

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended: March 31, 2019

OR

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

For the transition period from _____ to _____

Commission File Number: 0-11412

AMTECH SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

Arizona

86-0411215

(State or other jurisdiction of
incorporation or organization)

(I.R.S. Employer
Identification No.)

131 South Clark Drive, Tempe, Arizona

85281

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: 480-967-5146

Indicate by a 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

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller Reporting Company

Emerging Growth Company

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

Securities registered pursuant to Section 12(b) of the Act: None.

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

Shares of Common Stock outstanding as of May 3, 2019: 14,239,957

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
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Cautionary Statement Regarding Forward-Looking Statements

Unless otherwise indicated, the terms “Amtech,” the “Company,” “we,” “us” and “our” refer to Amtech Systems, Inc. together with its subsidiaries.

Our discussion and analysis in this Quarterly Report on Form 10-Q, our Annual Report on Form 10-K, our other reports that we file with the Securities and Exchange Commission (the “SEC”), our press releases and in public statements of our officers and corporate spokespersons contain “forward-looking” statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the Private Securities Litigation Reform Act of 1995. Forward-looking statements give our current expectations or forecasts of future events. You can identify these statements by the fact that they do not relate strictly to historical or current events. We have tried, wherever possible, to identify such statements by using words such as “may,” “plan,” “anticipate,” “seek,” “will,” “expect,” “intend,” “estimate,” “believe,” “continue,” “predict,” “potential,” “project,” “should,” “would,” “likely,” “future,” “target,” “forecast,” “goal,” “observe,” and “strategy” or the negative thereof or variations thereon or similar terminology. Some factors that could cause actual results to differ materially from those anticipated include, among others, future economic conditions, including changes in the markets in which we operate; changes in demand for our services and products; difficulties in executing our Solar restructuring plan; our ability to divest of our solar operations; difficulties in successfully executing our growth initiatives; the effects of semiconductor trends on our annual goodwill impairment analysis; the effects of competition in the markets in which we operate, including the adverse impact of competitive product announcements or new entrants into our markets and transfers of resources by competitors into our markets; control of costs and expenses; risks associated with new technologies and the impact on our business; legislative, regulatory, and competitive developments in markets in which we operate; possible future claims, litigation or enforcement actions and the results of any such claim, litigation proceeding, or enforcement action; and other circumstances and risks identified in this Quarterly Report or referenced from time to time in our filings with the SEC. These and many other factors could affect Amtech’s future operating results and financial condition, and could cause actual results to differ materially from expectations based on forward-looking statements made in this document or elsewhere by Amtech or on its behalf.

You should not place undue reliance on these forward-looking statements. We cannot guarantee that any forward-looking statement will be realized, although we believe that the expectations reflected in the forward-looking statements are reasonable as of the date of this Quarterly Report. Achievement of future results is subject to events out of our control, risks, uncertainties and potentially inaccurate assumptions. The Annual Report on Form 10-K that we filed with the SEC for the year-ended September 30, 2018 listed various important factors that could affect Amtech’s future operating results and financial condition and could cause actual results to differ materially from historical results and expectations based on forward-looking statements made in this document or elsewhere by Amtech or on its behalf. These factors can be found under the heading “Item 1A. Risk Factors” in the Annual Report on Form 10-K and investors should refer to them as well as the additional risk factors identified in this Quarterly Report. Because it is not possible to predict or identify all such factors, any such list cannot be considered a complete set of all potential risks or uncertainties.

The Company undertakes no obligation to update or publicly revise any forward-looking statement whether as a result of new information, future developments or otherwise. All subsequent written or oral forward-looking statements attributable to the Company or persons acting on its behalf are expressly qualified in their entirety by this paragraph. You are advised, however, to consult any further disclosures we make on related subjects in our subsequently filed Form 10-Q and Form 8-K reports and our other filings with the SEC. As noted above, we provide a cautionary discussion of risks, uncertainties and possibly inaccurate assumptions relevant to our business under “Item 1A. Risk Factors” of the Annual Report on Form 10-K. We note these factors for investors as permitted by the Private Securities Litigation Reform Act of 1995. You should understand it is not possible to predict or identify all such factors.

PART I. FINANCIAL INFORMATION
Item 1. Condensed Consolidated Financial Statements
AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Balance Sheets
(in thousands, except share data)

	March 31, 2019	September 30, 2018
Assets	(Unaudited)	
Current Assets		
Cash and cash equivalents	\$ 47,921	\$ 45,897
Restricted cash	502	18
Accounts receivable		
Trade (less allowance for doubtful accounts of \$444 and \$454 at March 31, 2019, and September 30, 2018, respectively)	17,093	17,985
Unbilled and other	—	291
Inventories	19,272	17,835
Contract assets	107	—
Held-for-sale assets	25,977	45,322
Other current assets	2,091	2,884
Total current assets	<u>112,963</u>	<u>130,232</u>
Property, Plant and Equipment - Net	10,180	10,509
Intangible Assets - Net	1,000	1,131
Goodwill - Net	6,633	6,633
Other Assets	828	901
Total Assets	<u>\$ 131,604</u>	<u>\$ 149,406</u>
Liabilities and Shareholders' Equity		
Current Liabilities		
Accounts payable	\$ 6,128	\$ 6,867
Accrued compensation and related taxes	3,604	3,359
Accrued warranty expense	530	644
Other accrued liabilities	1,171	667
Current maturities of long-term debt	356	350
Contract liabilities	2,015	1,519
Income taxes payable	2,630	2,357
Held-for-sale liabilities	21,965	31,798
Total current liabilities	<u>38,399</u>	<u>47,561</u>
Long-Term Debt	5,361	5,542
Income Taxes Payable	3,147	3,213
Total Liabilities	46,907	56,316
Commitments and Contingencies		
Shareholders' Equity		
Preferred stock; 100,000,000 shares authorized; none issued	—	—
Common stock; \$0.01 par value; 100,000,000 shares authorized; shares issued and outstanding: 14,227,580 and 14,216,596 at March 31, 2019 and September 30, 2018, respectively	142	142
Additional paid-in capital	124,716	124,316
Accumulated other comprehensive loss	(10,760)	(9,974)
Retained deficit	(29,401)	(21,394)
Total shareholders' equity	<u>84,697</u>	<u>93,090</u>
Total Liabilities and Shareholders' Equity	<u>\$ 131,604</u>	<u>\$ 149,406</u>

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

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Operations
(Unaudited)
(in thousands, except per share data)

	Three Months Ended March 31,		Six Months Ended March 31,	
	2019	2018	2019	2018
Revenues, net of returns and allowances	\$ 20,633	\$ 21,115	\$ 43,858	\$ 48,231
Cost of sales	12,706	12,533	26,911	29,689
Gross profit	7,927	8,582	16,947	18,542
Selling, general and administrative	5,793	6,319	12,419	12,743
Research, development and engineering	713	778	1,579	1,453
Restructuring charges	173	—	1,037	—
Operating income	1,248	1,485	1,912	4,346
Income from equity method investment	—	28	—	2
Interest income (expense) and other income, net	96	(32)	262	(14)
Income from continuing operations before income taxes	1,344	1,481	2,174	4,334
Income tax provision	332	420	914	1,572
Income from continuing operations, net of tax	1,012	1,061	1,260	2,762
(Loss) income from discontinued operations, net of tax	(6,647)	1,774	(9,267)	6,525
Net (loss) income	\$ (5,635)	\$ 2,835	\$ (8,007)	\$ 9,287
(Loss) Income Per Basic Share:				
Basic income per share from continuing operations	\$ 0.07	\$ 0.07	\$ 0.09	\$ 0.19
Basic (loss) income per share from discontinued operations	\$ (0.47)	\$ 0.12	\$ (0.65)	\$ 0.44
Net (loss) income per basic share	\$ (0.40)	\$ 0.19	\$ (0.56)	\$ 0.63
(Loss) Income Per Diluted Share:				
Diluted income per share from continuing operations	\$ 0.07	\$ 0.07	\$ 0.09	\$ 0.18
Diluted (loss) income per share from discontinued operations	\$ (0.47)	\$ 0.12	\$ (0.65)	\$ 0.43
Net (loss) income per diluted share	\$ (0.40)	\$ 0.19	\$ (0.56)	\$ 0.61
Weighted average shares outstanding - basic	14,228	14,891	14,224	14,835
Weighted average shares outstanding - diluted	14,258	15,154	14,255	15,223

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

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Comprehensive (Loss) Income
(Unaudited)
(in thousands)

	Three Months Ended March 31,		Six Months Ended March 31,	
	2019	2018	2019	2018
Net (loss) income	\$ (5,635)	\$ 2,835	\$ (8,007)	\$ 9,287
Foreign currency translation adjustment	(210)	796	(786)	1,337
Comprehensive (loss) income	<u>\$ (5,845)</u>	<u>\$ 3,631</u>	<u>\$ (8,793)</u>	<u>\$ 10,624</u>

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

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Shareholders' Equity
(Unaudited)
(in thousands)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings (Accumulated Deficit)	Total Shareholders' Equity
	Shares	Par Value				
Balance at September 30, 2017	14,711	\$ 147	\$ 125,564	\$ (8,529)	\$ (26,699)	\$ 90,483
Net income	—	—	—	—	6,452	6,452
Translation adjustment	—	—	—	541	—	541
Stock compensation expense	—	—	253	—	—	253
Stock options exercised	165	2	1,198	—	—	1,200
Balance at December 31, 2017	14,876	149	127,015	(7,988)	(20,247)	98,929
Net income	—	—	—	—	2,835	2,835
Translation adjustment	—	—	—	796	—	796
Stock compensation expense	—	—	210	—	—	210
Stock options exercised	20	—	142	—	—	142
Balance at March 31, 2018	14,896	\$ 149	\$ 127,367	\$ (7,192)	\$ (17,412)	\$ 102,912
2018						
Balance at September 30, 2018	14,217	\$ 142	\$ 124,316	\$ (9,974)	\$ (21,394)	\$ 93,090
Net loss	—	—	—	—	(2,372)	(2,372)
Translation adjustment	—	—	—	(576)	—	(576)
Stock compensation expense	—	—	169	—	—	169
Stock options exercised	11	—	37	—	—	37
Balance at December 31, 2018	14,228	142	124,522	(10,550)	(23,766)	90,348
Net loss	—	—	—	—	(5,635)	(5,635)
Translation adjustment	—	—	—	(210)	—	(210)
Stock compensation expense	—	—	194	—	—	194
Stock options exercised	—	—	—	—	—	—
Balance at March 31, 2019	14,228	\$ 142	\$ 124,716	\$ (10,760)	\$ (29,401)	\$ 84,697

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

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(in thousands)

	Six Months Ended March 31,	
	2019	2018
Operating Activities		
Net (loss) income	\$ (8,007)	\$ 9,287
Adjustments to reconcile net (loss) income to net cash used in operating activities:		
Depreciation and amortization	888	916
Write-down of inventory	2,794	126
Capitalized interest	106	143
Deferred income taxes	7	(23)
Non-cash share-based compensation expense	363	463
Loss (gain) on sale of property, plant and equipment	9	(57)
Income from equity method investment	—	(2)
Provision for allowance for doubtful accounts, net	1,141	48
Changes in operating assets and liabilities:		
Accounts receivable	(1,533)	(3,642)
Inventories	(650)	1,644
Contract and other assets	10,143	(1,899)
Accounts payable	(650)	9,097
Accrued income taxes	216	(2,954)
Accrued and other liabilities	(378)	423
Contract liabilities	(7,516)	(31,085)
Net cash used in operating activities	(3,067)	(17,515)
Investing Activities		
Purchases of property, plant and equipment	(238)	(686)
Proceeds from sale of property, plant and equipment	—	68
Net cash used in investing activities	(238)	(618)
Financing Activities		
Proceeds from the exercise of stock options	37	1,340
Payments on long-term debt	(186)	(183)
Net cash (used in) provided by financing activities	(149)	1,157
Effect of Exchange Rate Changes on Cash, Cash Equivalents and Restricted Cash	(903)	1,372
Net Decrease in Cash, Cash Equivalents and Restricted Cash	(4,357)	(15,604)
Cash, Cash Equivalents and Restricted Cash, Beginning of Period*	62,496	75,761
Cash, Cash Equivalents and Restricted Cash, End of Period*	\$ 58,139	\$ 60,157

*Includes Cash, Cash Equivalents and Restricted Cash that are included in Held-For-Sale Assets on the Condensed Consolidated Balance Sheets.

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

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
THREE AND SIX MONTHS ENDED MARCH 31, 2019 AND 2018
(UNAUDITED)

1. Basis of Presentation and Significant Accounting Policies

Nature of Operations and Basis of Presentation— Amtech Systems, Inc. (the “Company,” “Amtech,” “we,” “our” or “us”) is a leading, global manufacturer of capital equipment, including thermal processing and wafer handling automation, and related consumables used in fabricating semiconductor devices, light-emitting diodes, or LEDs, silicon carbide (SiC) and silicon power chips and solar cells. We sell these products to semiconductor and solar cell manufacturers worldwide, particularly in Asia, the United States and Europe.

We serve niche markets in industries that are experiencing rapid technological advances and which historically have been very cyclical. Therefore, future profitability and growth depend on our ability to develop or acquire and market profitable new products and on our ability to adapt to cyclical trends.

In the second quarter of 2019, we began the process to divest our solar business. As such, we have classified substantially all of the Solar segment as held for sale in our Condensed Consolidated Balance Sheets and reported its results as discontinued operations in our Condensed Consolidated Statements of Operations. For additional information on the divestiture, see Note 4. For additional information on our segments, see Note 10.

The accompanying unaudited condensed consolidated financial statements have been prepared pursuant to the rules and regulations of the U.S. Securities and Exchange Commission (the “SEC”), and consequently do not include all disclosures normally required by accounting principles generally accepted in the United States of America. In the opinion of management, the accompanying unaudited interim condensed consolidated financial statements contain all adjustments necessary, all of which are of a normal and recurring nature, to present fairly our financial position, results of operations and cash flows. Certain information and note disclosures normally included in financial statements have been condensed or omitted pursuant to the rules and regulations of the SEC. These unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the fiscal year ended September 30, 2018.

Our fiscal year is from October 1 to September 30. Unless otherwise stated, references to the years 2019 and 2018 relate to the fiscal years ended September 30, 2019 and 2018, respectively.

The consolidated results of operations for the three and six months ended March 31, 2019, are not necessarily indicative of the results to be expected for the full fiscal year.

Principles of Consolidation— The consolidated financial statements include the accounts of the Company and our wholly-owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates— The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Reclassifications— Certain reclassifications have been made to prior year financial statements to conform to the current year presentation. Results for all periods presented in this report have been reclassified for discontinued operations (Note 4) and for changes to our reportable segments (Note 10). These reclassifications had no effect on the previously reported consolidated financial statements for any period.

Divestitures— Significant accounting policies associated with a decision to dispose of a business are discussed below:

Discontinued Operations— A business is classified as discontinued operations if the disposal represents a strategic shift that will have a major effect on operations or financial results and meets the criteria to be classified as held for sale or is disposed of by sale or otherwise. Significant judgments are involved in determining whether a business meets the criteria for discontinued operations reporting and the period in which these criteria are met. If a business is reported as a discontinued operation, the results of operations through the date of sale, including any gain or loss recognized on the disposition, are presented on a separate line of the Condensed Consolidated Statement of Operations. Interest on debt directly attributable to the discontinued operation is allocated to discontinued operations.

Assets Held for Sale— An asset or business is classified as held for sale when (i) management commits to a plan to sell and it is actively marketed; (ii) it is available for immediate sale and the sale is expected to be completed within one year; and (iii) it is unlikely significant changes to the plan will be made or that the plan will be withdrawn. In isolated instances, assets held for sale may exceed one year due to events or circumstances beyond our control. The assets and related liabilities are aggregated and reported on separate lines of the Condensed Consolidated Balance Sheets.

Shipping Expense— Shipping expenses of \$0.2 million in each of the three months ended March 31, 2019 and 2018, and \$0.5 million and \$0.4 million for the six months ended March 31, 2019 and 2018, respectively, are included in selling, general and administrative expenses.

Research, Development and Engineering Expense— The table below shows gross research and development expenses and grants earned, in thousands:

	Three Months Ended March 31,		Six Months Ended March 31,	
	2019	2018	2019	2018
Research, development and engineering	\$ 713	\$ 778	\$ 1,579	\$ 1,453
Grants earned	—	—	—	—
Net research, development and engineering	\$ 713	\$ 778	\$ 1,579	\$ 1,453

Concentrations of Credit Risk— Our customers consist primarily of semiconductor manufacturers worldwide, as well as the lapping and polishing marketplace. Financial instruments that potentially subject us to significant concentrations of credit risk consist principally of cash and trade accounts receivable. Credit risk is managed by performing ongoing credit evaluations of the customers' financial condition, by requiring significant deposits where appropriate, and by actively monitoring collections. Letters of credit are required of certain customers depending on the size of the order, type of customer or its creditworthiness, and country of domicile.

As of March 31, 2019, one Semiconductor segment customer individually represented 11% of accounts receivable. As of September 30, 2018, one Semiconductor customer individually represented 16% of accounts receivable.

We maintain our cash, cash equivalents and restricted cash in multiple financial institutions. Balances in the United States, which account for approximately 80% and 88% of total cash balances at our continuing operations as of March 31, 2019 and September 30, 2018, respectively, are primarily invested in U.S. Treasuries or are in financial institutions insured by the Federal Deposit Insurance Corporation ("FDIC"). The remainder of our cash is maintained with financial institutions with reputable credit ratings in the Netherlands, China, France, the United Kingdom, Singapore and Malaysia. We maintain cash in bank accounts in amounts which at times may exceed federally insured limits. We have not experienced any losses on such accounts.

Refer to Note 11 to Condensed Consolidated Financial Statements for information regarding major customers, foreign sales and revenue in other countries subject to fluctuation in foreign currency exchange rates.

Impact of Recently Issued Accounting Pronouncements

See Note 2 for information on our adoption of Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 606, Revenue from Contracts with Customers ("ASC 606"), which amends the existing accounting standards for revenue recognition. The adoption of ASC 606 did not have a material effect on our results of operations.

In November 2016, the FASB issued Accounting Standard Update ("ASU") 2016-18, "Statement of Cash Flows: Restricted Cash." The amendments address diversity in practice that exists in the classification and presentation of changes in restricted cash and require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents and amounts generally described as restricted cash or restricted cash equivalents. We adopted this standard retrospectively effective October 1, 2018, and, accordingly, to conform to the current period presentation, we reclassified our restricted cash to be included in the total of cash and cash equivalents presented at the bottom of our consolidated statements of cash flows for both the beginning and ending periods for our six months ended March 31, 2019 and 2018. As a result, the amount of the change in our net cash provided by operating activities no longer separately shows the change in restricted cash for either period.

The following table summarizes the effects related to the adoption of ASU 2016-18 for the six months ended March 31, 2018:

	March 31, 2018	
	As reported	As adjusted
Net cash used in operating activities	\$ (1,805)	\$ (17,515)
Effect of Exchange Rate Changes on Cash, Cash Equivalents and Restricted Cash	\$ 640	\$ 1,372
Net Decrease in Cash, Cash Equivalents and Restricted Cash	\$ (626)	\$ (15,604)
Cash, Cash Equivalents and Restricted Cash, Beginning of Period	\$ 51,121	\$ 75,761
Cash, Cash Equivalents and Restricted Cash, End of Period	\$ 50,495	\$ 60,157

There have been no other material changes or additions to the recently issued accounting standards other than those previously reported in Note 1 to our Consolidated Financial Statements in Part II, Item 8 of our Annual Report on Form 10-K for the year ended September 30, 2018 that affect or may affect our financial statements.

2. Contracts with Customers

We are a leading, global manufacturer of capital equipment, including thermal processing and wafer handling automation, and related consumables used in fabricating semiconductor devices, light-emitting diodes, or LEDs, silicon carbide (“SiC”) and silicon power chips. We sell these products to semiconductor manufacturers worldwide, particularly in Asia, North America and Europe. We operate in three reportable business segments, based primarily on the industry they serve: (i) Semiconductor, (ii) SiC/LED and (iii) Automation. In our Semiconductor segment, we supply thermal processing equipment, including solder reflow ovens, diffusion furnaces, and customer high-temp belt furnaces for use by semiconductor and electronics assembly manufacturers. In our SiC/LED segment, we produce substrate consumables and machinery for lapping (fine abrading) and polishing of materials, such as silicon wafers for semiconductor products, sapphire wafers for LED applications, and compound substrates, like silicon carbide wafers, for power device applications. In our Automation segment, we supply solar and semiconductor automation with in-house design and manufacturing capabilities and offer a full array of single wafer transfer tools as well as batch transfer tools and stocker options.

Under ASC 606, revenue is recognized when a customer obtains control of promised goods or services in an amount that reflects the consideration expected to be received in exchange for those goods or services. A performance obligation is a promise in a contract to transfer a product or service to the customer. The transaction price of a contract is allocated to each distinct performance obligation based upon the relative standalone selling price for each performance obligation and is recognized as revenue upon satisfaction of the performance obligation.

We implemented ASC 606 as of October 1, 2018 using the modified retrospective approach with no cumulative effect adjustment recorded to the opening balance of accumulated deficit. Prior period amounts have not been restated and continue to be reported under the accounting standards in effect for those periods. Upon adoption of ASC 606, we changed our accounting policy for the installation performance obligation included in all solar system sales. Previously under ASC 605, we deferred revenue for the fair value of the installation and recognized it when earned. Under ASC 606, we will no longer record a deferral but will continue to recognize the revenue when earned. This change in policy does not result in a change in the amount of revenue recorded; instead, it removes the installation liability from our balance sheet.

To achieve the core principle of the standard, we apply the following five steps:

1) Identify the contract with the customer

A contract with a customer exists when (i) the Company enters into an enforceable contract with a customer that defines each party’s rights regarding the goods or services to be transferred and identifies the related payment terms, (ii) the contract has commercial substance, and (iii) the Company determines that collection of substantially all consideration for goods and services that are transferred is probable based on the customer’s intent and ability to pay the promised consideration.

2) Identify the performance obligations in the contract

Performance obligations promised in a contract are identified based on the goods and services that will be transferred to the customer that are both capable of being distinct, whereby the customer can benefit from the good or service either on its own or together with other available resources, and are distinct in the context of the contract, whereby the transfer of the good or service

is separately identifiable from other promises to the customer in the contract. To the extent a contract includes multiple promised goods and services, the Company must apply judgment to determine whether promised goods and services are capable of being distinct and distinct in the context of the contract. If these criteria are not met, the promised goods and services are accounted for as a combined performance obligation.

Our equipment sales consist of multiple performance obligations, including the system itself and obligations that are not delivered simultaneously with the system, primarily installation services. Customers who purchase new systems are provided an assurance-type warranty, generally for periods of 12 to 24 months. In accordance with ASC 606, assurance-type warranties are not considered a performance obligation.

3) Determine the transaction price

The transaction price is determined based on the consideration to which the Company will be entitled in exchange for transferring goods and services to the customer. The transaction price for equipment sales is adjusted for estimated product returns that we expect to occur under our return policy based upon past return rates, which have historically been immaterial. In rare cases when the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price utilizing either the expected value method or the most likely amount method depending on the nature of the variable consideration. Any estimates, including the effect of the constraint on variable consideration, are evaluated at each reporting period for any changes.

The transaction price for all transactions is based on the price reflected in the individual customer's purchase order. Variable consideration has not been identified as a significant component of the transaction price for any of our transactions.

The Company has determined that most contracts will be completed in less than one year. For those transactions where all performance obligations will be satisfied within one year or less, the Company is applying the practical expedient outlined in ASC 606-10-32-18. This practical expedient allows the Company not to adjust promised consideration for the effects of a significant financing component if the Company expects at contract inception the period between when the Company transfers the promised good or service to a customer and when the customer pays for that good or service will be one year or less. For those transactions that are expected to be completed after one year, the Company has assessed that there are no significant financing components because any difference between the promised consideration and the cash selling price of the good or service is for reasons other than the provision of financing.

4) Allocate the transaction price to performance obligations in the contract

If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. Contracts that contain multiple distinct performance obligations require an allocation of the transaction price to each distinct performance obligation on a relative standalone selling price basis unless the transaction price is variable and meets the criteria to be allocated entirely to each distinct performance obligation or to a distinct service that forms part of a single performance obligation.

Where required, the Company determines the standalone selling price ("SSP") for each performance obligation based on consideration of both market and Company specific factors, including the selling price and profit margin for similar products.

For those contracts that contain multiple performance obligations (primarily system sales requiring installation services), the Company must determine the SSP. To determine the SSP for labor related performance obligations (such as the labor component of installation), the Company used directly observable inputs based on the standalone sale prices for these services. The Company used a cost plus margin approach in determining the SSP for any materials related performance obligations (e.g., system add-ons, spare parts, and systems).

5) Recognize revenue when, or as, the Company satisfied a performance obligation

The Company satisfies performance obligations either over time or at a point in time. Revenue is recognized over time if either 1) the customer simultaneously receives and consumes the benefits provided by the entity's performance, 2) the entity's performance creates or enhances an asset that the customer controls as the asset is created or enhanced, or 3) the entity's performance does not create an asset with an alternative use to the entity and the entity has an enforceable right to payment for performance completed to date. If the entity does not satisfy a performance obligation over time, the related performance obligation is satisfied at a point in time by transferring the control of a promised good or service to a customer. Examples of control are using the asset to produce goods or services, enhance the value of other assets, settle liabilities, and holding or selling the asset. For over time recognition, ASC 606 requires the Company to select a single revenue recognition method for the performance obligation that faithfully depicts

the Company's performance in transferring control of the goods and services. The guidance allows entities to choose between two methods to measure progress toward complete satisfaction of a performance obligation:

Output methods - recognize revenue on the basis of direct measurements of the value to the customer of the goods or services transferred to date relative to the remaining goods or services promised under the contract (e.g., surveys of performance completed to date, appraisals of results achieved, milestones reached, time elapsed, and units of produced or units delivered); and

Input methods - recognize revenue on the basis of the entity's efforts or inputs to the satisfaction of a performance obligation (e.g., resources consumed, labor hours expended, costs incurred, or time elapsed) relative to the total expected inputs to the satisfaction of that performance obligation.

Equipment and related product revenues (e.g., furnace systems, system add-ons, machinery, consumables and spare parts) are recognized at a point in time, when they are shipped or delivered, depending on contractual terms.

For installation services, revenue is recognized at a point in time, once the installation of the tool is complete. The nature of the installation services are such that the customer does not simultaneously receive and consume the benefits provided by the entity's performance, nor does performance of installation services create or enhance an asset that the customer controls. Installation services do not create an asset with an alternative use to the entity, and the entity does not have an enforceable right to payment for performance completed to date.

Maintenance and service contracts are recognized over time. Progress in the satisfaction of these performance obligations will be measured using an input method of either time elapsed in the case of fixed period contracts, or labor hours expended, in the case of project-based contracts.

Cost to Obtain and Fulfill a Contract with a Customer

The Company recognizes an asset related to incremental costs of obtaining a contract with a customer if the Company expects to recover those costs. The Company will recognize an asset from costs incurred to fulfill a contract only if such costs relate directly to a contract that the entity can specifically identify, the costs generate or enhance resources of the Company that will be used in satisfying performance obligations in the future, and the costs are expected to be recovered. Any assets recognized related to costs to obtain or fulfill a contract are amortized to selling, general and administrative expense on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the asset relates.

In substantially all of our business transactions, we incur incremental costs to obtain contracts with customers, in the form of sales commissions. We maintain a commission program which rewards our sales representatives for system sales and our employees for system sales and other individual goals. Under ASC 606, an asset shall be amortized on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the asset relates. However, ASC 606 provides a practical expedient to allow for the recognition of commission expense when incurred if the amortization period of the asset that the entity otherwise would have recognized is one year or less. Based on the nature of the Company's contracts with customers, we have elected this practical expedient and expense all commissions as incurred based upon the expectation that the amortization period would be one year or less.

Revenue Categories used by Management

Management reviews disaggregated revenue at the operating segment level. Revenue-generating transactions vary between our operating segments due to several factors. For example, lead times vary among our operating segments and among our products. Most of the revenue for our SiC/LED segment results from the sale of consumables, rather than equipment sales. These consumables have a much shorter production period than equipment produced by our other operating segments. Due to these variations between operating segments, management determined that disaggregated revenue by segment sufficiently depicts how economic factors affect the nature, amount, timing and uncertainty of our revenue and cash flows.

Contract assets and liabilities

Contract assets consist of amounts the Company is not legally able to invoice but has completed the related performance obligation. These amounts generally arise from variances between the contractual payment terms and the transaction price assigned to the open performance obligations (e.g., the Company has recognized revenue in an amount greater than the amount that is billable under the contract). Contract assets are reflected in current assets on the consolidated balance sheets.

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Contract liabilities are reflected in current liabilities on the consolidated balance sheets as all performance obligations are expected to be satisfied within the next 2 months. Contract liabilities include customer deposits and deferred profit. Contract liabilities relate to payments invoiced or received in advance of completion of performance obligations under a contract. Contract liabilities are recognized as revenue upon the fulfillment of performance obligations. This amount relates primarily to prepayments for system sales and installation services.

Semiconductor system transactions have payment terms that generally require a payment due upon shipment of the system (80%-90% of contract price) and a final payment due upon installation or acceptance. Automation transactions have payment terms that generally require a payment due upon shipment of the system (90% of contract price), with a final payment due upon acceptance of the installation (10% of contract price).

The components of contract assets are as follows, in thousands:

	March 31, 2019
Unbilled accounts receivable	\$ 107
Contract assets	\$ 107

The components of contract liabilities are as follows, in thousands:

	March 31, 2019	September 30, 2018
Customer deposits	\$ 2,015	\$ 1,519
Contract liabilities	\$ 2,015	\$ 1,519

3. Restructuring

The Company and its Chief Executive Officer and President, Fokko Pentinga, agreed on a transition of leadership, pursuant to which Mr. Pentinga stepped down as the Chief Executive Officer, President and a director of the Company effective December 6, 2018 (the "Effective Date"). In connection with his departure, Mr. Pentinga and the Company entered into a Separation Agreement and General Release of all Claims, dated November 28, 2018 (the "Separation Agreement"). Pursuant to the Separation Agreement, Mr. Pentinga will receive the following benefits:

- a severance payment of \$864,000 in gross, less all customary and appropriate income and employment taxes;
- a payment of \$458,500 for all other amounts due him;
- all of his time-based stock options (the "Options"), became fully vested and immediately exercisable. Mr. Pentinga has the right to exercise Options with an exercise price of \$7.01 or less until December 31, 2019. The remaining Options were exercisable during the 90-day period following the Effective Date; and
- certain other benefits as set forth in the Separation Agreement.

The table below details the activity for the six months ended March 31, 2019 related to the above action as well as additional headcount reductions as we consolidated satellite offices in our Semiconductor segment and the outstanding obligations as of March 31, 2019, in thousands:

	Six Months Ended March 31, 2019
Balance at September 30, 2018	\$ —
Severance expense, net of adjustments	1,037
Cash payments	(49)
Balance at March 31, 2019	\$ 988

4. Assets Held for Sale and Discontinued Operations

We recently announced that our Board of Directors (the “Board”) determined that it was in the long-term best interest of the Company to exit the solar business segment and focus our strategic efforts on our semiconductor and silicon carbide/polishing business segments in order to more fully realize the opportunities the Company believes are presented in those areas.

The Board made its decision, effective March 28, 2019, after analyzing current market conditions and the strategic outlook for its solar segment, which operates in a highly competitive market among lower cost manufacturers, particularly in China. Historical fluctuations in the solar cell industry combined with downward pricing pressure has negatively affected the Company’s results of operations in recent years. In response, as previously disclosed in our periodic reports, we have been pursuing strategic alternatives for the continued operations of the Solar Segment, including the possibility of restructuring the Solar Segment to achieve profitability and compete more effectively. After further assessment, however (including input from management of the Solar segment and our external advisors), the Board determined that the investment required to return the solar business to profitability would be better utilized to pursue strategic opportunities in the Semiconductor and SiC/LED segments.

The anticipated divestiture of our solar business will include our Tempres and SoLayTec subsidiaries, which comprised substantially all of our Solar segment. We have adopted a plan to sell our Solar operations on or before March 31, 2020. As such, we have classified substantially all of the Solar segment as held for sale in our Condensed Consolidated Balance Sheets and reported its results as discontinued operations in our Condensed Consolidated Statements of Operations. We expect to incur one-time costs to sell the operations of approximately \$750,000, which includes \$500,000 in broker fees and \$250,000 in legal fees, although the final amount could be greater if certain timing and/or price targets are met.

Operating results of our discontinued solar operations were as follows, in thousands:

	Three Months Ended March 31,		Six Months Ended March 31,	
	2019	2018	2019	2018
Revenues, net of returns and allowances	\$ 8,153	\$ 11,668	\$ 14,381	\$ 58,163
Cost of sales	9,229	8,525	15,352	44,643
Gross (loss) profit	(1,076)	3,143	(971)	13,520
Selling, general and administrative	4,082	3,159	5,677	7,315
Research, development and engineering	831	1,404	1,911	2,720
Restructuring charges	591	—	601	—
Operating (loss) income	(6,580)	(1,420)	(9,160)	3,485
Interest income (expense) and other income, net	(48)	(6)	(70)	(72)
(Loss) income from discontinued operations before income taxes	(6,628)	(1,426)	(9,230)	3,413
Income tax provision (benefit)	19	(3,200)	37	(3,112)
Net (loss) income	\$ (6,647)	\$ 1,774	\$ (9,267)	\$ 6,525

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The following table presents a summary of the solar assets and liabilities held for sale included in our Condensed Consolidated Balance Sheets, in thousands:

	March 31, 2019	September 30, 2018
Assets	(Unaudited)	
Total current assets	\$ 20,418	\$ 39,379
Property, Plant and Equipment - Net	5,559	5,943
Total assets included in the disposal group	25,977	45,322
Total current liabilities	19,545	29,380
Long-Term Debt	2,420	2,418
Total liabilities included in the disposal group	21,965	31,798
Net assets included in the disposal group	\$ 4,012	\$ 13,524

Amtech's Condensed Consolidated Statement of Cash flows combines cash flows from discontinued operations with cash flows from continuing operations within each cash flow statement category. The following table summarizes selected cash flow information for discontinued operations, in thousands:

	Six Months Ended March 31,	
	2019	2018
(Loss) income from discontinued operations, net of tax	\$ (9,267)	\$ 6,525
Depreciation and amortization	\$ 287	\$ 324
Provision for allowance for doubtful accounts, net	\$ 981	\$ 37
Purchases of property, plant and equipment	\$ 96	\$ 220

5. Earnings Per Share

Basic earnings per share ("EPS") is computed by dividing net income (loss) by the weighted average number of common shares outstanding for the period. Diluted EPS is computed similarly to basic EPS except that the denominator is increased to include the number of additional common shares that would have been outstanding if potentially dilutive common shares had been issued. In the case of a net loss, diluted earnings per share is calculated in the same manner as basic EPS.

For the three and six months ended March 31, 2019, options for 1,248,000 and 1,220,000 weighted average shares, respectively, were excluded from the diluted EPS calculations because they were anti-dilutive. For the three and six months ended March 31, 2018, options for 422,000 and 296,000 weighted average shares, respectively, were excluded from the diluted EPS calculations because they were anti-dilutive. These shares could become dilutive in the future.

A reconciliation of the denominators of the basic and diluted EPS calculations follows (in thousands, except per share amounts):

	Three Months Ended March 31,		Six Months Ended March 31,	
	2019	2018	2019	2018
Numerator:				
Net income from continuing operations	\$ 1,012	\$ 1,061	\$ 1,260	\$ 2,762
Net (loss) income from discontinued operations	\$ (6,647)	\$ 1,774	\$ (9,267)	\$ 6,525
Net (loss) income	<u>\$ (5,635)</u>	<u>\$ 2,835</u>	<u>\$ (8,007)</u>	<u>\$ 9,287</u>
Denominator:				
Weighted-average shares used to compute basic EPS	14,228	14,891	14,224	14,835
Common stock equivalents (1)	30	263	31	388
Weighted-average shares used to compute diluted EPS	<u>14,258</u>	<u>15,154</u>	<u>14,255</u>	<u>15,223</u>
Basic income per share from continuing operations	\$ 0.07	\$ 0.07	\$ 0.09	\$ 0.19
Basic (loss) income per share from discontinued operations	\$ (0.47)	\$ 0.12	\$ (0.65)	\$ 0.44
Net (loss) income per basic share	<u>\$ (0.40)</u>	<u>\$ 0.19</u>	<u>\$ (0.56)</u>	<u>\$ 0.63</u>
Diluted income per share from continuing operations	\$ 0.07	\$ 0.07	\$ 0.09	\$ 0.18
Diluted (loss) income per share from discontinued operations	\$ (0.47)	\$ 0.12	\$ (0.65)	\$ 0.43
Net (loss) income per diluted share	<u>\$ (0.40)</u>	<u>\$ 0.19</u>	<u>\$ (0.56)</u>	<u>\$ 0.61</u>

(1) The number of common stock equivalents is calculated using the treasury method and the average market price during the period.

6. Inventory

The components of inventories are as follows, in thousands:

	March 31, 2019	September 30, 2018
Purchased parts and raw materials	\$ 11,902	\$ 10,989

Work-in-process	4,449	4,159
Finished goods	2,921	2,687
	<u>\$ 19,272</u>	<u>\$ 17,835</u>

7. Equity and Stock-Based Compensation

Stock-based compensation expense was \$0.2 million in both the three months ended March 31, 2019 and 2018, and was \$0.4 million and \$0.5 million in the six months ended March 31, 2019 and 2018, respectively. Stock-based compensation expense is included in selling, general and administrative expenses.

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The following table summarizes our stock option activity during these six months ended March 31, 2019:

	Options	Weighted Average Exercise Price
Outstanding at beginning of period	1,248,758	\$ 7.69
Granted	198,850	5.35
Exercised	(11,086)	3.35
Forfeited	(258,930)	9.02
Outstanding at end of period	<u>1,177,592</u>	\$ 7.04
Exercisable at end of period	<u>914,159</u>	\$ 7.50
Weighted average fair value of options granted during the period	\$ 3.08	

As a result of the Separation Agreement entered into with the Company's former Chief Executive Officer and President (see Note 3), vesting of 12,500 options was accelerated in the first quarter of 2019. Additionally, 122,500 options were unexercised at the end of the 90-day period following the Effective Date and were subsequently modified. The modification allows for an additional nine-month exercise period and resulted in approximately \$108,000 of additional stock-based compensation expense, which was recorded in the second quarter of 2019.

The fair value of options was estimated at the applicable grant date using the Black-Scholes option pricing model with the following assumptions:

	Six Months Ended March 31, 2019
Risk free interest rate	3%
Expected life	6 years
Dividend rate	0%
Volatility	60%

On November 29, 2018, we announced that the Board of Directors of Amtech Systems, Inc. (the "Board") approved a stock repurchase program, pursuant to which we may repurchase up to \$4 million of our outstanding common stock, par value \$0.01 per share, over a one-year period. Repurchases under the program will be made in open market transactions at prevailing market prices, in privately negotiated transactions, or by other means in compliance with the rules and regulations of the SEC; however, we have no obligation to repurchase shares and the timing, actual number, and value of shares to be repurchased is subject to management's discretion and will depend on the Company's stock price and other market conditions. Our Board may terminate the repurchase program at any time while it is in effect. We intend to retire any repurchased shares. There were no shares repurchased during the quarter ended March 31, 2019.

8. Income Taxes

For the three months ended March 31, 2019 and 2018, we recorded income tax expense of \$0.3 million and \$0.4 million, respectively. For the six months ended March 31, 2019 and 2018, we recorded income tax expense of \$0.9 million and \$1.6 million, respectively. The quarterly income tax provision is calculated using an estimated annual effective tax rate, based upon expected annual income, permanent items, statutory rates and planned tax strategies in the various jurisdictions in which we operate. However, losses in certain jurisdictions and discrete items are treated separately.

For the three and six months ended March 31, 2018, we recorded an income tax benefit of \$3.2 million and \$3.1 million, respectively, related to our discontinued operations. This benefit was the result of the resolution of an uncertain tax position in specific tax jurisdictions. We worked with tax experts in the local jurisdictions and in the U.S. to review the transactions and tax laws that resulted in this uncertain tax position, as well as the related interest and penalties. At the conclusion of this review, we determined that the Company is not liable for withholding taxes nor the associated interest and penalties in one of the jurisdictions. Therefore, we reversed the accrued tax, interest and penalties relating to this jurisdiction.

Deferred tax assets and liabilities reflect the tax effects of temporary differences between the carrying value of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. We record a valuation allowance if, based on the weight of available evidence, it is more likely than not that some portion or all of a deferred tax asset will not be realized. Our expectations regarding realization of our deferred tax assets is based upon the weight of all available evidence, including such factors as our recent earnings history, expected future taxable income and available tax planning strategies. We established valuation allowances on substantially all net deferred tax assets, after considering all of the available objective evidence, both positive and negative, historical and prospective, with greater weight given to historical evidence, and determined it is not more likely than not that these assets will be realized. We will continue to monitor our cumulative income and loss positions in the U.S. and foreign jurisdictions to determine whether full valuation allowances on net deferred tax assets are appropriate.

We classify all of our uncertain tax positions as income taxes payable long-term. At both March 31, 2019 and September 30, 2018, the total amount of unrecognized tax benefits was approximately \$1.2 million. Income taxes payable long-term includes other items, primarily withholding taxes that are not due until the related intercompany service fees are paid.

We classify interest and penalties related to unrecognized tax benefits as income tax expense. As of both March 31, 2019 and September 30, 2018, we had an accrual for potential interest and penalties of approximately \$0.7 million classified with income taxes payable long-term.

Amtech and one or more of our subsidiaries file income tax returns in The Netherlands, Germany, France, China and other foreign jurisdictions, as well as in the U.S. and various states in the U.S. We have not signed any agreements with the Internal Revenue Service, any state or foreign jurisdiction to the extend the statute of limitations for any fiscal year. As such, the number of open years is the number of years dictated by statute in each of the respective taxing jurisdictions, which generally is from 3 to 5 years.

9. Commitments and Contingencies

Purchase Obligations – As of March 31, 2019, we had unrecorded purchase obligations at our continuing operations in the amount of \$6.0 million compared to \$7.3 million as of September 30, 2018. These purchase obligations consist of outstanding purchase orders for goods and services. While the amount represents purchase agreements, the actual amounts to be paid may be less in the event that any agreements are renegotiated, canceled or terminated.

Legal Proceedings and Other Claims – From time to time, we are a party to claims and actions for matters arising out of our business operations. We regularly evaluate the status of the legal proceedings and other claims in which we are involved to assess whether a loss is probable or there is a reasonable possibility that a loss, or an additional loss, may have been incurred and determine if accruals are appropriate. If accruals are not appropriate, we further evaluate each legal proceeding to assess whether an estimate of possible loss or range of possible loss can be made for disclosure. Although the outcome of claims and litigation is inherently unpredictable, we believe that we have adequate provisions for any probable and estimable losses. It is possible, nevertheless, that our consolidated financial position, results of operations or liquidity could be materially and adversely affected in any particular period by the resolution of a claim or legal proceeding. Legal expenses related to defense, negotiations, settlements, rulings and advice of outside legal counsel are expensed as incurred.

In December 2018, we were notified by our customer that the turnkey contract for Phase II has been terminated. As a result, we will not perform the final installation and integration of our equipment under such contract. Final settlement of the contract is under review and discussions with such customer are ongoing. We have removed the value of this remaining work from our backlog with no material effect on financial condition and results of operations.

Employment Contracts – We have employment contracts with, and severance plans covering, certain officers and management employees under which severance payments would become payable in the event of specified terminations without cause or terminations under certain circumstances after a change in control. If severance payments under the current employment contracts or severance plans were to become payable, the severance payments would generally range from twelve to thirty-six months of salary.

10. Business Information **Segment**

After announcing the planned divestiture of our Solar segment (see Note 4), we conducted an evaluation of our organizational structure. Beginning with the second quarter of fiscal 2019, we made changes to our reportable segments. Prior period amounts have been revised to conform to the current period segment reporting structure. Our three reportable segments are as follows:

Semiconductor – We design, manufacture, sell and service thermal processing equipment and related controls for use by leading semiconductor manufacturers, and in electronics, automotive and other industries.

SiC/LED – We produce consumables and machinery for lapping (fine abrading) and polishing of materials, such as sapphire substrates, optical components, silicon wafers, numerous types of crystal materials, ceramics and metal components. We formerly referred to our SiC/LED segment as “Polishing.”

Automation – We are a leading supplier of solar and semiconductor automation with in-house design and manufacturing capabilities and offer a full array of single wafer transfer tools as well as batch transfer tools and stocker options.

Information concerning our business segments is as follows, in thousands:

	Three Months Ended March 31,		Six Months Ended March 31,	
	2019	2018	2019	2018
Net Revenues:				
Semiconductor	\$ 16,053	\$ 16,582	\$ 35,013	\$ 37,473
SiC/LED	3,273	3,603	6,256	7,126
Automation	1,307	930	2,589	3,632
	<u>\$ 20,633</u>	<u>\$ 21,115</u>	<u>\$ 43,858</u>	<u>\$ 48,231</u>
Operating income (loss):				
Semiconductor	\$ 1,732	\$ 2,257	\$ 4,477	\$ 5,261
SiC/LED	877	1,111	1,646	2,215
Automation	(116)	(483)	(340)	(36)
Non-segment related	(1,245)	(1,400)	(3,871)	(3,094)
	<u>\$ 1,248</u>	<u>\$ 1,485</u>	<u>\$ 1,912</u>	<u>\$ 4,346</u>

	March 31, 2019	September 30, 2018
Identifiable Assets:		
Semiconductor	\$ 60,362	\$ 59,744
SiC/LED	7,848	6,545
Automation	3,995	3,586
Non-segment related*	33,422	34,209
Held-for-sale assets**	25,977	45,322
	<u>\$ 131,604</u>	<u>\$ 149,406</u>

*Non-segment related assets include cash, property and other assets.

**See Note 4 for additional information on held-for-sale assets.

Goodwill and other long-lived assets

We review our long-lived assets, including goodwill, for impairment at least annually in our fourth quarter or whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Additional information on impairment testing of long-lived assets, intangible assets and goodwill can be found in Notes 1 and 5 of our Annual Report on Form 10-K for the year ended September 30, 2018.

11. Major Customers and Foreign Sales

During the six months ended March 31, 2019, one Semiconductor segment customer individually represented 11% of our net revenues. No other customer represented greater than 10% of net revenues. During the six months ended March 31, 2018, one Semiconductor segment customer individually represented 14% of our net revenues.

Our net revenues were from customers in the following geographic regions:

	Six Months Ended March 31,	
	2019	2018
United States	40 %	21 %
Other	2 %	3 %
Total North America	42 %	24 %
China	19 %	28 %
Malaysia	3 %	5 %
Taiwan	6 %	9 %
Other	7 %	5 %
Total Asia	35 %	47 %
Germany	11 %	14 %
Other	12 %	15 %
Total Europe	23 %	29 %
	100 %	100 %

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our "Condensed Consolidated Financial Statements" in Item 1 of this Quarterly Report on Form 10-Q ("Quarterly Report") and our consolidated financial statements and related notes included in Item 8, "Financial Statements and Supplementary Data" in our Annual Report on Form 10-K for the fiscal year ended September 30, 2018.

Overview

We are a leading, global manufacturer of capital equipment, including thermal processing and wafer handling automation, and related consumables used in fabricating semiconductor devices, light-emitting diodes, or LEDs, silicon carbide ("SiC") and silicon power chips and solar cells. We sell these products to semiconductor and solar cell manufacturers worldwide, particularly in Asia, the United States and Europe. We operate in three reportable business segments, based primarily on the industry they serve: (i) Semiconductor, (ii) SiC/LED and (iii) Automation. In our Semiconductor segment, we supply thermal processing equipment, including solder reflow ovens, diffusion furnaces, and customer high-temp belt furnaces for use by semiconductor and electronics assembly manufacturers. In our SiC/LED segment, we produce substrate consumables and machinery for lapping (fine abrading) and polishing of materials, such as silicon wafers for semiconductor products, sapphire wafers for LED applications, and compound substrates, like silicon carbide wafers, for power device applications. In our Automation segment, we supply semiconductor and solar automation with in-house design and manufacturing capabilities and offer a full array of single wafer transfer tools as well as batch transfer tools and stocker options.

Our semiconductor customers are primarily manufacturers of integrated circuits, O-S-D (optoelectronic, sensors and discrete) components used in analog, power and radio frequency (RF) devices and photovoltaic solar cells. The semiconductor industry is cyclical and historically has experienced fluctuations. Our revenue is impacted by these broad industry trends. Although semiconductor demand for our products may have reached its cyclical peak in our fiscal year ended September 30, 2018, we believe that continued technological advances and emerging industries, such as silicon carbide power devices, will sustain our long-term performance.

Solar Developments

We recently announced that our Board of Directors (the "Board") determined that it was in the long-term best interest of the Company to exit the solar business segment and focus our strategic efforts on our semiconductor and silicon carbide/polishing business segments in order to more fully realize the opportunities the Company believes are presented in those areas. The anticipated divestiture will include our Tempress and SoLayTec subsidiaries, which comprise substantially all of our Solar segment.

The Board made its decision after analyzing current market conditions and the strategic outlook for its solar segment, which operates in a highly competitive market among lower cost manufacturers, particularly in China. Historical fluctuations in the solar cell industry combined with downward pricing pressure has negatively affected the Company's results of operations in recent years. This pricing pressure has contributed to the losses incurred by our Solar segment and overshadowed the revenue growth and profitability of our semiconductor and silicon carbide/polishing segments. While we have and are taking actions to reduce headcount and lower our cost structure, the process involved in the Netherlands to accomplish these actions takes significant time, during which losses and cash burn are likely to continue.

As previously disclosed in our periodic reports, we have been pursuing strategic alternatives for the continued operations of the Solar segment. After further assessment, however (including input from management of the Solar segment and our advisors), the Board determined that the investment required to return the solar business to profitability would be better utilized to pursue strategic opportunities in the Semiconductor and SiC/LED segments.

We can give no assurance as to whether we will be able to secure a buyer for our solar divisions or, if we do so, it will be at a price that is favorable to us, and we may incur a loss on disposal. These divisions carry significant balances of Other Comprehensive Income, which will also affect any potential gain or loss realized on disposal. We currently do not intend to further invest in or fund Tempress or SoLayTec beyond that reflected in the assets held for sale on the balance sheet at March 31, 2019.

The portion of our Solar segment not included in discontinued operations is our Automation division, R2D Automation SAS ("R2D"). R2D has historically sold automation products to both solar and semiconductor customers. We are evaluating how and whether R2D will fit into our current semiconductor and silicon carbide/polishing strategy. However, R2D has experienced a significant decline in sales of automation to other divisions in our Solar segment. R2D has also been negatively impacted by the slowdown in the broader semiconductor industry. If we do not find a fit for R2D in our future strategy, we will have to seek other strategic alternatives, which may result in a non-cash loss on disposal.

Segment Reporting Changes

After announcing the planned divestiture of our Solar segment, we conducted an evaluation of our organizational structure. Beginning with the second quarter of fiscal 2019, we made changes to our reportable segments. Prior period amounts have been revised to conform to the current period segment reporting structure.

Results of Operations

The following table sets forth certain operational data as a percentage of net revenue for the periods indicated:

	Three Months Ended March 31,		Six Months Ended March 31,	
	2019	2018	2019	2018
Net revenue	100 %	100 %	100 %	100 %
Cost of sales	62 %	59 %	61 %	62 %
Gross margin	38 %	41 %	39 %	38 %
Selling, general and administrative	28 %	30 %	28 %	26 %
Research, development and engineering	3 %	4 %	4 %	3 %
Restructuring charges	1 %	0 %	2 %	0 %
Operating income	6 %	7 %	5 %	9 %
Income from equity method investment	0 %	0 %	0 %	0 %
Interest (expense) and other income, net	1 %	0 %	0 %	(1)%
Income from continuing operations before income taxes	7 %	7 %	5 %	8 %
Income tax provision	2 %	2 %	2 %	3 %
Income from continuing operations, net of tax	5 %	5 %	3 %	5 %
(Loss) income from discontinued operations, net of tax	(32)%	8 %	(21)%	14 %
Net (loss) income	(27)%	13 %	(18)%	19 %

In the second quarter of 2019, we began the process to divest our solar business. As such, we have classified portions of the Solar segment as held for sale in our Condensed Consolidated Balance Sheets and reported its results as discontinued operations in our Condensed Consolidated Statements of Operations for all periods presented.

Net Revenue

Net revenue consists of revenue recognized upon shipment or installation of equipment, with the exception of products using new technology, for which revenue is recognized upon customer acceptance. Spare parts sales are recognized upon shipment and service revenue is recognized upon completion of the service activity, which is generally ratable over the term of the service contract. Since the majority of our revenue is generated from large system sales, revenue and operating income can be significantly impacted by the timing of system shipments and system acceptances.

Our net revenue by operating segment was as follows (dollars in thousands):

Segment	Three Months Ended March 31,				Six Months Ended March 31,			
	2019	2018	Incr (Decr)	% Change	2019	2018	Incr (Decr)	% Change
Semiconductor	\$ 16,053	\$ 16,582	\$ (529)	(3)%	\$ 35,013	\$ 37,473	\$ (2,460)	(7)%
SiC/LED	3,273	3,603	(330)	(9)%	6,256	7,126	(870)	(12)%
Automation	1,307	930	377	41%	2,589	3,632	(1,043)	(29)%
Total net revenue	\$ 20,633	\$ 21,115	\$ (482)	(2)%	\$ 43,858	\$ 48,231	\$ (4,373)	(9)%

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Total net revenue for the quarters ended March 31, 2019 and 2018 was \$20.6 million and \$21.1 million, respectively, a decrease of approximately \$0.5 million or 2%. Revenue from the Semiconductor segment decreased 3% compared to the prior year quarter due primarily to market demand peaking in fiscal 2018 and weakness in the China consumer market, partially offset by strong demand in North America. Revenue from our SiC/LED segment decreased 9% compared to the prior year quarter due primarily to higher initial sales of a new template design in the second quarter of fiscal 2018. Revenue from the Automation segment increased 41% compared to the prior year quarter due primarily to increased solar automation shipments.

Total net revenue for the six months ended March 31, 2019 and 2018 was \$43.9 million and \$48.2 million, respectively, a decrease of approximately \$4.4 million or 9%. Revenue from the Semiconductor segment decreased 7% compared to the prior year period. This change is primarily a result of market demand peaking in fiscal 2018 and weakness in the China consumer market, partially offset by strong demand in North America. Revenue from our SiC/LED segment decreased 12% compared to the prior year period due primarily to more machine sales and higher initial sales of a new template design in the first half of fiscal 2018. Revenue from the Automation segment decreased 29% compared to the prior year period due primarily to less solar automation shipments in fiscal 2019.

Backlog and Orders

Our backlog as of March 31, 2019 and 2018 was as follows (dollars in thousands):

Segment	March 31,			
	2019	2018	Incr (Decr)	% Change
Semiconductor	\$ 17,286	\$ 26,366	\$ (9,080)	(34)%
SiC/LED	3,311	1,794	1,517	85%
Automation	1,394	2,216	(822)	(37)%
Total backlog	\$ 21,991	\$ 30,376	\$ (8,385)	(28)%

New orders booked in the three and six months ended March 31, 2019 and 2018 were as follows (dollars in thousands):

Segment	Three Months Ended March 31,				Six Months Ended March 31,			
	2019	2018	Incr (Decr)	% Change	2019	2018	Incr (Decr)	% Change
Semiconductor	\$ 15,469	\$ 19,227	\$ (3,758)	(20)%	\$ 31,563	\$ 44,519	\$ (12,956)	(29)%
SiC/LED	3,133	2,532	601	24%	6,877	7,233	(356)	(5)%
Automation	723	1,089	(366)	(34)%	1,498	1,976	(478)	(24)%
Total new orders	\$ 19,325	\$ 22,848	\$ (3,523)	(15)%	\$ 39,938	\$ 53,728	\$ (13,790)	(26)%

As of March 31, 2019, one Semiconductor customer individually accounted for 13% of our backlog. No other customer accounted for more than 10% of our backlog as of March 31, 2019. The orders included in our backlog are generally credit approved customer purchase orders believed to be firm and are generally expected to ship within the next twelve months. Because our orders are typically subject to cancellation or delay by the customer, our backlog at any particular point in time is not necessarily representative of actual sales for succeeding periods, nor is backlog any assurance that we will realize profit from completing these orders.

Gross Profit and Gross Margin

Gross profit is the difference between net revenue and cost of goods sold. Cost of goods sold consists of purchased material, labor and overhead to manufacture equipment and spare parts and the cost of service and support to customers for installation, warranty and paid service calls. Gross margin is gross profit as a percent of net revenue. Our gross profit and gross margin by operating segment were as follows (dollars in thousands):

Segment	Three Months Ended March 31,					Six Months Ended March 31,				
	2019	Gross Margin	2018	Gross Margin	Incr (Decr)	2019	Gross Margin	2018	Gross Margin	Incr (Decr)
Semiconductor	\$ 6,443	40%	\$ 7,075	43%	\$ (632)	\$ 13,933	40%	\$ 14,563	39%	\$ (630)
SiC/LED	1,262	39%	1,540	43%	(278)	2,486	40%	3,076	43%	(590)
Automation	222	17%	(33)	(4)%	255	528	20%	903	25%	(375)
Total gross profit	<u>\$ 7,927</u>	38%	<u>\$ 8,582</u>	41%	<u>\$ (655)</u>	<u>\$ 16,947</u>	39%	<u>\$ 18,542</u>	38%	<u>\$ (1,595)</u>

Gross profit for the three months ended March 31, 2019 and 2018 was \$7.9 million (38% of net revenue) and \$8.6 million (41% of net revenue), respectively, a decrease of \$0.7 million. Our gross margins can be affected by capacity utilization and the type and volume of machines and consumables sold each quarter. Gross margin on products from our Semiconductor segment decreased compared to the three months ended March 31, 2018, due primarily to a lower-margin product mix, partially offset by lower warranty expense. Gross margin on products from our SiC/LED segment decreased compared to the three months ended March 31, 2018, due primarily to a lower margin consumable product mix. Gross margin on products from our Automation segment increased from the prior year period, primarily due to improved utilization of manufacturing capacity with increased sales volumes.

Gross profit for the six months ended March 31, 2019 and 2018 was \$16.9 million (39% of net revenue) and \$18.5 million (38% of net revenue), respectively, a decrease of \$1.6 million. Gross margin on products from our Semiconductor segment increased slightly compared to the six months ended March 31, 2018, due primarily to product mix and lower warranty expense. Gross margin on products from our SiC/LED segment decreased compared to the six months ended March 31, 2018, due primarily to more machine sales and higher initial sales of a new template design in the first half of fiscal 2018. Gross margin on products from our Automation segment decreased from the prior year period, primarily due to lower solar automation shipments in fiscal 2019.

Selling, General and Administrative

Selling, general and administrative expenses ("SG&A") consists of the cost of employees, consultants and contractors, facility costs, sales commissions, shipping costs, promotional marketing expenses, legal and accounting expenses and bad debt expense.

SG&A expenses for the three months ended March 31, 2019 and 2018 were \$5.8 million and \$6.3 million, respectively. SG&A decreased compared to the prior year quarter due primarily to lower headcount, employee-related expenses and professional fees.

SG&A expenses for the six months ended March 31, 2019 and 2018 were \$12.4 million and \$12.7 million, respectively. SG&A decreased compared to the prior year period due primarily to lower headcount and employee-related expenses, partially offset by higher legal fees.

Restructuring Charges

We recorded restructuring charges of \$0.2 million and \$1.0 million in the three and six months ended March 31, 2019, respectively. The amount in the second quarter of 2019 relates to the consolidation of satellite offices in Asia. For the six months ended March 31, 2019, the amount is primarily severance expense related to the departure of our former Chief Executive Officer. There were no restructuring charges in the corresponding prior-year periods.

Research, Development and Engineering

Research, development and engineering ("RD&E") expenses consist of the cost of employees, consultants and contractors who design, engineer and develop new products and processes as well as materials and supplies used in producing prototypes. We receive governmental research and development grants which are netted against these expenses when certain conditions have been met.

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RD&E expense, net of grants earned, for the three months ended March 31, 2019 and 2018 were \$0.7 million and \$0.8 million, respectively, and \$1.6 million and \$1.5 million in the six months ended March 31, 2019 and 2018, respectively. The six month increase is due to additional spending related to a new grant received in fiscal 2019 and the development of a new product at our Semiconductor segment.

Income Taxes

For the three months ended March 31, 2019 and 2018, we recorded income tax expense of \$0.3 million and \$0.4 million, respectively. For the six months ended March 31, 2019 and 2018, we recorded income tax expense of \$0.9 million and \$1.6 million, respectively. The income tax provisions are based upon estimates of annual income, annual permanent differences and statutory tax rates in the various jurisdictions in which we operate, except that certain loss jurisdictions and discrete items are treated separately.

Generally accepted accounting principles require that a valuation allowance be established when it is “more likely than not” that all or a portion of deferred tax assets will not be realized. A review of all available positive and negative evidence needs to be considered, including a company’s performance, the market environment in which the company operates and the length of carryback and carryforward periods. According to those principles, it is difficult to conclude that a valuation allowance is not needed when the negative evidence includes cumulative losses in recent years. Therefore, in the first half of fiscal 2019, cumulative losses in the Solar segment weighed heavily in the overall assessment. As a result of the review, it was determined that it was appropriate to maintain a full valuation allowance for all net deferred tax assets in the foreign jurisdictions in which the Solar segment has operations, and for the carryforwards of U.S. net operating losses and foreign tax credits, acquired in the merger with BTU International, for which there are limitations on their utilization. We continue to monitor our cumulative income and loss positions in the U.S. and foreign jurisdictions to determine whether full valuation allowances on net deferred tax assets are appropriate.

Our future effective income tax rate depends on various factors, such as the amount of income (loss) in each tax jurisdiction, tax regulations governing each region, non-tax deductible expenses incurred as a percent of pre-tax income and the effectiveness of our tax planning strategies.

Discontinued Operations

As discussed above in the “Solar Developments” section, we recently announced that our Board determined that it was in the long-term best interest of the Company to exit the solar business segment and focus our strategic efforts on our semiconductor and silicon carbide/polishing business segments in order to more fully realize the opportunities we believe are presented in those areas. The anticipated divestiture will include our Tempres and SoLayTec subsidiaries, which comprised substantially all of our Solar segment. As such, we have classified portions of the Solar segment as held for sale in our Condensed Consolidated Balance Sheets and reported its results as discontinued operations in our Condensed Consolidated Statements of Operations.

Liquidity and Capital Resources

The following table sets forth for the periods presented certain consolidated cash flow information (in thousands):

	Six Months Ended March 31,	
	2019	2018
Net cash used in operating activities	\$ (3,067)	\$ (17,515)
Net cash used in investing activities	(238)	(618)
Net cash (used in) provided by financing activities	(149)	1,157
Effect of exchange rate changes on cash	(903)	1,372
Net decrease in cash, cash equivalents and restricted cash	(4,357)	(15,604)
Cash, cash equivalents and restricted cash, beginning of period*	62,496	75,761
Cash, cash equivalents and restricted cash, end of period*	\$ 58,139	\$ 60,157

*Includes Cash, Cash Equivalents and Restricted Cash that are included in Held-For-Sale Assets on the Condensed Consolidated Balance Sheets.

Cash and Cash Flow

The decrease in cash, cash equivalents and restricted cash during the first six months of fiscal 2019 of \$4.4 million was primarily due to cash used in operations and the effect of exchange rates on our cash balances. We maintain a portion of our cash, cash equivalents and restricted cash in Euros at our Dutch and French operations and in RMB in our Chinese operations; therefore, changes in the exchange rate have an impact on our cash balances. Our working capital was \$74.6 million as of March 31, 2019 and \$82.7 million as of September 30, 2018. The decrease in our working capital occurred primarily at our Solar divisions as a result of cash used to fund operations as well as decreases in accounts receivable and inventory due to declining orders. Our ratio of current assets to current liabilities was 2.9:1 as of March 31, 2019, and 2.7:1 as of September 30, 2018. Excluding our held-for-sale assets and liabilities, our ratio of current assets to current liabilities was 5.3:1 as of March 31, 2019, and 5.4:1 as of September 30, 2018.

The success of our growth strategy is dependent upon the availability of additional capital resources on terms satisfactory to management. Our sources of capital in the past have included the sale of equity securities, which includes common stock sold in private transactions and public offerings, long-term debt and customer deposits. There can be no assurance that we can raise such additional capital resources on satisfactory terms. We believe that our principal sources of liquidity discussed above are sufficient to support operations for at least the next twelve months. We have never paid dividends on our common stock.

Cash Flows from Operating Activities

Cash used in our operating activities was \$3.1 million for the six months ended March 31, 2019, compared to \$17.5 million for the six months ended March 31, 2018, an improvement of \$14.4 million. During the six months ended March 31, 2019, \$2.7 million was used in losses from operations adjusted for non-cash items, with an additional \$0.4 million of cash used as a result of changes in operating assets and liabilities. During the six months ended March 31, 2018, cash was primarily generated through net income adjusted for non-cash items of \$10.9 million and increases in current liabilities, such as customer deposits and accounts payable. These increases were more than offset by an increase in accounts receivable due to the high volumes of shipments during the quarter and advances made to vendors.

Cash Flows from Investing Activities

For the six months ended March 31, 2019, cash used in investing activities was \$0.2 million compared to \$0.6 million in the prior year period.

Cash Flows from Financing Activities

For the six months ended March 31, 2019, \$0.1 million of cash used in financing activities was comprised of approximately \$37,000 of proceeds received from the exercise of stock options, which was more than offset by payments on long-term debt of \$0.2 million. For the six months ended March 31, 2018, \$1.2 million of cash provided by financing activities was primarily comprised of \$1.3 million of proceeds from the exercise of stock options, partially offset by payments on long-term debt of \$0.2 million.

Off-Balance Sheet Arrangements

As of March 31, 2019, we had no off-balance sheet arrangements as defined in Item 303(a)(4) of Regulation S-K promulgated by the SEC that have or are reasonably likely to have a current or future effect on financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material to investors.

Contractual Obligations

Unrecorded purchase obligations at our continuing operations were \$6.0 million as of March 31, 2019, compared to \$7.3 million as of September 30, 2018, a decrease of \$1.3 million due primarily to the timing of inventory builds related to expected shipments in the third and fourth quarters of fiscal 2019.

There were no other material changes to the contractual obligations included in Part II, Item 7: "Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the year ended September 30, 2018.

Critical Accounting Policies

Part I, Item 2: “Management’s Discussion and Analysis of Financial Condition and Results of Operations” of this Quarterly Report discusses our condensed consolidated financial statements that have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these condensed consolidated financial statements requires us to make estimates and assumptions that affect the reported amount of assets and liabilities at the date of the condensed consolidated financial statements, the disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenue and expenses during the reporting period.

On an ongoing basis, we evaluate our estimates and judgments, including those related to revenue recognition, inventory valuation, accounts and notes receivable collectability, warranty and impairment of long-lived assets. We base our estimates and judgments on historical experience and on various other factors that we believe to be reasonable under the circumstances. The results of these estimates and judgments form the basis for making conclusions about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

A critical accounting policy is one that is both important to the presentation of our financial position and results of operations, and requires management’s most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. These uncertainties are discussed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended September 30, 2018. We believe our critical accounting policies relate to the more significant judgments and estimates used in the preparation of our consolidated financial statements.

We believe the critical accounting policies discussed in the section entitled “Item 7: Management’s Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies” in our Annual Report on Form 10-K for the fiscal year ended September 30, 2018 represent the most significant judgments and estimates used in the preparation of our consolidated financial statements. Other than the Revenue Recognition policy change disclosed in Note 2 hereto, there have been no significant changes in our critical accounting policies during the six months ended March 31, 2019.

Impact of Recently Issued Accounting Pronouncements

For discussion of the impact of recently issued accounting pronouncements, see “Part I, Item 1: Financial Information” under “Impact of Recently Issued Accounting Pronouncements.”

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As a smaller reporting company, as defined by Rule 12b-2 of the Exchange Act and in Item 10(f)(1) of Regulation S-K, we are electing scaled disclosure reporting obligations and, therefore, are not required to provide the information requested by this Item.

Item 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, including our Chief Executive Officer (“CEO”) and our Chief Financial Officer (“CFO”), has carried out an evaluation of the effectiveness of our disclosure controls and procedures as of March 31, 2019, pursuant to Exchange Act Rules 13a-15(e) and 15(d)-15(e). Disclosure controls and procedures means controls and other procedures that are designed to ensure that information required to be disclosed by the Company in the reports 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. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to management, including the principal executive and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. Based upon that evaluation, our CEO and CFO have concluded that as of such date, our disclosure controls and procedures in place were effective.

Changes in Internal Control Over Financial Reporting

There have not been any changes in the Company’s internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the first fiscal quarter to which this report relates that materially affected, or are reasonably likely to materially affect, the internal control over financial reporting of the Company.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

For discussion of legal proceedings, see Note 9 to our consolidated financial statements under “Part I, Item 1: Financial Information” under “Commitments and Contingencies” of this Quarterly Report.

Item 1A. Risk Factors

There have been no material changes to the risk factors as previously disclosed in the section entitled “Risk Factors” of our Form 10-K for the fiscal year ended September 30, 2018, except as follows:

We may not be able to find a buyer for our solar assets.

In April 2019, we announced our intent to divest all of our operations in the Netherlands, which comprise the majority of our Solar segment, as we plan to focus on our Semiconductor and SiC/LED operations. There can be no assurances that we will be able to timely complete a sale of our Solar segment or otherwise find a buyer for these assets, or, if we do complete a sale transaction, that it will be on terms acceptable to the Company. If we are unable to locate a buyer, we will have to seek other strategic alternatives, which may include an auction of our solar business assets, suspending or winding down operations or the discontinued operations may file for bankruptcy. It is not possible to predict the outcome of any suspension, winding down or bankruptcy proceeding that may be required.

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

Issuer Purchases of Equity Securities

On November 29, 2018, we announced that our Board approved a stock repurchase program, pursuant to which we may repurchase up to \$4 million of our outstanding common stock, par value \$0.01 per share, over a one-year period, commencing immediately. Repurchases under the program will be made in open market transactions at prevailing market prices, in privately negotiated transactions, or by other means in compliance with the rules and regulations of the SEC; however, we have no obligation to repurchase shares and the timing, actual number, and value of shares to be repurchased is subject to management’s discretion and will depend on the Company’s stock price and other market conditions. We may, in the sole discretion of the Board, terminate the repurchase program at any time while it is in effect. We intend to retire any repurchased shares.

During the three months ended March 31, 2019, we did not repurchase any of our equity securities nor did we sell any equity securities that were not registered under the Securities Act of 1933, as amended.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

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Item 6. Exhibits

EXHIBIT NO.	EXHIBIT DESCRIPTION	INCORPORATED BY REFERENCE				FILED HEREWITH
		FORM	FILE NO.	EXHIBIT NO.	FILING DATE	
31.1	Certification Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as Amended					X
31.2	Certification Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as Amended					X
32.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
32.2	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
101.INS	XBRL Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema Document					X
101.PRE	Taxonomy Presentation Linkbase Document					X
101.CAL	XBRL Taxonomy Calculation Linkbase Document					X
101.LAB	XBRL Taxonomy Label Linkbase Document					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					X

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.

AMTECH SYSTEMS, INC.

By /s/ Lisa D. Gibbs

Dated: May 9, 2019

Lisa D. Gibbs

Vice President and Chief Financial Officer

(Principal Financial Officer and Duly Authorized Officer)

Exhibit 31.1

AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES
CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Jong S. Whang, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Amtech Systems, Inc. (the “registrant”),
2. Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this quarterly report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this quarterly report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

By /s/ Jong S. Whang

Jong S. Whang

Executive Chairman, Chairman of the Board and Chief Executive Officer

Amtech Systems, Inc.

Date: May 9, 2019

Exhibit 31.2

AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES
CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Lisa D. Gibbs, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Amtech Systems, Inc. (the “registrant”),
2. Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this quarterly report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this quarterly report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

By /s/ Lisa D. Gibbs

Lisa D. Gibbs

Vice President and Chief Financial Officer

Amtech Systems, Inc.

Date: May 9, 2019

Exhibit 32.1

AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Amtech Systems, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jong S. Whang, Executive Chairman, Chairman of the Board and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934;
and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By /s/ Jong S. Whang

Jong S. Whang

Executive Chairman, Chairman of the Board and Chief Executive Officer

Amtech Systems, Inc.

Date: May 9, 2019

The foregoing certification is being furnished pursuant to 18 U.S.C. Section 1350. It is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and it is not to be incorporated by reference into any filing of the Company, regardless of any general incorporation language in such filing.

Exhibit 32.2

AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Amtech Systems, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Lisa D. Gibbs, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. sections 1350, as adopted pursuant to sections 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934;
and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By /s/ Lisa D. Gibbs

Lisa D. Gibbs

Vice President and Chief Financial Officer

Amtech Systems, Inc.

Date: May 9, 2019

The foregoing certification is being furnished pursuant to 18 U.S.C. Section 1350. It is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and it is not to be incorporated by reference into any filing of the Company, regardless of any general incorporation language in such filing.