

**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, 2017

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files).  Yes  No

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

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.

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 2, 2017: 13,200,510

AMTECH SYSTEMS, INC. AND SUBSIDIARIES  
TABLE OF CONTENTS

	Page
<b><u>PART I. FINANCIAL INFORMATION</u></b>	
<b><u>Item 1. Condensed Consolidated Financial Statements</u></b>	
<u>Condensed Consolidated Balance Sheets</u> <u>March 31, 2017 (Unaudited) and September 30, 2016</u>	<u>3</u>
<u>Condensed Consolidated Statements of Operations (Unaudited)</u> <u>Three and Six Months Ended March 31, 2017 and 2016</u>	<u>4</u>
<u>Condensed Consolidated Statements of Comprehensive Loss (Unaudited)</u> <u>Three and Six Months Ended March 31, 2017 and 2016</u>	<u>5</u>
<u>Condensed Consolidated Statements of Cash Flows (Unaudited) Six Months Ended March 31, 2017 and 2016</u>	<u>6</u>
<u>Notes to Condensed Consolidated Financial Statements (Unaudited)</u>	<u>7</u>
<b><u>Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations</u></b>	
<u>Cautionary Statement Regarding Forward-Looking Statements</u>	<u>19</u>
<u>Overview</u>	<u>19</u>
<u>Results of Operations</u>	<u>19</u>
<u>Liquidity and Capital Resources</u>	<u>22</u>
<u>Off-Balance Sheet Arrangements</u>	<u>23</u>
<u>Contractual Obligations</u>	<u>23</u>
<u>Critical Accounting Policies</u>	<u>23</u>
<u>Impact of Recently Issued Accounting Pronouncements</u>	<u>23</u>
<b><u>Item 3. Quantitative and Qualitative Disclosures About Market Risk</u></b>	
<b><u>Item 4. Controls and Procedures</u></b>	
<b><u>PART II. OTHER INFORMATION</u></b>	
<u>Item 1. Legal Proceedings</u>	<u>25</u>
<u>Item 1A. Risk Factors</u>	<u>25</u>
<u>Item 2. Unregistered Sales of Equity Securities and Use of Proceeds</u>	<u>26</u>
<u>Item 3. Defaults Upon Senior Securities</u>	<u>26</u>
<u>Item 4. Mine Safety Disclosures</u>	<u>26</u>
<u>Item 5. Other Information</u>	<u>27</u>
<u>Item 6. Exhibits</u>	<u>27</u>
<b><u>SIGNATURES</u></b>	<b><u>28</u></b>

**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, 2017	September 30, 2016
Assets	(Unaudited)	
<b>Current Assets</b>		
Cash and cash equivalents	\$ 38,860	\$ 27,655
Restricted cash	2,565	893
Accounts receivable		
Trade (less allowance for doubtful accounts of \$1,164 and \$3,730 at March 31, 2017, and September 30, 2016, respectively)	19,484	17,642
Unbilled and other	9,430	8,634
Inventories	20,778	23,223
Refundable income taxes	—	260
Vendor deposits	7,970	1,962
Other	2,138	2,655
Total current assets	101,225	82,924
<b>Property, Plant and Equipment - Net</b>	15,014	15,960
<b>Deferred Income Taxes - Long-Term</b>	200	200
<b>Other Assets - Long-Term</b>	1,050	1,095
<b>Investments</b>	2,942	3,032
<b>Intangible Assets - Net</b>	3,740	4,100
<b>Goodwill</b>	10,867	11,119
<b>Total Assets</b>	\$ 135,038	\$ 118,430
<b>Liabilities and Stockholders' Equity</b>		
<b>Current Liabilities</b>		
Accounts payable	\$ 16,850	\$ 15,397
Current maturities of long-term debt	860	1,134
Accrued compensation and related taxes	5,819	5,710
Accrued warranty expense	885	795
Deferred profit	5,009	4,709
Customer deposits	24,214	7,055
Other accrued liabilities	1,815	2,164
Income taxes payable	1,170	1,100
Total current liabilities	56,622	38,064
<b>Long-Term Debt</b>	9,285	9,097
<b>Income Taxes Payable - Long-Term</b>	5,770	5,930
<b>Total Liabilities</b>	71,677	53,091
<b>Commitments and Contingencies</b>		
<b>Stockholders' Equity</b>		
Preferred stock; 100,000,000 shares authorized; none issued	—	—
Common stock; \$0.01 par value; 100,000,000 shares authorized; shares issued and outstanding: 13,200,510 and 13,179,355 at March 31, 2017 and September 30, 2016, respectively	132	132
Additional paid-in capital	112,350	111,631
Accumulated other comprehensive loss	(9,430)	(8,876)
Retained deficit	(37,305)	(35,830)
Total stockholders' equity	65,747	67,057
Noncontrolling interest	(2,386)	(1,718)
Total equity	63,361	65,339
<b>Total Liabilities and Stockholders' Equity</b>	\$ 135,038	\$ 118,430

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

[Table of Contents](#)

**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,	
	2017	2016	2017	2016
Revenues, net of returns and allowances	\$ 32,944	\$ 22,483	\$ 62,079	\$ 44,557
Cost of sales	24,549	16,482	45,241	32,601
Gross profit	8,395	6,001	16,838	11,956
Selling, general and administrative	8,260	7,448	15,258	15,044
Research, development and engineering	1,535	2,160	3,163	4,447
Operating loss	(1,400)	(3,607)	(1,583)	(7,535)
Gain on sale of other assets	—	2,576	—	2,576
Income (loss) from equity method investment	52	688	(91)	671
Interest expense and other income, net	(197)	33	(116)	(169)
Loss before income taxes	(1,545)	(310)	(1,790)	(4,457)
Income tax provision	194	1,670	284	1,970
<b>Net loss</b>	<b>(1,739)</b>	<b>(1,980)</b>	<b>(2,074)</b>	<b>(6,427)</b>
Add: net loss attributable to noncontrolling interest	319	481	599	914
<b>Net loss attributable to Amtech Systems, Inc.</b>	<b>\$ (1,420)</b>	<b>\$ (1,499)</b>	<b>\$ (1,475)</b>	<b>\$ (5,513)</b>

**Loss Per Share:**

Basic loss per share attributable to Amtech shareholders	\$ (0.11)	\$ (0.11)	\$ (0.11)	\$ (0.42)
Weighted average shares outstanding	13,188	13,169	13,184	13,161
Diluted loss per share attributable to Amtech shareholders	\$ (0.11)	\$ (0.11)	\$ (0.11)	\$ (0.42)
Weighted average shares outstanding	13,188	13,169	13,184	13,161

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

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

	<b>Three Months Ended March 31,</b>		<b>Six Months Ended March 31,</b>	
	<b>2017</b>	<b>2016</b>	<b>2017</b>	<b>2016</b>
Net loss	\$ (1,739)	\$ (1,980)	\$ (2,074)	\$ (6,427)
Foreign currency translation adjustment	318	617	(623)	82
Comprehensive loss	(1,421)	(1,363)	(2,697)	(6,345)
Comprehensive loss attributable to noncontrolling interest	293	454	668	887
Comprehensive loss attributable to Amtech Systems, Inc.	<u>\$ (1,128)</u>	<u>\$ (909)</u>	<u>\$ (2,029)</u>	<u>\$ (5,458)</u>

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

[Table of Contents](#)

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

	<b>Six Months Ended March 31,</b>	
	<b>2017</b>	<b>2016</b>
<b>Operating Activities</b>		
Net loss	\$ (2,074)	\$ (6,427)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	1,255	1,529
Write-down of inventory	51	74
Capitalized interest	204	—
Deferred income taxes	24	(5)
Non-cash share based compensation expense	624	708
Loss on sale of property, plant and equipment	9	—
Gain on sale of other assets	—	(2,576)
Loss (gain) from equity method investment	91	(671)
Reversal of allowance for doubtful accounts, net of provision	(1,217)	(122)
Changes in operating assets and liabilities:		
Restricted cash	(1,703)	97
Accounts receivable	(2,002)	475
Inventories	1,840	(656)
Accrued income taxes	169	1,939
Vendor deposits and other assets	(5,557)	(120)
Accounts payable	1,823	(707)
Accrued liabilities and customer deposits	17,531	1,515
Deferred profit	520	(1,440)
Net cash provided by (used in) operating activities	<u>11,588</u>	<u>(6,387)</u>
<b>Investing Activities</b>		
Purchases of property, plant and equipment	(210)	(192)
Proceeds from sale of property, plant and equipment	34	—
Proceeds from partial sale of subsidiary	—	7,012
Proceeds from sale of other assets	—	4,884
Net cash (used in) provided by investing activities	<u>(176)</u>	<u>11,704</u>
<b>Financing Activities</b>		
Proceeds from the exercise of stock options	94	30
Payments on long-term debt	(319)	(259)
Borrowings on long-term debt	137	830
Net cash (used in) provided by financing activities	<u>(88)</u>	<u>601</u>
<b>Effect of Exchange Rate Changes on Cash and Cash Equivalents</b>	<u>(119)</u>	<u>48</u>
<b>Net Increase in Cash and Cash Equivalents</b>	<u>11,205</u>	<u>5,966</u>
<b>Cash and Cash Equivalents, Beginning of Period</b>	<u>27,655</u>	<u>25,852</u>
<b>Cash and Cash Equivalents, End of Period</b>	<u>\$ 38,860</u>	<u>\$ 31,818</u>
<b>Supplemental Cash Flow Information:</b>		
Cash paid for interest	\$ 135	\$ 176
Income tax refunds	\$ 262	\$ —
Income tax payments	\$ 78	\$ —

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, 2017 AND 2016**  
**(UNAUDITED)**

**1. Summary of Significant Accounting Policies**

**Nature of Operations and Basis of Presentation** - Amtech Systems, Inc. (the “Company”, “Amtech”, “we”, “us” or “our”) is a global manufacturer of capital equipment, atomic layer deposition (“ALD”) including thermal processing, silicon wafer handling automation, and related consumables used in fabricating solar cells, LED and semiconductor devices. We sell these products to solar cell and semiconductor 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.

The accompanying unaudited condensed consolidated financial statements have been prepared pursuant to the rules and regulations of the 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, as amended, for the fiscal year ended September 30, 2016.

The consolidated results of operations for the three and six months ended March 31, 2017, 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 its wholly-owned subsidiaries and subsidiaries in which it has a controlling interest. The Company reports noncontrolling interests in consolidated entities as a component of equity separate from the Company’s equity. The equity method of accounting is used for investments over which the Company has a significant influence but not a controlling financial interest. All material intercompany accounts 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.

**Revenue Recognition** – We review product and service sales contracts with multiple deliverables to determine if separate units of accounting are present. Where separate units of accounting exist, revenue allocated to delivered items is the lower of the relative selling price of the delivered items in the sales arrangement or the portion of the selling price that is not contingent upon performance of the service.

We recognize revenue when persuasive evidence of an arrangement exists; the product has been delivered and title has transferred, or services have been rendered; and the seller’s price to the buyer is fixed or determinable and collectability is reasonably assured. For us, this policy generally results in revenue recognition at the following points:

1. For the Company’s equipment business, transactions where legal title passes to the customer upon shipment, revenue is recognized upon shipment for those products where the customer’s defined specifications have been met with at least two similarly configured systems and processes for a comparably situated customer. Selling prices may include both equipment and services, i.e., installation and start-up services performed by our service technicians. The equipment and services are multiple deliverables. Certain equipment that has a positive track record of successful installation and customer acceptance are considered to be routine systems. Revenue recognition upon delivery of such equipment that has been routinely installed and accepted is equal to the total selling price minus the relative selling price of the undelivered services.

Where there have been installation and acceptance of more than two similarly configured items of equipment, but installation and acceptance have not become routine, recognition of revenue upon delivery of equipment is limited to the lesser of (i) the total selling price minus the relative selling price of the undelivered services or (ii) the non-contingent amount. Since we defer only those costs directly related to installation, or another unit of accounting not yet delivered, and the portion of the contract price is often considerably greater than the relative selling price of those items, our policy at times will result in deferral of profit that is disproportionate in relation to the deferred revenue. When this is the case, the gross margin recognized in one period will be lower and the gross margin reported in a subsequent period will improve.

- For products where the customer's defined specifications have not been met with at least two similarly configured systems and processes, the revenue and directly related costs are deferred at the time of shipment and later recognized at the time of customer acceptance or when this criterion has been met. On occasion, we have experienced longer than expected delays in receiving cash from certain customers pending final installation or system acceptance. If some customers refuse to pay the final payment, or otherwise delay final acceptance or installation, the deferred revenue would not be recognized, adversely affecting future cash flows and operating results.
- Sales of certain equipment, spare parts and consumables are recognized upon shipment, as there are no post shipment obligations other than standard warranties.
- Service revenue is recognized upon performance of the services requested by the customer. Revenue related to service contracts is recognized ratably over the period of the contract or in accordance with the terms of the contract, which generally coincides with the performance of the services requested by the customer.

**Deferred Profit** – Revenue deferred pursuant to our revenue recognition policy, net of the related deferred costs, if any, is recorded as deferred profit in current liabilities. The components of deferred profit are as follows:

	March 31, 2017	September 30, 2016
	(dollars in thousands)	
Deferred revenues	\$ 9,462	\$ 7,029
Deferred costs	4,453	2,320
Deferred profit	\$ 5,009	\$ 4,709

**Cash Equivalents** – We consider all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents. Cash and cash equivalents consist of amounts invested in U.S. money market funds and various U.S. and foreign bank operating and time deposit accounts.

**Restricted Cash** – Restricted cash of \$2.6 million and \$0.9 million as of March 31, 2017, and September 30, 2016, respectively, includes collateral for bank guarantees required by certain customers from whom deposits have been received in advance of shipment. Restricted cash as of March 31, 2017 and September 30, 2016 includes \$0.2 million relating our proportional responsibility, assumed in connection with the BTU International Inc. (“BTU”) acquisition, for clean-up costs at a Superfund site. Refer to Note 8 to Condensed Consolidated Financial Statements, Commitments and Contingencies, for more detail regarding our proportional liability related to the Superfund site.

**Accounts Receivable and Allowance for Doubtful Accounts** – Accounts receivable are recorded at the gross sales price of products sold to customers on trade credit terms. Accounts receivable are considered past due when payment has not been received from the customer within the normal credit terms extended to that customer. A valuation allowance is established for accounts when collection is no longer probable. Accounts are written off against the allowance when the probability of collection is remote.

**Accounts Receivable - Unbilled and Other** – Unbilled and other accounts receivable consist mainly of a contingent portion of the sales price that is not collectible until successful installation of the product. These amounts are generally billed upon final customer acceptance. Accounts receivable also includes Value-added tax receivable.

**Concentrations of Credit Risk** – Financial instruments that potentially subject us to significant concentrations of credit risk consist principally of cash and trade accounts receivable. Our customers consist of solar cell and semiconductor manufacturers worldwide, as well as the lapping and polishing marketplace. Credit risk is managed by performing ongoing credit evaluations of our customers' financial condition, by requiring significant deposits where appropriate, and by actively monitoring collections.



[Table of Contents](#)

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. Reserves for potentially uncollectible receivables are maintained based on an assessment of collectability.

We maintain our cash, cash equivalents and restricted cash in multiple financial institutions. As of March 31, 2017, approximately 46% of our total cash balances 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, France and China.

As of March 31, 2017, two customers individually represented 13% and 11% of accounts receivable. As of September 30, 2016, one customer individually represented 11% of accounts receivable.

Refer to Note 6 to Condensed Consolidated Financial Statements, Major Customers and Foreign Sales, for information regarding revenue in other countries subject to fluctuation in foreign currency exchange rates.

**Inventories** – We value our inventory at the lower of cost or net realizable value. Costs for approximately 50% of inventory is valued on an average cost basis with the remainder determined on a first-in, first-out (FIFO) basis. The components of inventories are as follows:

	<b>March 31, 2017</b>	<b>September 30, 2016</b>
	<b>(dollars in thousands)</b>	
Purchased parts and raw materials	\$ 12,407	\$ 12,435
Work-in-process	5,751	7,044
Finished goods	2,620	3,744
	<u>\$ 20,778</u>	<u>\$ 23,223</u>

**Property, Plant and Equipment** – Property, plant and equipment are recorded at cost. Maintenance and repairs are charged to expense as incurred. The cost of property retired or sold and the related accumulated depreciation are removed from the applicable accounts when disposition occurs and any gain or loss is recognized. Depreciation and amortization is computed using the straight-line method. Useful lives for equipment, machinery and leasehold improvements range from three to seven years; for furniture and fixtures from five to ten years; and for buildings from 20 to 30 years.

The following is a summary of property, plant and equipment:

	<b>March 31, 2017</b>	<b>September 30, 2016</b>
	<b>(dollars in thousands)</b>	
Land, building and leasehold improvements	\$ 17,970	\$ 18,255
Equipment and machinery	8,795	9,056
Furniture and fixtures	5,213	5,426
	31,978	32,737
Accumulated depreciation and amortization	(16,964)	(16,777)
	<u>\$ 15,014</u>	<u>\$ 15,960</u>

[Table of Contents](#)

**Goodwill** – Goodwill and intangible assets with indefinite lives are not subject to amortization, but are tested for impairment when it is determined that it is more likely than not that the fair value of a reporting unit or the indefinite-lived intangible asset is less than its carrying amount, typically at the end of the fiscal year, or more frequently if circumstances dictate.

The following is a summary of activity in goodwill:

	Solar	Semiconductor	Polishing	Total
	(dollars in thousands)			
Goodwill	\$ 6,597	\$ 5,063	\$ 728	\$ 12,388
Accumulated impairment losses	(1,269)	—	—	(1,269)
Carrying value at September 30, 2016	5,328	5,063	728	11,119
Net foreign exchange differences	(252)	—	—	(252)
Carrying value at March 31, 2017	\$ 5,076	\$ 5,063	\$ 728	\$ 10,867
Goodwill	\$ 6,277	\$ 5,063	\$ 728	\$ 12,068
Accumulated impairment losses	(1,201)	—	—	(1,201)
Carrying value at March 31, 2017	\$ 5,076	\$ 5,063	\$ 728	\$ 10,867

**Intangibles** – Intangible assets are capitalized and amortized on a straight-line basis over their useful lives if the life is determinable. If the life is not determinable, amortization is not recorded.

The following is a summary of intangibles:

	Useful Life	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
		March 31, 2017			September 30, 2016		
		(dollars in thousands)					
Customer lists	6-10 years	\$ 2,398	\$ (1,271)	\$ 1,127	\$ 2,432	\$ (1,164)	\$ 1,268
Technology	5-10 years	3,062	(1,678)	1,384	3,214	(1,678)	1,536
Trade names	10-15 years	1,444	(226)	1,218	1,455	(219)	1,236
Other	2-10 years	264	(253)	11	277	(217)	60
		\$ 7,168	\$ (3,428)	\$ 3,740	\$ 7,378	\$ (3,278)	\$ 4,100

**Long-lived assets** – Long-lived assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

**Warranty** – A limited warranty is provided free of charge, generally for periods of 12 to 24 months, for all purchases of our new products and systems. Accruals are recorded for estimated warranty costs at the time revenue is recognized. Estimates are based on past experience and take into account the nature of the products under warranty. The following is a summary of activity in accrued warranty expense:

	<b>Six Months Ended March 31,</b>	
	<b>2017</b>	<b>2016</b>
	<b>(dollars in thousands)</b>	
Beginning balance	\$ 795	\$ 793
Additions for warranties issued during the period	683	430
Reductions in the liability for payments made under the warranty	(160)	(382)
Changes related to pre-existing warranties	(414)	3
Currency translation adjustment	(19)	15
Ending balance	<u>\$ 885</u>	<u>\$ 859</u>

**Stock-Based Compensation** – We measure compensation costs relating to share-based payment transactions based upon the grant date fair value of the award. Those costs are recognized as expense over the requisite service period, which is generally the vesting period. The benefits of tax deductions in excess of recognized compensation cost are credited to additional paid-in capital and reported as cash flow from financing activities.

Stock-based compensation expense reduced our results of operations by the following amounts:

	<b>Three Months Ended March 31,</b>		<b>Six Months Ended March 31,</b>	
	<b>2017</b>	<b>2016</b>	<b>2017</b>	<b>2016</b>
	<b>(dollars in thousands)</b>		<b>(dollars in thousands)</b>	
Effect on income before income taxes (1)	\$ (305)	\$ (366)	\$ (624)	\$ (708)
Effect on income taxes	35	51	70	98
Effect on net income	<u>\$ (270)</u>	<u>\$ (315)</u>	<u>\$ (554)</u>	<u>\$ (610)</u>

(1) Stock-based compensation expense is included in selling, general and administrative expenses.

Stock options issued under the terms of our option plans have, or will have, an exercise price equal to the fair market value of the common stock at the close of trading on the NASDAQ the trading day prior to the date of the option grant and expire no later than 10 years from the date of grant, with the most recent option grant expiring in 2027. Options issued by us generally vest over six months to four years, subject to our board of directors' (the "Board") discretion pursuant to our share-based compensation plans.

[Table of Contents](#)

Stock option transactions and the options outstanding are summarized as follows:

	Six Months Ended March 31,			
	2017		2016	
	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price
Outstanding at beginning of period	1,841,567	\$ 8.15	1,627,477	\$ 9.11
Granted	145,000	5.23	350,075	5.25
Exercised	(21,155)	4.46	(9,188)	3.27
Forfeited	(67,453)	12.27	(62,116)	13.87
Outstanding at end of period	<u>1,897,959</u>	<u>\$ 7.83</u>	<u>1,906,248</u>	<u>\$ 8.29</u>
Exercisable at end of period	<u>1,357,459</u>	<u>\$ 8.32</u>	<u>1,170,018</u>	<u>\$ 9.16</u>
Weighted average fair value of options granted during the period	\$ 3.04		\$ 3.04	

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,	
	2017	2016
Risk free interest rate	2%	2%
Expected life	6 years	6 years
Dividend rate	0%	0%
Volatility	63%	63%

To estimate expected lives for this valuation, it was assumed that options will be exercised at varying schedules after becoming fully vested. Forfeitures have been estimated at the time of grant and will be revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Forfeitures were estimated based upon historical experience. Fair value computations are highly sensitive to the volatility factor assumed; the greater the volatility, the higher the computed fair value of the options granted. We use historical stock prices to determine the volatility factor.

We award restricted shares under our existing share-based compensation plans. Our restricted share awards vest in equal annual installments over a two to four year period. The total value of these awards is expensed on a ratable basis over the service period of the employees receiving the grants. The "service period" is the time during which the employees receiving grants must remain employees for the shares granted to fully vest.

Restricted stock transactions and awards outstanding are summarized as follows:

	Six Months Ended March 31,			
	2017		2016	
	Awards	Weighted Average Grant Date Fair Value	Awards	Weighted Average Grant Date Fair Value
Beginning Outstanding	—	\$ —	13,540	\$ 7.98
Released	—	—	(13,540)	7.98
Ending Outstanding	<u>—</u>	<u>\$ —</u>	<u>—</u>	<u>\$ —</u>

**Fair Value of Financial Instruments** – In accordance with the requirements of the Fair Value Measurements and Disclosures Topic of the Financial Accounting Standards Board (the “FASB”) Accounting Standards Codification (“ASC”), we group our financial assets and liabilities measured at fair value on a recurring basis in three levels, based on the markets in which the assets and liabilities are traded and the reliability of the assumptions used to determine fair value. These levels are:

Level 1 - Valuation is based upon quoted market price for identical instruments traded in active markets.

Level 2 - Valuation is based upon quoted market prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market.

Level 3 - Valuation is generated from model-based techniques that use significant assumptions not observable in the market. Valuation techniques include use of discounted cash flow models and similar techniques.

In accordance with the requirements of the Fair Value Measurements and Disclosures Topic of the FASB ASC, it is our policy to use observable inputs whenever reasonably practicable in order to minimize the use of unobservable inputs when developing fair value measurements. When available, we use quoted market prices to measure fair value. If market prices are not available, the fair value measurement is based on models that use primarily market based parameters including interest rate yield curves, option volatilities and currency rates. In certain cases, where market rate assumptions are not available, we are required to make judgments about assumptions market participants would use to estimate the fair value of a financial instrument. Changes in the underlying assumptions used, including discount rates and estimates of future cash flows, could significantly affect the results of current or future values.

*Cash, Cash Equivalents and Restricted Cash* – Included in Cash and Cash Equivalents in the Condensed Consolidated Balance Sheets are money market funds invested in treasury bills, notes and other direct obligations of the U.S. Treasury or are in financial institutions insured by the FDIC and foreign bank operating and time deposit accounts. The fair value of this cash equivalent is based on Level 1 inputs in the fair value hierarchy.

*Receivables and Payables* – The recorded amounts of these financial instruments, including accounts receivable and accounts payable, approximate their fair value because of the short maturities of these instruments. If measured at fair value in the financial statements, these financial instruments would be classified as Level 3 in the fair value hierarchy.

*Debt* – The recorded amounts of these financial instruments, including long-term debt and current maturities of long-term debt, approximate fair value and are considered Level 2 in the fair value hierarchy.

**Pensions** – We have retirement plans covering substantially all employees. The principal plans are the multiemployer defined benefit pension plans of our operations in The Netherlands and France and the plan for hourly union employees in Pennsylvania. The multiemployer plans in the United States and France are insignificant to our results of operations and financial condition. Our defined contribution plans cover substantially all of the employees in the United States. We match certain employee funds on a discretionary basis while certain subsidiaries require a minimum match to maintain their safe harbor status.

**Shipping Expense** – Shipping expenses of \$0.5 million and \$0.3 million for the three months ended March 31, 2017 and 2016, respectively, are included in selling, general and administrative expenses. Shipping expenses of \$0.9 million and \$0.8 million for the six months ended March 31, 2017 and 2016, respectively, are included in selling, general and administrative expenses.

**Research, Development and Engineering Expense** – Research, development and engineering expenses consist of the cost of employees, consultants and contractors who design, engineer and develop new products and processes; materials and supplies used in those activities; and product prototyping. We receive reimbursements through governmental research and development grants which are netted against these expenses when certain conditions have been met. The table below shows gross research and development expenses and grants earned:

	Three Months Ended		Six Months Ended	
	March 31, 2017	March 31, 2016	March 31, 2017	March 31, 2016
	(dollars in thousands)		(dollars in thousands)	
Research, development and engineering	\$ 1,943	\$ 2,525	\$ 3,773	\$ 5,139
Grants earned	(408)	(365)	(610)	(692)
Net research, development and engineering	\$ 1,535	\$ 2,160	\$ 3,163	\$ 4,447

#### Impact of Recently Issued Accounting Pronouncements

In March 2017, the FASB issued Accounting Standards Update (“ASU”) No. 2017-07, “Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost”. The update requires employers to present the service cost component of the net periodic benefit cost in the same income statement line item as other employee compensation costs arising from services rendered during the period. The other components of net benefit cost, including interest cost, expected return on plan assets, amortization of prior service cost/credit and actuarial gain/loss, and settlement and curtailment effects, are to be presented outside of any subtotal of operating income. Employers will have to disclose the line(s) used to present the other components of net periodic benefit cost, if the components are not presented separately in the income statement. ASU 2017-07 is effective for fiscal years and interim periods beginning after December 15, 2017, and early adoption is permitted. We are currently in the process of evaluating the impact of the adoption on our consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04, “Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment”. The guidance is intended to simplify the subsequent accounting for goodwill acquired in a business combination. Prior guidance required utilizing a two-step process to review goodwill for impairment. A second step was required if there was an indication that an impairment may exist, and the second step required calculating the potential impairment by comparing the implied fair value of the reporting unit’s goodwill (as if purchase accounting were performed on the testing date) with the carrying amount of the goodwill. The new guidance eliminates the second step from the goodwill impairment test. Under the new guidance, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount, and then recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value (although the loss should not exceed the total amount of goodwill allocated to the reporting unit). The guidance requires prospective adoption and will be effective for annual or interim goodwill impairment tests in fiscal years beginning after December 15, 2019. Early adoption of this guidance is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. We plan to early adopt this guidance in the fourth quarter of fiscal 2017, or with any interim impairment tests during fiscal 2017, and do not expect it to have a significant impact on our consolidated financial statements.

In November 2016, the FASB issued 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. This ASU is effective retrospectively for fiscal years and interim periods within those years beginning after December 15, 2017. We do not expect the adoption of this ASU to have a material impact on our consolidated financial statements.

In October 2016, the FASB issued ASU 2016-16, “Income Taxes: Intra-Entity Transfers of Assets Other than Inventory”. The amendments in this ASU remove the prohibition against the recognition of current and deferred income tax effects of intra-entity transfers of assets other than inventory until the asset has been sold to an outside party. The ASU is effective for fiscal years and interim periods within those years beginning after December 15, 2017. We do not expect the adoption of this ASU to have a material impact on our consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, “Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments”. These amendments provide cash flow statement classification guidance for: 1. Debt Prepayment or Debt

Extinguishment Costs; 2. Settlement of Zero-Coupon Debt Instruments or Other Debt Instruments with Coupon Interest Rates That Are Insignificant in Relation to the Effective Interest Rate of the Borrowing; 3. Contingent Consideration Payments Made after a Business Combination; 4. Proceeds from the Settlement of Insurance Claims; 5. Proceeds from the Settlement of Corporate-Owned Life Insurance Policies, including Bank-Owned Life Insurance Policies; 6. Distributions Received from Equity Method Investees; 7. Beneficial Interests in Securitization Transactions; and 8. Separately Identifiable Cash Flows and Application of the Predominance Principle. The amendments in this ASU are effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early application is permitted, including adoption in an interim period. We are currently in the process of evaluating the impact of the adoption on our consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments". ASU 2016-13 amends the impairment model to utilize an expected loss methodology in place of the currently used incurred loss methodology, which will result in the more timely recognition of losses. The new standard applies to financial assets measured at amortized cost basis, including receivables that result from revenue transactions and held-to-maturity debt securities. The new guidance will be effective for us starting in the first quarter of fiscal 2021. Early adoption is permitted starting in the first quarter of fiscal 2020. We are in the process of determining the effects the adoption will have on our consolidated financial statements as well as whether to adopt the new guidance early.

In May 2014, the FASB issued ASU No. 2014-09 regarding ASC Topic 606, "Revenue from Contracts with Customers". ASU 2014-09 provides principles for recognizing revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In August 2015, the FASB issued ASU 2015-14 to defer the effective date by one year with early adoption permitted as of the original effective date. ASU 2014-09 will be effective for Amtech's fiscal year beginning October 1, 2018 unless we elect the earlier date of October 1, 2017. In addition, the FASB issued ASU 2016-08, ASU 2016-10, ASU 2016-12 and ASU 2016-20 in March 2016, April 2016, May 2016 and December 2016, respectively, to help provide interpretive clarifications on the new guidance in ASC Topic 606. We have determined that we will not early adopt the standard and are currently assessing the impact that adopting this new accounting standard will have on our consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, "Compensation - Stock Compensation (Topic 718)". ASU 2016-09 identifies areas for simplification involving several aspects of accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, an option to recognize gross stock compensation expense with actual forfeitures recognized as they occur, as well as certain classifications on the statement of cash flows. The amendments in this ASU are effective for annual periods beginning after December 15, 2016 and for the interim periods therein. We are currently assessing the impact that adopting this new accounting standard will have on our consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)", which requires companies to generally recognize on the balance sheet operating and financing lease liabilities and corresponding right-of-use-assets. ASU 2016-02 also requires improved disclosures to help users of financial statements better understand the amount, timing and uncertainty of cash flows arising from leases. This ASU is effective for fiscal years beginning after December 15, 2018 and early application is permitted. We are currently in the process of evaluating the impact of this standard on our consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01, "Financial Instruments - Overall (Subtopic 825-10), Recognition and Measurement of Financial Assets and Financial Liabilities", which addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. This ASU is effective for fiscal years beginning after December 15, 2017 and early adoption is not permitted. We are currently evaluating the impact that the standard will have on our consolidated financial statements.

In November 2015, the FASB issued ASU 2015-17, "Balance Sheet Classification of Deferred Taxes". This ASU requires entities to classify deferred tax liabilities and assets as noncurrent in a classified statement of financial position. This ASU is effective for fiscal years beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted for all entities as of the beginning of an interim or annual reporting period. The adoption of this guidance is not expected to have a material impact on our consolidated financial statements.

In July 2015, the FASB issued ASU 2015-11, "Simplifying the Measurement of Inventory". This ASU simplifies the measurement of inventory by requiring certain inventory to be measured at the lower of cost or net realizable value. The amendments in this ASU are effective for fiscal years beginning after December 15, 2016 and for interim periods therein. We do not expect adoption of this ASU to have a material impact on our consolidated financial position and results of operations.

[Table of Contents](#)

**2. Income Taxes**

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.

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 maintain a valuation allowance with respect to certain state, federal and foreign deferred tax assets that may not be recovered. We have 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 classify all of our uncertain tax positions as income taxes payable long-term. At March 31, 2017 and September 30, 2016, the total amount of unrecognized tax benefits was approximately \$3.9 million. If recognized, these amounts would favorably impact the effective tax rate. Income taxes payable long-term primarily includes, among other items, 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 March 31, 2017 and September 30, 2016, we had an accrual for potential interest and penalties of approximately \$2.5 million and \$2.3 million, respectively, classified with income taxes payable long-term.

We and one or more of our subsidiaries file income tax returns in The Netherlands, France, China, Singapore, Malaysia, Hong Kong, and Germany, as well as in the U.S. and various states in the U.S. The Company and its subsidiaries have a number of open tax years dictated by statute in each of their respective taxing jurisdictions, but generally it is from 3 to 5 years in the jurisdictions in which we file tax returns.

**3. 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, 2017, options for 1,669,000 and 1,696,000 shares, respectively, are excluded from the diluted EPS calculations because they are anti-dilutive. For the three and six months ended March 31, 2016, options for 1,906,000 shares were excluded from the diluted EPS calculations because they were anti-dilutive. These shares could be dilutive in the future.

The following table outlines basic and diluted EPS:

	Three Months Ended March 31,		Six Months Ended March 31,	
	2017	2016	2017	2016
	(in thousands, except per share amounts)		(in thousands, except per share amounts)	
<b>Basic Loss Per Share Computation</b>				
Net loss attributable to Amtech Systems, Inc.	\$ (1,420)	\$ (1,499)	\$ (1,475)	\$ (5,513)
Weighted Average Shares Outstanding:				
Common stock	13,188	13,169	13,184	13,161
Basic loss per share attributable to Amtech shareholders	\$ (0.11)	\$ (0.11)	\$ (0.11)	\$ (0.42)
<b>Diluted Loss Per Share Computation</b>				
Net loss attributable to Amtech Systems, Inc.	\$ (1,420)	\$ (1,499)	\$ (1,475)	\$ (5,513)
Weighted Average Shares Outstanding:				
Common stock	13,188	13,169	13,184	13,161
Diluted shares	13,188	13,169	13,184	13,161
Diluted loss per share attributable to Amtech shareholders	\$ (0.11)	\$ (0.11)	\$ (0.11)	\$ (0.42)

**4. Stockholders’ Equity**

**Shareholder Rights Plan** – On December 15, 2008, Amtech and Computershare Trust Company, N.A., as Rights Agent (the “Rights Agent”), entered into an Amended and Restated Rights Agreement (the “Restated Rights Agreement”) which amended and restated the terms governing the previously authorized shareholder rights (each a “Right”) to purchase fractional shares of our Series A Participating Preferred Stock (“Series A Preferred”) currently attached to each of our outstanding Common Shares, par value \$0.01 per share (“Common Shares”). As amended, each Right entitles the registered holder to purchase from us one one-thousandth of a share of Series A Preferred at an exercise price of \$51.60 (the “Exercise Price”), subject to adjustment. The Rights will expire 10 years after issuance and will be exercisable if (a) a person or group becomes the beneficial owner of 15% or more of the Company’s common stock or (b) a person or group commences a tender or exchange offer that would result in the offeror beneficially owning 15% or more of our common stock. The Final Expiration Date (as defined in the Restated Rights Agreement) is December 14, 2018.

On October 1, 2015, we entered into a Second Amended and Restated Rights Agreement (the “Second Restated Rights Agreement”) with the Rights Agent, which expands the definition of Exempted Person to include any person that the Board, in its sole and absolute discretion, exempts from becoming an Acquiring Person under the Second Restated Rights Agreement. A Person deemed an Exempted Person under the Second Restated Rights Agreement cannot trigger any of the Rights provided therein so long as such Exempted Person complies with the terms and conditions by which the Board approved such exemption from the Restated Rights Agreement.

As previously disclosed, on October 8, 2015, we entered into a Letter Agreement (the “Agreement”) by and between Amtech and certain shareholders of Amtech who jointly file (the “Joint Filers”) under Section 13 of the Securities Exchange Act of 1934, as amended. One of the Joint Filers became a member of our Board after the Agreement was approved by the Board. The Agreement permits the Joint Filers, pursuant to the Second Restated Rights Agreement, to individually acquire shares of common stock of Amtech that would, in the aggregate, bring the Joint Filers’ collective ownership to no more than 19.9% of our issued and outstanding common stock at any time. In the event the Joint Filers’ collective ownership at any time exceeds 19.9% of our issued and outstanding shares of common stock, we are entitled to specific performance and all other remedies entitled to us at law or equity, among others. Our Board approved the Agreement and transactions contemplated thereunder, and has the sole authority to terminate the Agreement at any time.



**5. Business Segment  
Information**

Our three reportable segments are as follows:

**Solar** – We are a leading supplier of thermal processing systems, ALD, related automation, parts and services, to the solar/photovoltaic industry and also offer PECVD (plasma-enhanced chemical vapor deposition) equipment to the global solar market.

[Table of Contents](#)

**Semiconductor** - In our Semiconductor segment, we design, manufacture, sell and service thermal processing equipment and related controls and parts for use by leading semiconductor manufacturers, and in electronics, automotive and other industries.

**Polishing** - In our Polishing segment, 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.

Information concerning our business segments is as follows:

	Three Months Ended March 31,		Six Months Ended March 31,	
	2017	2016	2017	2016
(dollars in thousands)				
<b>Net Revenues:</b>				
Solar *	\$ 16,555	\$ 9,801	\$ 27,979	\$ 19,344
Semiconductor	13,443	10,507	29,146	21,206
Polishing	2,946	2,175	4,954	4,007
	<u>\$ 32,944</u>	<u>\$ 22,483</u>	<u>\$ 62,079</u>	<u>\$ 44,557</u>
<b>Operating income (loss):</b>				
Solar *	\$ (1,878)	\$ (2,266)	\$ (2,901)	\$ (4,130)
Semiconductor	1,403	(119)	3,763	(279)
Polishing	503	386	967	555
Non-segment related	(1,428)	(1,608)	(3,412)	(3,681)
	<u>\$ (1,400)</u>	<u>\$ (3,607)</u>	<u>\$ (1,583)</u>	<u>\$ (7,535)</u>

\* The financial statement of business units included in the Solar segment include some sales of equipment and parts to the semiconductor, silicon wafer and MEMS industries, comprising less than 25% of the Solar segment revenue.

	March 31,	September 30,
	2017	2016
(dollars in thousands)		
<b>Identifiable Assets:</b>		
Solar	\$ 60,610	\$ 42,962
Semiconductor	52,670	51,985
Polishing	4,783	4,819
Non-segment related	16,975	18,664
	<u>\$ 135,038</u>	<u>\$ 118,430</u>

## 6. Major Customers and Foreign Sales

During the six months ended March 31, 2017, one customer individually represented 19% of our net revenues. No other customer represented greater than 10% of net revenues. During the six months ended March 31, 2016, no customer represented greater than 10% of our net revenues.

We have operations in The Netherlands, United States, France, and China. Our net revenues were to customers in the following geographic regions:

	Six Months Ended March 31,	
	2017	2016
United States	16 %	23 %
Other	2 %	3 %
<b>Total North America</b>	<b>18 %</b>	<b>26 %</b>
China	29 %	22 %
Malaysia	18 %	15 %
Taiwan	13 %	12 %
Other	8 %	7 %
<b>Total Asia</b>	<b>68 %</b>	<b>56 %</b>
Germany	5 %	3 %
Other	9 %	15 %
<b>Total Europe</b>	<b>14 %</b>	<b>18 %</b>
	<u><b>100 %</b></u>	<u><b>100 %</b></u>

## 7. Long-Term Debt

We hold debt in the form of a mortgage note secured by our real property in Billerica, Massachusetts that has a remaining balance of \$6.4 million as of March 31, 2017. The debt has an interest rate of 4.11% through September 26, 2021, at which time the interest rate will be adjusted to a per annum fixed rate equal to the aggregate of the Federal Home Loan Board Five Year Classic Advance Rate plus two hundred forty basis points. The maturity date of the debt is September 26, 2023.

SoLayTec B.V. ("SoLayTec"), a division of our Solar segment, holds long-term debt with a remaining balance of \$3.8 million. During the six months ended March 31, 2017, SoLayTec borrowed approximately \$0.1 million. The debt has interest rates ranging from 4.5% to 12.5% and maturity dates ranging from fiscal 2017 to fiscal 2021.

## 8. Commitments and Contingencies

**Purchase Obligations** – As of March 31, 2017, we had purchase obligations in the amount of \$29.1 million compared to \$11.3 million as of September 30, 2016. 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 if any agreements are renegotiated, canceled or terminated.

**Development Projects** – In fiscal 2014, our wholly owned subsidiary, Tempres Systems, Inc. (“Tempres”), entered into an agreement with the Energy Research Centre of the Netherlands (“ECN”), a Netherlands government-sponsored research institute, for a joint research and development project. Under the terms of the agreement, Tempres sold an ion implanter (“Equipment”) to ECN for \$1.4 million. Both Tempres and ECN are performing research and development projects utilizing the Equipment at the ECN facilities. Each party to the agreement will have 100% rights to the results of the projects developed separately by the individual parties. Any results co-developed will be jointly owned. Tempres met its requirement to contribute \$1.4 million to the project in the form of installation of the equipment, acceptance testing, project meeting attendance, training, parts, and service, including keeping the equipment in good condition and repair for the first two years of the agreement prior to fiscal 2017.

**EPA Accrual** – As a result of the BTU acquisition, we assumed BTU’s proportional responsibility for clean-up costs at a Superfund site. As an equipment manufacturer, BTU generated and disposed of small quantities of solid waste that were considered hazardous under Environment Protection Agency (“EPA”) regulations. Because BTU historically used a waste disposal firm that disposed of the solid waste at a site that the EPA designated as a Superfund site, BTU was named by the EPA as one of the entities responsible for a portion of the expected clean-up costs. Based on our proportional responsibility, as negotiated with and agreed to by the EPA, our liability related to this matter is less than \$0.1 million, which is included in Other Accrued Liabilities on the Condensed Consolidated Balance Sheets as of March 31, 2017 and September 30, 2016. In accordance with the agreement, we established a letter of credit for \$0.2 million to the benefit of the EPA for potential cash payments as settlements for our proportional liability.

**Legal Proceedings** – The Company and its subsidiaries are defendants from time to time in actions for matters arising out of their business operations. We do not believe that any matters or proceedings presently pending will have a material adverse effect on our consolidated financial position, results of operations or liquidity.

As previously disclosed in our filings with the SEC, shortly after we entered into the merger agreement with BTU two separate putative stockholder class action complaints (together, the “Stockholder Actions”) were filed in the Court of Chancery of the State of Delaware (the “Delaware Court”). The first was filed on November 4, 2014 and the second on November 17, 2014, on behalf of BTU’s public stockholders, against BTU, members of the BTU board, Amtech and the special purpose merger subsidiary. The Stockholder Actions were consolidated on December 4, 2014. The complaints generally alleged that, in connection with entering into the merger agreement, the BTU board of directors breached certain fiduciary duties owed to BTU’s stockholders. The complaints sought various forms of declaratory and injunctive relief, as well as compensatory damages.

On February 18, 2016, the Delaware Court entered the Order approving the Amended Stipulation of Settlement. As a result, the Released Claims were dismissed with prejudice and without any admission of wrongdoing by any of the parties to the Stockholder Actions. Pursuant to the Amended Stipulation of Settlement, BTU, its insurer(s), or its successor(s) in interest are responsible for payment of fees and expenses in the amount of \$325,000 which were paid in full on April 1, 2016.

As described above, the Released Claims are limited solely to claims related to any disclosures (or lack thereof) to BTU’s stockholders concerning the merger and any fiduciary claims concerning the decision to enter into the merger. While we are currently unaware of any other pending or threatened litigation related to additional claims arising from the Stockholder Actions, any future claims are uncertain, so additional harm could potentially result from this litigation, which may cause us to incur substantial costs and divert management’s attention from operational matters.

## **9. Investments**

Our long-term investment consists of a 15% interest in Kingstone Technology Hong Kong Limited (“Kingstone”). We recognize our portion of net income or losses on a one-quarter lag. The carrying value of the equity method investment in Kingstone was \$2.9 million and \$3.0 million as of March 31, 2017 and September 30, 2016, respectively. For the six months ended March 31, 2017 we recognized investment loss of \$0.1 million. For the three and six months ended March 31, 2016, we recognized investment income of \$0.7 million.

## **10. Related Party Transactions**

In fiscal 2015, we deconsolidated Kingstone, reducing our ownership to 15% of Kingstone Hong Kong, the Hong Kong holding company. Upon the deconsolidation, Kingstone became a related party of the Company. At March 31, 2017 and September 30, 2016, our accounts receivable due from Kingstone were \$0.3 million, which are included in Accounts Receivable on the Condensed Consolidated Balance Sheet.

As of March 31, 2017, SoLayTec has borrowed approximately \$1.3 million from its shareholder, TNO Technostarters B.V. The loans have varying interest rates from 9.5% to 12.5% and mature in 2021.

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 and the related notes included in Item 1, “Condensed Consolidated Financial Statements” in 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, as amended, for the fiscal year ended September 30, 2016.

**Cautionary Statement Regarding Forward-Looking Statements**

Certain information contained or incorporated by reference in this Quarterly Report is forward-looking in nature. All statements included or incorporated by reference in this Quarterly Report, or made by management of Amtech Systems, Inc. and its subsidiaries (“Company”, “Amtech”, “we” or “our”), other than statements of historical fact, are hereby identified as “forward-looking statements” (as such term is defined in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). In some cases, forward-looking statements can be identified by terminology such as “may,” “will,” “should,” “would,” “expects,” “plans,” “anticipates,” “intends,” “believes,” “estimates,” “predicts,” “potential,” “continue,” or the negative of these terms or other comparable terminology. Examples of forward-looking statements include statements regarding Amtech’s future financial results, operating results, business strategies, projected costs, products under development, competitive positions and plans and objectives of the Company and its management for future operations. 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. Achievement of future results is subject to risks, uncertainties and potentially inaccurate assumptions. The Form 10-K, as amended, that we filed with the Securities and Exchange Commission for the year-ended September 30, 2016 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 “Risk Factors” in the Form 10-K, as amended, and investors should refer to them as well as the 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. Except as required by law, we undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events, or otherwise.

**Introduction**

Management’s Discussion and Analysis (“MD&A”) is intended to facilitate an understanding of our business and results of operations. MD&A consists of the following sections:

- Overview
- Results of Operations
- Liquidity and Capital Resources
- Off-Balance Sheet Arrangements
- Contractual Obligations
- Critical Accounting Policies
- Impact of Recently Issued Accounting Pronouncements

**Overview**

We operate in three reportable business segments: (i) solar, (ii) semiconductor and (iii) polishing. In our solar segment, we are a leading global supplier of thermal processing systems, including diffusion, plasma-enhanced chemical vapor deposition (“PECVD”), atomic layer deposition (“ALD”), and related automation, parts and services, to the solar/photovoltaic industry. In our semiconductor segment, we supply thermal processing equipment, including solder reflow equipment and related controls for use by leading semiconductor manufacturers, and in electronics assembly for automotive and other industries. In our polishing segment, we produce consumables and machinery for lapping (fine abrading) and polishing of materials, such as sapphire substrates, optical components, silicon wafers, numerous types of crystalline materials, ceramics and metal components.

Our customers are primarily manufacturers of solar cells and integrated circuits. The solar cell and semiconductor industries are cyclical and historically have experienced significant fluctuations. Our revenue is impacted by these broad industry trends. Since 2012, the solar cell industry has experienced a structural imbalance between supply and demand. This imbalance has increased competitive pressure on selling prices and negatively impacted our results of operations. We believe that at least several solar cell manufacturers are now producing at near practical capacity, which is consistent with recently announced cell capacity expansion plans within the industry. Our high throughput equipment platforms, technologies for higher cell efficiency, and greater knowledge of the complete cell manufacturing process have contributed significantly to our success in securing the large turnkey orders announced in January and April of 2017 from a new solar cell manufacturer in China. For individual equipment orders, we compete with Chinese equipment manufacturers that offer lower prices coupled with liberal payment terms. Thus, we are finding it more difficult to participate in the capacity expansions of those Chinese companies that already have significant experience with all facets of producing solar cells and at least some prior experience working with the local equipment vendors. While we will continue to focus on developing advanced products and technologies, we plan to seek further cost reductions to address the competition from Chinese equipment vendors.

**Results of Operations**

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

**Three Months Ended**

**Six Months Ended**

	March 31, 2017	March 31, 2016	March 31, 2017	March 31, 2016
Net revenue	100 %	100 %	100 %	100 %
Cost of sales	75 %	73 %	73 %	73 %
Gross margin	25 %	27 %	27 %	27 %
Selling, general and administrative	25 %	33 %	25 %	34 %
Research, development and engineering	5 %	10 %	5 %	10 %
Operating loss	(5)%	(16)%	(3)%	(17)%
Gain on sale of other assets	0 %	11 %	0 %	6 %
Income (loss) from equity method investment	0 %	3 %	0 %	2 %
Interest expense and other income, net	0 %	0 %	0 %	1 %
Loss before income taxes	(5)%	(2)%	(3)%	(10)%
Income taxes provision	0 %	7 %	0 %	4 %
Net loss	(5)%	(9)%	(3)%	(14)%
Add: net loss (income) attributable to noncontrolling interest	1 %	2 %	1 %	2 %
Net loss attributable to Amtech Systems, Inc.	(4)%	(7)%	(2)%	(12)%

### *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 or ratably 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 recognition of revenue based on customer acceptances.

Segment	Three Months Ended March 31,				Six Months Ended March 31,			
	2017	2016	Incr (Decr)	% Change	2017	2016	Incr (Decr)	% Change
(dollars in thousands)								
Solar	\$ 16,555	\$ 9,801	\$ 6,754	69%	\$ 27,979	\$ 19,344	\$ 8,635	45%
Semiconductor	13,443	10,507	2,936	28%	29,146	21,206	7,940	37%
Polishing	2,946	2,175	771	35%	4,954	4,007	947	24%
Total net revenue	\$ 32,944	\$ 22,483	\$ 10,461	47%	\$ 62,079	\$ 44,557	\$ 17,522	39%

Net revenue for the quarters ended March 31, 2017 and 2016 was \$32.9 million and \$22.5 million, respectively, an increase of \$10.5 million or 47%. Revenue from the solar segment increased 69% compared to the prior year quarter due primarily to a significant increase in shipments of PECVD and ALD equipment, partially offset by a net deferral of revenue in the second quarter of fiscal 2017, compared to net recognition of previously-deferred revenue in the second quarter of fiscal 2016. Revenue from the semiconductor segment increased 28% compared to the prior year quarter due primarily to shipments of thermal processing systems and diffusion furnaces. Revenue from the polishing segment increased 35% compared to the prior year quarter due primarily to increased customer demand.

Net revenue for the six months ended March 31, 2017 and 2016 was \$62.1 million and \$44.6 million, respectively, an increase of \$17.5 million or 39%. Revenue from the solar segment increased 45% compared to the first six months of 2016 due primarily to a significant increase in shipments of PECVD equipment and increases in ALD sales, partially offset by a net deferral of revenue in the first six months of fiscal 2017 compared to net recognition of previously-deferred revenue in the first six months of fiscal 2016. Revenue from the semiconductor segment increased 37% compared to the first six months of 2016 for the same reasons discussed above. Revenue from the polishing segment increased 24% compared to the first six months of 2016 primarily due to increased shipments in the second quarter as discussed above.

### **Backlog and Orders**

Our order backlog as of March 31, 2017 and 2016 was \$87.4 million and \$67.3 million, respectively, an increase of \$20.1 million or 30%. Our backlog as of March 31, 2017 includes approximately \$66.9 million of orders and deferred revenue from our solar industry customers, compared to \$51.3 million at March 31, 2016. New orders booked in the quarter ended March 31, 2017 were \$68.2 million (\$46.9 million solar) compared to \$45.0 million (\$28.0 million solar) of customer orders in the quarter ended March 31, 2016. As of March 31, 2017, one customer individually accounted for 51% of our backlog, primarily related to the n-type bi-facial turnkey order discussed in the January 24, 2017 order announcement, with which we concurrently received a large customer deposit. The large turnkey order announced in January 2017 ("Phase I") is expected to ship in the third and fourth quarters of this fiscal year. A meaningful portion of the revenue from Phase I will be deferred until installation and acceptance, which is expected in fiscal 2018. The large follow-on turnkey order announced in April 2017 ("Phase II") is not included in the backlog as of March 31, 2017 and is expected to ship in the first half of fiscal 2018, with a deferral of revenue similar to Phase I. 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. Our backlog also includes revenue deferred pursuant to our revenue recognition policy, derived from orders that have already been shipped, but which have not met the criteria for revenue recognition.

### **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.

Segment	Three Months Ended March 31,				Six Months Ended March 31,			
	2017	2016	Incr (Decr)	% Change	2017	2016	Incr (Decr)	% Change
(dollars in thousands)								
Solar	\$ 1,947	\$ 1,420	\$ 527	37%	\$ 3,558	\$ 3,168	\$ 390	12%
Semiconductor	5,628	3,882	1,746	45%	11,723	7,624	4,099	54%
Polishing	820	699	121	17%	1,557	1,164	393	34%
Total gross profit	\$ 8,395	\$ 6,001	\$ 2,394	40%	\$ 16,838	\$ 11,956	\$ 4,882	41%

Gross profit for the three months ended March 31, 2017 and 2016 was \$8.4 million (25% of net revenue) and \$6.0 million (27% of net revenue), respectively, an increase of \$2.4 million. Gross margin on products from our solar segment decreased compared to the three months ended March 31, 2016, due primarily to a net deferral of profit compared to a net recognition of previously deferred profit. Additionally, during the 2017 period there was less usage of previously reserved inventory. Gross margin on products from our semiconductor segment increased primarily due to higher sales volumes, improved product mix, and higher capacity utilization. Gross profit on products from our polishing segment increased, while gross margin decreased primarily due to higher sales of lower margin products. For the three months ended March 31, 2017, we deferred gross profit of \$1.2 million. For the three months ended March 31, 2016, we recognized previously-deferred gross profit of \$0.8 million. Deferred commissions are included in selling, general and administrative expenses ("SG&A").

Gross profit for the six months ended March 31, 2017 and 2016 was \$16.8 million (27% of net revenue) and \$12.0 million (27% of net revenue), respectively, an increase of \$4.9 million. Gross margin on products from our solar segment decreased compared to the first six months of fiscal 2016, due primarily to a net deferral of profit compared to a net recognition of previously deferred profit, and less usage of previously reserved inventory. In the semiconductor segment, gross profit and gross margin increased primarily due to higher sales volumes, improved product mix, and higher capacity utilization. Gross profit and margin on products from our polishing segment increased primarily due to higher sales volumes. For the six months ended March 31, 2017, we deferred gross profit of \$0.9 million. For the six months ended March 31, 2016, we recognized previously-deferred gross profit of \$1.5 million. Deferred commissions are included in SG&A.

#### ***Selling, General and Administrative***

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

SG&A expenses for the three months ended March 31, 2017 and 2016 were \$8.3 million and \$7.4 million, respectively. SG&A increased compared to the prior year quarter due primarily to higher commissions related to higher revenues.

SG&A expenses for the six months ended March 31, 2017 and 2016 were \$15.3 million and \$15.0 million, respectively. Compared to the six months ended March 31, 2016, the increase in SG&A, primarily due to higher commissions related to higher revenues, was mostly offset by the collection of previously reserved accounts receivable of approximately \$1.0 million.

#### ***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 reimbursements through governmental research and development grants which are netted against these expenses when certain conditions have been met.



	Three Months Ended March 31,				Six Months Ended March 31,			
	2017	2016	Incr. (Decr.)	% Change	2017	2016	Incr. (Decr.)	% Change
	(dollars in thousands)				(dollars in thousands)			
Research, development and engineering	\$ 1,943	\$ 2,525	\$ (582)	(23)%	\$ 3,773	\$ 5,139	\$ (1,366)	(27)%
Grants earned	(408)	(365)	(43)	12 %	(610)	(692)	82	(12)%
Net research, development and engineering	\$ 1,535	\$ 2,160	\$ (625)	(29)%	\$ 3,163	\$ 4,447	\$ (1,284)	(29)%

RD&E expense, net of grants earned, for the three months ended March 31, 2017, decreased \$0.6 million compared to the three months ended March 31, 2016, due primarily to decreased spending on RD&E at our solar segment. RD&E expense, net of grants earned, for the six months ended March 31, 2017, decreased \$1.3 million compared to the six months ended March 31, 2016, due primarily to decreased spending on RD&E at our solar segment.

#### ***Gain on Sale of Other Assets***

For the three and six months ended March 31, 2016, we recognized a gain of \$2.6 million on the receipt of sale of our exclusive sales and service rights in the Kingstone Hong Kong Limited (“Kingstone”) solar ion implant equipment, with no comparable items in the fiscal 2017 period.

#### ***Income from Equity Method Investment***

For the six months ended March 31, 2017 we recognized investment loss of \$0.1 million, related to our 15% equity investment in Kingstone. For the three and six months ended March 31, 2016, we recognized investment income of \$0.7 million.

#### ***Income Taxes***

For the three and six months ended March 31, 2017 we recorded income tax expense of \$0.2 million and \$0.3 million, respectively. For the three and six months ended March 31, 2016 we recorded income tax expense of \$1.7 million and \$2.0 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. The gain on the Kingstone transaction, described above, was treated as a discrete item and accounted for \$1.7 million of the tax expense in the 2016 second fiscal quarter, with the tax calculated utilizing the effective tax rate and other discrete items nearly offsetting each other.

We establish a valuation allowance 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 standards, it is difficult to conclude that a valuation allowance is not needed when the negative evidence includes cumulative losses in recent years. Therefore, cumulative losses weigh heavily in the overall assessment. As a result of the review, where cumulative losses had been incurred, we concluded in 2015 and 2016 that it was appropriate to maintain a full valuation allowance for substantially all net deferred tax assets in foreign jurisdictions and the carryforwards of U.S. net operating losses and foreign tax credits, which were acquired in the merger with BTU International, Inc. Tax planning strategies to reduce sources of future taxable income caused us to conclude in the fourth quarter of fiscal 2016 that a valuation allowance should be established on the remaining U.S. deferred tax assets.

#### ***Liquidity and Capital Resources***

At March 31, 2017, and September 30, 2016, cash and cash equivalents were \$38.9 million and \$27.7 million, respectively, and restricted cash was \$2.6 million and \$0.9 million, respectively. Our working capital was \$44.6 million as of March 31, 2017 and \$44.9 million as of September 30, 2016.

The increase in cash during the first six months of fiscal 2017 of \$11.2 million was primarily due to the significant customer deposit received in January 2017 by our Solar segment. The increased cash will facilitate the fulfillment of that order. We maintain a portion of our cash and cash equivalents 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. Restricted cash increased due to an increase in

## [Table of Contents](#)

customer deposits requiring bank guarantees collateralized by cash. Our ratio of current assets to current liabilities was 1.8:1 as of March 31, 2017, and 2.2:1 as of September 30, 2016. We have never paid dividends on our common stock.

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 include common and preferred stock sold in private transactions and public offerings, capital leases, long-term debt and customer deposits. We believe that our principal sources of liquidity discussed above are sufficient to support operations for at least the next twelve months.

### ***Cash Flows from Operating Activities***

Cash provided by our operating activities was \$11.6 million for the six months ended March 31, 2017, compared to \$6.4 million used in operations for the six months ended March 31, 2016. During the six months ended March 31, 2017, cash was provided primarily by an increase in customer deposits, partially offset by advances made to vendors and an increase in restricted cash. During the six months ended March 31, 2016, net loss adjusted for non-cash items resulted in the use of \$7.5 million, which was partially offset by \$1.1 million provided by income taxes and other accrued liabilities, offset by purchases of inventory and payment of accounts payable.

### ***Cash Flows from Investing Activities***

Our investing activities for each of the six month periods ended March 31, 2017 and 2016 included purchases of property, plant and equipment of approximately \$0.2 million. In the six months ended March 31, 2016, we received cash of \$7.0 million from the partial sale of our equity interest in Kingstone and \$4.9 million from the sale of the related sales and service rights.

### ***Cash Flows from Financing Activities***

For the six months ended March 31, 2017, \$0.1 million of cash used by financing activities was primarily comprised of payments on long-term debt of \$0.3 million, net of borrowings of \$0.1 million. For the six months ended March 31, 2016, \$0.6 million of cash provided by financing activities was primarily related to borrowings of long-term debt of \$0.8 million, net of payments of \$0.3 million.

### **Off-Balance Sheet Arrangements**

As of March 31, 2017, Amtech had no off-balance sheet arrangements as defined in Item 303(a)(4) of Regulation S-K promulgated by the Securities and Exchange Commission.

### **Contractual Obligations**

Purchase obligations were \$29.1 million as of March 31, 2017, compared to \$11.3 million as of September 30, 2016, an increase of \$17.8 million due primarily to the large solar order received in January 2017. Approximately \$8.0 million of the March 31, 2017 obligation has been prepaid in the form of advances to vendors.

During the six months ended March 31, 2017, SoLayTec B.V. borrowed an additional \$0.1 million. As of March 31, 2017, the SoLayTec debt has a remaining balance of \$3.8 million, with interest capitalized per the agreement bearing interest at rates ranging from 4.5% to 12.5% and maturity dates ranging from fiscal 2017 to fiscal 2021.

Refer to Amtech's Annual Report on Form 10-K, as amended, for the year ended September 30, 2016, for additional information on the Company's other contractual obligations.

### **Critical Accounting Policies**

"Management's Discussion and Analysis of Financial Condition and Results of Operations" 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, as amended, for the year ended September 30, 2016. 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, as amended, for the fiscal year ended September 30, 2016 represent the most significant judgments and estimates used in the preparation of our consolidated financial statements. There have been no significant changes in our critical accounting policies during the six months ended March 31, 2017.

### **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**

We are exposed to foreign currency exchange rates to the extent sales contracts, purchase contracts, assets or liabilities of our operations are denominated in currencies other than their functional currency. Our operations in the United States are generally conducted in U.S. dollars. Our operations in Europe, China and other countries conduct business primarily in their respective functional currencies, but occasionally we enter into transactions in non-functional currencies. It is highly uncertain how currency exchange rates will fluctuate in the future. Actual changes in foreign exchange rates could adversely affect our operating results or financial condition.

During fiscal 2016 and in the first six months of fiscal 2017, we did not hold any stand-alone or separate derivative instruments. We incurred net foreign currency transaction losses of \$0.1 million during the six month period ended March 31, 2017, and net foreign currency transaction gains of \$0.1 million during the six month period ended March 31,

2016.

We incurred a foreign currency translation loss of \$0.6 million and a gain of \$0.1 million during the six months ended March 31, 2017 and 2016, respectively, a type of other comprehensive income (loss), which is a direct adjustment to stockholders' equity. Our net investment in and advances to our foreign operations totaled \$47.7 million as of March 31, 2017. A 10% change in the value of the foreign currencies relative to the U.S. dollar would cause approximately \$5.0 million of other comprehensive income (loss).

As of March 31, 2017, sales commitments denominated in a currency other than the functional currency of our transacting operation totaled approximately \$15.3 million. Our lead-times to fulfill these commitments generally range between 13 and 26 weeks. A 10% change in the relevant exchange rates between the time the order was taken and the time of shipment cause our gross profit on such orders to be \$1.5 million greater or less than expected on the date the order was taken.

As of March 31, 2017, purchase commitments denominated in a currency other than the functional currency of our transacting operation totaled \$3.7 million. A 10% change in the relevant exchange rates between the time the purchase order was placed and the time the order is received would not cause our cost of such items to be significantly greater or less than expected on the date the purchase order was placed.

**Item 4. CONTROLS AND PROCEDURES**

***Disclosure Controls and Procedures***

Our management, including the Chief Executive Officer (“CEO”) and the Chief Financial Officer (“CFO”), has carried out an evaluation of the effectiveness of our disclosure controls and procedures as of March 31, 2017, 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 Securities and Exchange Commission’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 were no changes in Amtech’s internal control over financial reporting during the six months ended March 31, 2017 that has materially affected, or is reasonably likely to materially affect, its internal control over financial reporting.

## PART II. OTHER INFORMATION

### Item 1. Legal Proceedings

The Company and its subsidiaries are defendants from time to time in actions for matters arising out of their business operations. The Company does not believe that any matters or proceedings presently pending will have a material adverse effect on its consolidated financial position, results of operations or liquidity. As previously disclosed in the Company's filings with the SEC, shortly after the Company entered into the merger agreement with BTU, two separate putative stockholder class action complaints (together, the "Stockholder Actions") were filed in the Court of Chancery of the State of Delaware (the "Delaware Court"). The first was filed on November 4, 2014 and the second on November 17, 2014, on behalf of BTU's public stockholders, against BTU, members of the BTU board, Amtech and the special purpose merger subsidiary. The Stockholder Actions were consolidated on December 4, 2014. The complaints generally alleged that, in connection with entering into the merger agreement, the BTU board of directors breached certain fiduciary duties owed to BTU's stockholders. The complaints sought various forms of declaratory and injunctive relief, as well as compensatory damages.

On February 18, 2016, the Delaware Court entered the Order approving the Amended Stipulation of Settlement. As a result, the Released Claims were dismissed with prejudice and without any admission of wrongdoing by any of the parties to the Stockholder Actions. Pursuant to the Amended Stipulation of Settlement, BTU, its insurer(s), or its successor(s) in interest are responsible for payment of fees and expenses in the amount of \$325,000 which were paid in full on April 1, 2016.

As described above, the Released Claims are limited solely to claims related to any disclosures (or lack thereof) to BTU's stockholders concerning the merger and any fiduciary claims concerning the decision to enter into the merger. While we are currently unaware of any other pending or threatened litigation related to additional claims arising from the Stockholder Actions, any future claims are uncertain, so additional harm could potentially result to the Company from this litigation, which may cause the Company to incur substantial costs and divert management's attention from operational matters.

### Item 1A. Risk Factors

The most significant risk factors applicable to Amtech are described in Part I, Item 1A (Risk Factors) of Amtech's Annual Report on Form 10-K, as amended, for the fiscal year ended September 30, 2016. There have been no material changes to the risk factors previously disclosed in our Form 10-K, as amended, for the fiscal year ended September 30, 2016, other than as described in the Overview above, and the supplemental risk factors set forth below:

***If the United States were to withdraw from or materially modify certain international trade agreements, or change tax provisions related to the global manufacturing and sales of our products, our financial condition and results of operations could be adversely affected.***

A portion of our business activities are conducted in foreign countries, including China, Malaysia, Taiwan, and the Netherlands. Our business benefits from free trade agreements, and we also rely on various U.S. corporate tax provisions related to international commerce as we build, market and sell our products globally. The current presidential administration has made comments suggesting that it is not supportive of certain existing international trade agreements. At this time, it remains unclear what the current presidential administration will do with respect to these international trade agreements and U.S. tax provisions related to international commerce. Any action to withdraw from or materially modify international trade agreements, or change corporate tax policy related to international commerce, could adversely affect our financial condition and results of operations.

***The number of turnkey project order opportunities is uncertain and such projects may increase our risks relating to current and future performance, project management, supplier fulfillment, unforeseen site conditions, and the regulatory environment, which could have a material adverse effect on our financial condition and results of operations.***

A turnkey project is a complete solar cell manufacturing line, including equipment manufactured by third parties, and the design, delivery, installation, start-up, and qualification of the entire line. While we have successfully participated in turnkey projects in the past, historically, those and other orders have been for shipments of our equipment. The demand for turnkey projects from our customers can fluctuate significantly, and, therefore, the magnitude and frequency of previously announced turnkey orders may not be indicative of future turnkey orders or our financial performance. Additionally, turnkey orders may provide additional risks to us in executing the project, such as:

- project management, including potentially lower-than-expected revenue due to project delays and cost overruns;
- organizational stress/burden that could impact order fulfillment of other orders;
- project duration and customer acceptance;
- use of and reliance on subcontractors;

[Table of Contents](#)

- supplier relationships and constraints;
- pricing and fulfillment;
- turnkey site conditions, such as readiness of customer facilities and access restrictions; and
- local regulations and policies.

Such risks could make it difficult or impossible to complete a turnkey order or cause us to incur unforeseen costs and expenses to complete a turnkey order. Failure to complete a turnkey order or unforeseen costs and expenses incurred in completing a turnkey order could have a material adverse effect on our financial condition and results of operations.

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

None.

**Item 3. Defaults Upon Senior Securities**

None.

**Item 4. Mine Safety Disclosures**

Not applicable.

[Table of Contents](#)

**Item 5. Other Information**

None.

**Item 6. Exhibits**

31.1	Certification of Chief Executive Officer Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as Amended	*
31.2	Certification of Chief Financial Officer Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as Amended	*
32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	*
32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	*
101.INS	XBRL Instance Document	*
101.SCH	XBRL Taxonomy Extension Schema Document	*
101.PRE	Taxonomy Presentation Linkbase Document	*
101.CAL	XBRL Taxonomy Calculation Linkbase Document	*
101.LAB	XBRL Taxonomy Label Linkbase Document	*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	*

---

\* Filed herewith.

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/ Robert T. Hass

Dated: May 10, 2017

Robert T. Hass

Vice President – Finance and Chief Financial Officer

(Principal Financial Officer, Principal Accounting 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, Fokko Pentinga, 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/ Fokko Pentinga

Fokko Pentinga

President and Chief Executive Officer

Amtech Systems, Inc.

Date: May 10, 2017

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, Robert T. Hass, 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/ Robert T. Hass

Robert T. Hass

Vice President – Finance and Chief Financial Officer

Amtech Systems, Inc.

Date: May 10, 2017

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, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Fokko Pentinga, President 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/ Fokko Pentinga

Fokko Pentinga

President and Chief Executive Officer

Amtech Systems, Inc.

Date: May 10, 2017

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, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Robert T. Hass, Interim 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/ Robert T. Hass

Robert T. Hass

Vice President – Finance and Chief Financial Officer

Amtech Systems, Inc.

Date: May 10, 2017

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.