Interest expense, net” line item in the condensed consolidated statements of operations, were as follows:

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Interest on revolving credit facility	\$ 101	\$ 1,079
Interest rate swap settlements	—	86
Line of credit fees	273	166
Debt issuance amortization costs	179	138
Interest on finance leases	212	33
Interest income	(195)	(320)
Other	38	25
Total interest expense, net	\$ 608	\$ 1,207

Note 16 – Recent Accounting Standards

Recently Adopted Standards Reflected in Our 2021 Financial Statements

In August 2020, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2020-06, *Debt-Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging-Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity*. Under ASU 2020-06, the embedded conversion features are no longer separated from the host contract for convertible instruments with conversion features that are not required to be accounted for as derivatives under Topic 815, or that do not result in substantial premiums accounted for as paid-in capital. Consequently, a convertible debt instrument will be accounted for as a single liability measured at its amortized cost, as long as no other features require bifurcation and recognition as derivatives. The new guidance also requires the if-converted method be applied for all convertible instruments. ASU 2020-06 is effective for fiscal years beginning after December 15, 2021, with early adoption permitted. Adoption of the standard requires using either the modified retrospective or the retrospective approach. We adopted this standard in January 2021, and it did not have a material effect on our condensed consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*. Under ASU 2019-12, the new guidance removes certain exceptions to the general principles in Topic 740. The new guidance also clarifies and amends existing guidance to improve consistent application. ASU 2019-12 is effective for our annual reporting periods beginning after December 15, 2020. The transition method (retrospective, modified retrospective, or prospective approach) related to this standard depends on the applicable guidance, and all amendments for which there is no transition guidance specified, are to be applied on a prospective basis. We adopted this standard in January 2021, and it did not have a material effect on our condensed consolidated financial statements.

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 (the Exchange Act). 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:

- the duration and impacts of the novel coronavirus (COVID-19) global pandemic and efforts to contain its transmission and distribute vaccines, including the effect of these factors on our business, suppliers, customers, end users and economic conditions generally;
- 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 (U.S.) and abroad, particularly in China, South Korea, Germany, Hungary and Belgium, where we maintain significant manufacturing, sales or administrative operations;
- the trade policy dynamics between the U.S. and China reflected in trade agreement negotiations and the imposition of tariffs and other trade restrictions, including trade restrictions on Huawei Technologies Co., Ltd. (Huawei);
- 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;
- business interruptions due to catastrophes or other similar events, such as natural disasters, war, terrorism or public health crises;
- failure to realize, or delays in the realization of, anticipated benefits of acquisitions and divestitures due to, among other things, the existence of unknown liabilities or difficulty integrating acquired businesses;
- our ability to attract and retain management and skilled technical personnel;
- our ability to protect our proprietary technology from infringement by third parties and/or allegations that our technology infringes third party rights;
- changes in effective tax rates or tax laws and regulations in the jurisdictions in which we operate;
- failure to comply with financial and restrictive covenants in our credit agreement or restrictions on our operational and financial flexibility due to such covenants;
- the outcome of ongoing and future litigation, including our asbestos-related product liability litigation;
- changes in environmental laws and regulations applicable to our business; and
- disruptions in, or breaches of, our information technology systems.

Our forward-looking statements are expressly qualified by these cautionary statements, which you should consider carefully, along with the risks discussed in this section and elsewhere in this report, including under the section entitled "Risk Factors" in Part II, Item 1A and in our Annual Report on Form 10-K for the year ended December 31, 2020 (the Annual Report) and our other 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.

Company Background and Strategy

Rogers Corporation designs, develops, manufactures and sells high-performance and high-reliability engineered materials and components to meet our customers' demanding challenges. We operate two strategic operating segments: Advanced Electronics Solutions (AES) and Elastomeric Material Solutions (EMS). 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 mobility and advanced connectivity. More specifically, in addition to the impact of COVID-19 discussed below, the key medium- to long-term trends currently affecting our business include the increasing use of advanced driver assistance systems (ADAS) and increasing electrification of vehicles, including electric and hybrid electric vehicles (EV/HEV), in the automotive industry and the growth of 5G smartphones in the portable electronics industry. In addition to our focus on advanced mobility and advanced connectivity in the automotive, portable electronics and telecommunications industries, we sell into a variety of other markets including general industrial, aerospace and defense, mass transit, clean energy and connected devices.

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: performance, quality, service, cost, efficiency, innovation and technology. We have expanded our capabilities through organic investment and acquisitions and strive to ensure high quality solutions for our customers. We continue to review and re-align our manufacturing and engineering footprint in an effort to maintain 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.

COVID-19 Update

The global COVID-19 pandemic has affected and continues to affect Rogers' business and operations, although to a lesser extent than the first half of 2020. In response to the outbreak, Rogers prioritized the safety and well-being of its employees—including implementing social distancing initiatives in its facilities, providing remote working arrangements for certain employees, expanding personal protective equipment usage, enhancing plant hygiene processes, and extending employee benefits, which increased our expenses—while at the same time taking actions to preserve business continuity. Our non-manufacturing employees transitioned seamlessly to remote working arrangements and are effectively collaborating both internally and with our customers. In some cases, based on local conditions, non-manufacturing employees have returned to their worksites. We expect that the COVID-19 pandemic will have a continuing but uncertain impact on our business and operations in the short- and medium-term.

Due to the above circumstances and as described generally in this Form 10-Q, our results of operations for the three months ended March 31, 2021 are not necessarily indicative of the results to be expected for the full year.

Executive Summary

The following key highlights and factors should be considered when reviewing our results of operations, financial position and liquidity:

- In the first quarter of 2021 as compared to the first quarter of 2020, our net sales increased 15.3% to \$229.3 million, our gross margin increased approximately 600 basis points to 39.0% from 33.0%, and operating income increased approximately 740 basis points to 16.2% from 8.8%.
- We made \$21.0 million of discretionary principal payments on our revolving credit facility during the first quarter of 2021.
- We recognized \$1.5 million of restructuring charges in the first quarter of 2021 related to the manufacturing footprint optimization plans involving certain Europe and Asia manufacturing locations, primarily impacting our AES operating segment.
- In early February 2021, there was a fire at our UTIS manufacturing facility in Ansan, South Korea. This facility manufactures eSorba® polyurethane foams used in portable electronics and display applications. These operations will be disrupted into at least late 2021. We are currently evaluating alternative facility options. We recognized net expense

of \$1.3 million related to the financial impacts from the fire, which consisted of write-offs of fixed assets and inventory destroyed and/or damaged in the fire, professional services, costs incurred due to obligations under our manufacturing facility lease agreement, compensation and benefits for certain of our UTIS employees, partially offset by the recognition of certain anticipated insurance recoveries.

- We incurred incremental transaction costs of \$0.7 million in both the first quarter of 2021 and the first quarter of 2020 due to the COVID-19 pandemic.

Results of Operations

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

	Three Months Ended	
	March 31, 2021	March 31, 2020
Net sales	100.0 %	100.0 %
Gross margin	39.0 %	33.0 %
Selling, general and administrative expenses	18.5 %	20.3 %
Research and development expenses	3.1 %	3.9 %
Restructuring and impairment charges	0.7 %	— %
Other operating (income) expense, net	0.5 %	— %
Operating income	16.2 %	8.8 %
Equity income in unconsolidated joint ventures	1.0 %	0.6 %
Other income (expense), net	1.3 %	(0.4)%
Interest expense, net	(0.3)%	(0.6)%
Income before income tax expense	18.2 %	8.4 %
Income tax expense	4.6 %	1.7 %
Net income	<u>13.6 %</u>	<u>6.7 %</u>

Net Sales and Gross Margin

	Three Months Ended	
	March 31, 2021	March 31, 2020
<i>(Dollars in thousands)</i>		
Net sales	\$ 229,265	\$ 198,810
Gross margin	\$ 89,499	\$ 65,630
Percentage of net sales	39.0 %	33.0 %

Net sales increased by 15.3% in the first quarter of 2021 compared to the first quarter of 2020. Our AES and EMS operating segments had net sales increases of 18.5% and 10.0%, respectively. The increase in net sales was primarily due to higher net sales in the ADAS, aerospace and defense and clean energy markets in our AES operating segment and higher net sales in the EV/HEV, general industrial, consumer and automotive markets in our EMS operating segment. Net sales were favorably impacted by foreign currency impacts of \$8.2 million, or 4.1%, due to the appreciation in value of the euro and Chinese renminbi relative to the U.S. dollar.

Gross margin as a percentage of net sales increased approximately 600 basis points to 39.0% in the first quarter of 2021 compared to 33.0% in the first quarter of 2020. Gross margin in the first quarter of 2021 was favorably impacted by higher volume in our AES and EMS operating segments, favorable product mix in our EMS operating segment, favorable absorption of fixed overhead costs and favorable productivity improvements in our AES operating segment, as well as yield improvements and a lower inventory reserves provision in our EMS operating segment. This was partially offset by higher commodity costs and unfavorable product mix in our AES operating segment and higher freight expenses in our EMS operating segment.

Our UTIS net sales were only slightly impacted by the fire at our UTIS manufacturing facility in Ansan, South Korea as a result of selling our undamaged finished goods inventory during the remainder of the first quarter of 2021. In the second quarter of 2021, we expect a greater impact to our net sales due to the continued disruption to our UTIS operations.

In the first quarter of 2021, our net sales were largely unaffected by global supply chain disruptions, but we began seeing some greater impacts as we exited the quarter. In the second quarter of 2021, the lack of availability of certain raw materials,

primarily due to the weather interruptions along the U.S. Gulf Coast, will likely somewhat temper our net sales growth and gross margin.

Selling, General and Administrative Expenses

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Selling, general and administrative expenses	\$ 42,413	\$ 40,330
Percentage of net sales	18.5 %	20.3 %

Selling, general and administrative (SG&A) expenses increased 5.2% in the first quarter of 2021 from the first quarter of 2020, primarily due to a \$2.5 million increase in total compensation and benefits, a \$0.8 million increase in software expenses, a \$0.2 million increase in environmental charges and a \$0.1 million increase in recruiting/relocation/training expenses. This was partially offset by a \$1.2 million decrease in travel and entertainment expenses, a \$0.5 million decrease in other intangible assets amortization and a \$0.1 million decrease in depreciation.

The decrease in travel and entertainment and recruiting/relocation/training expenses was primarily driven by the impacts of COVID-19.

Research and Development Expenses

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Research and development expenses	\$ 7,172	\$ 7,805
Percentage of net sales	3.1 %	3.9 %

R&D expenses decreased 8.1% in the first quarter of 2021 from the first quarter of 2020 due to decreases in professional services, travel and entertainment expenses, total compensation and benefits and laboratory expenses, partially offset by an increase in depreciation. The decrease in travel and entertainment expenses was primarily driven by the impacts of COVID-19.

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

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Restructuring and impairment charges	\$ 1,506	\$ —
Other operating (income) expense, net	\$ 1,215	\$ 20

We incurred restructuring charges and related expenses associated with our manufacturing footprint optimization plans involving certain Europe and Asia manufacturing locations. We recognized \$1.5 million of restructuring charges and related expenses pertaining to these restructuring projects in the first quarter of 2021. For additional information, refer to “Note 15 – Supplemental Financial Information” to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q.

With respect to other operating (income) expense, net, we recognized expense of \$1.2 million primarily related to the financial impacts from the fire at our UTIS manufacturing facility in Ansan, South Korea in the first quarter of 2021. This impact consisted of write-offs of fixed assets and inventory destroyed and/or damaged in the fire, professional services, costs incurred due to obligations under our manufacturing facility lease agreement, compensation and benefits for certain of our UTIS employees, partially offset by the recognition of certain anticipated insurance recoveries. There may be other potential costs that cannot be reasonably foreseen or estimated at this time and we continue to evaluate information as it becomes available. For additional information, refer to “Note 15 – Supplemental Financial Information” to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q.

Equity Income in Unconsolidated Joint Ventures

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Equity income in unconsolidated joint ventures	\$ 2,181	\$ 1,218

As of March 31, 2021, 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 increased 79.1% in the first quarter of 2021 from the first quarter of 2020. On a quarter-to-date basis, the increase was due to higher net sales, driven by strong sales in the portable electronics market, and improved operational performance for both RIS and RIC, primarily due to higher utilization of production capacity.

Other Income (Expense), Net

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Other income (expense), net	\$ 2,968	\$ (786)

Other income (expense), net increased to income of \$3.0 million in the first quarter of 2021 from expense of \$0.8 million in the first quarter of 2020. On a quarter-to-date basis, the increase was due to favorable impacts from our copper derivative contracts and foreign currency transactions, partially offset by unfavorable impacts from our foreign currency derivative contracts.

Interest Expense, Net

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Interest expense, net	\$ (607)	\$ (1,207)

Interest expense, net, decreased by 49.7% in the first quarter of 2021 from the first quarter of 2020. The decrease on a quarter-to-date basis was primarily due to a lower weighted-average outstanding balance for our borrowings under our revolving credit facility. We expect interest expense, net to decrease on quarter-to-date and year-to-date bases in the second quarter of 2021 from the second quarter of 2020 primarily due to a lower weighted-average outstanding balance for our borrowings under our revolving credit facility.

Income Taxes

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Income tax expense	\$ 10,517	\$ 3,441
Effective tax rate	25.2 %	20.6 %

Our effective income tax rate was 25.2% and 20.6% for the three months ended March 31, 2021 and 2020, respectively. The increase from the first quarter of 2020 was primarily due to the decrease in the current quarter valuation allowance release and decrease in current quarter reversals of unrecognized tax benefits.

Operating Segment Net Sales and Operating Income

Advanced Electronics Solutions

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Net sales	\$ 131,892	\$ 111,274
Operating income	\$ 14,849	\$ 4,778

AES net sales increased by 18.5% in the first quarter of 2021 compared to the first quarter of 2020. The increase in net sales over the first quarter of 2020 was primarily driven by higher net sales in the ADAS, aerospace and defense and clean energy markets. Net sales were favorably impacted by foreign currency fluctuations of \$5.3 million, or 4.8%, due to the appreciation in value of the euro and Chinese renminbi relative to the U.S. dollar.

Operating income increased by 210.8% in the first quarter of 2021 from the first quarter of 2020. As a percentage of net sales, operating income in the first quarter of 2021 was 11.3%, an approximately 700 basis point increase as compared to the 4.3% reported in the first quarter of 2020. The increase in operating income was primarily due to higher volume, favorable absorption of fixed overhead costs and favorable productivity improvements. This was partially offset by higher commodity costs and unfavorable product mix.

Additionally, we incurred restructuring charges and related expenses associated with our manufacturing footprint optimization plans involving certain Europe and Asia manufacturing locations. We recognized \$1.5 million of restructuring charges and related expenses pertaining to these restructuring projects in the first quarter of 2021. For additional information, refer to “Note 15 – Supplemental Financial Information” to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q.

In the first quarter of 2021, our net sales were largely unaffected by global supply chain disruptions, but we began seeing some greater impacts as we exited the quarter. In the second quarter of 2021, the lack of availability of certain raw materials, primarily due to the weather interruptions along the U.S. Gulf Coast, will likely somewhat temper our net sales growth and gross margin.

Elastomeric Material Solutions

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Net sales	\$ 91,849	\$ 83,526
Operating income	\$ 20,077	\$ 11,517

EMS net sales increased by 10.0% in the first quarter of 2021 compared to the first quarter of 2020. The increase in net sales over the first quarter of 2020 was primarily driven by higher net sales in the EV/HEV, general industrial, consumer and automotive markets, partially offset by lower net sales in the mass transit market. Net sales were favorably impacted by foreign currency fluctuations of \$2.7 million, or 3.3%, due to the appreciation in value of the Chinese renminbi and euro relative to the U.S. dollar.

Operating income increased by 74.3% in the first quarter of 2021 from the first quarter of 2020. As a percentage of net sales, first quarter of 2021 operating income was 21.9%, an approximately 810 basis point increase as compared to the 13.8% reported in the first quarter of 2020. The increase in operating income was primarily due to higher volume, yield improvements and a lower inventory reserves provision. This was partially offset by higher freight expenses.

Additionally, we recognized expense of \$1.3 million primarily related to the financial impacts from the fire at our UTIS manufacturing facility in Ansan, South Korea in the first quarter of 2021. This impact consisted of write-offs of fixed assets and inventory destroyed and/or damaged in the fire, professional services, costs incurred due to obligations under our manufacturing facility lease agreement, compensation and benefits for certain of our UTIS employees, partially offset by the recognition of certain anticipated insurance recoveries. There may be other potential costs that cannot be reasonably foreseen or estimated at this time and we continue to evaluate information as it becomes available. For additional information, refer to “Note 15 – Supplemental Financial Information” to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q.

Our UTIS net sales were only slightly impacted by the fire at our UTIS manufacturing facility in Ansan, South Korea as a result of selling our undamaged finished goods inventory during the remainder of the first quarter of 2021. In the second quarter of 2021, we expect a greater impact to our net sales due to the continued disruption to our UTIS operations.

In the first quarter of 2021, our net sales were largely unaffected by global supply chain disruptions, but we began seeing some greater impacts as we exited the quarter. In the second quarter of 2021, the lack of availability of certain raw materials, primarily due to the weather interruptions along the U.S. Gulf Coast, will likely somewhat temper our net sales growth and gross margin.

Other

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
Net sales	\$ 5,524	\$ 4,010
Operating income	\$ 2,267	\$ 1,180

Net sales in this segment increased by 37.8% in the first quarter of 2021 from the first quarter of 2020. The increase in net sales over the first quarter of 2020 was primarily driven by higher demand in the automotive market. Net sales were favorably impacted by foreign currency fluctuations of \$0.2 million, or 4.4%, due to the appreciation in value of the Chinese renminbi relative to the U.S. dollar.

Operating income increased 92.1% in the first quarter of 2021 compared to the first quarter of 2020. The increase in operating income was primarily driven by higher volume, favorable product mix and favorable absorption of fixed overhead costs.

As a percentage of net sales, first quarter of 2021 operating income was 41.0%, a 1,160 basis point increase as compared to the 29.4% reported in the first quarter of 2020.

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:

<i>(Dollars in thousands)</i>	March 31, 2021	December 31, 2020
United States	\$ 28,692	\$ 21,657
Europe	51,834	55,449
Asia	118,583	114,679
Total cash and cash equivalents	\$ 199,109	\$ 191,785

Approximately \$170.4 million of our cash and cash equivalents were held by non-U.S. subsidiaries as of March 31, 2021. We did not make any changes in the three months ended March 31, 2021 to our position on the permanent reinvestment of our 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.

<i>(Dollars in thousands)</i>	March 31, 2021	December 31, 2020
<i>Key Financial Position Accounts:</i>		
Cash and cash equivalents	\$ 199,109	\$ 191,785
Accounts receivable, net	\$ 144,049	\$ 134,421
Inventories	\$ 106,706	\$ 102,360
Borrowings under revolving credit facility	\$ 4,000	\$ 25,000

Changes in key financial position accounts and other significant changes in our statements of financial position from December 31, 2020 to March 31, 2021 were as follows:

- Accounts receivable, net increased 7.2% to \$144.0 million as of March 31, 2021 from \$134.4 million as of December 31, 2020. The increase from year-end was primarily due to higher net sales at the end of the first quarter of 2021 compared to at the end of 2020.
- Inventories increased 4.2% to \$106.7 million as of March 31, 2021, from \$102.4 million as of December 31, 2020, primarily driven by the ramp up of raw material purchases and production efforts to meet anticipated demand.
- Borrowings under revolving credit facility decreased 84.0% to \$4.0 million as of March 31, 2021, from \$25.0 million as of December 31, 2020. This was as a result of \$21.0 million of discretionary principal payments on our revolving credit facility during the first quarter of 2021. For additional information regarding this facility and the Fourth Amended Credit Agreement, refer to “Note 9 – Debt” to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q.

<i>(Dollars in thousands)</i>	Three Months Ended	
	March 31, 2021	March 31, 2020
<i>Key Cash Flow Measures:</i>		
Net cash provided by operating activities	\$ 36,521	\$ 8,633
Net cash used in investing activities	\$ (3,602)	\$ (11,160)
Net cash (used in) provided by financing activities	\$ (23,181)	\$ 145,571

As of March 31, 2021, cash and cash equivalents were \$199.1 million as compared to \$191.8 million as of December 31, 2020, an increase of \$7.3 million, or 3.8%. This increase was primarily due to cash flows generated by operations, partially offset by \$21.0 million of discretionary principal payments on our revolving credit facility during the first quarter of 2021, \$3.6 million in capital expenditures and \$2.6 million in tax payments related to net share settlement of equity awards.

In 2021, we continue to expect capital spending to be in the range of approximately \$70.0 million to \$80.0 million, which we plan to fund with cash from operations. This range excludes the capital expenditures necessary to restore the UTIS operations, a significant portion of which we expect to be reimbursed by insurance proceeds.

Restrictions on Payment of Dividends

The Fourth 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 total net leverage ratio does not exceed 2.75 to 1.00. If our total net leverage ratio exceeds 2.75 to 1.00, we may nonetheless make up to \$20.0 million in restricted payments, including cash dividends, during each fiscal year, provided that no default or event of default has occurred and is continuing or would result from the payments. Our total net leverage ratio did not exceed 2.75 to 1.00 as of March 31, 2021.

Contingencies

During the first quarter of 2021, 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 12 – 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 March 31, 2021, 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

There were no material changes in our critical accounting policies during the first quarter of 2021.

Recent Accounting Pronouncements

Refer to “Note 16 – 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 first quarter of 2021. 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 March 31, 2021. 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 March 31, 2021.

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 12 – 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.](#)
- 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 March 31, 2021 formatted in iXBRL (Inline Extensible Business Reporting Language): (i) Condensed Consolidated Statements of Operations for the three months ended March 31, 2021 and March 31, 2020, (ii) Condensed Consolidated Statements of Comprehensive Income (Loss) for the three months ended March 31, 2021 and March 31, 2020, (iii) Condensed Consolidated Statements of Financial Position as of March 31, 2021 and March 31, 2020, (iv) Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2021 and March 31, 2020, (v) Condensed Consolidated Statements of Shareholders’ Equity for the three months ended March 31, 2021 and March 31, 2020, (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 March 31, 2021, 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: April 29, 2021