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

FORM 10-K

(Mark One)

[X] **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended: September 30, 2015

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**

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

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

Common Stock, $0.01 Par Value

(Title of Class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes [ ] No [X]

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes [ ] No [X]

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. [X] 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 (§229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). [X] Yes [ ] No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405) is not contained herein, and will not be contained, to the best of registrant's knowledge in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [X]

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, non-accelerated filer, or a smaller reporting company. See 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 [X]   Non-accelerated filer [ ] (do not check if a smaller reporting company)   [ ] Smaller Reporting Company

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

As of March 31, 2015, the aggregate market value of the voting and non-voting stock held by non-affiliates of the registrant was approximately $107,379,680, based upon the closing sales price reported by the NASDAQ Global Market on that date.

As of November 12, 2015, the registrant had outstanding 13,150,469 shares of Common Stock, $0.01 par value.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Definitive Proxy Statement related to the registrant's 2015 Annual Meeting of Shareholders, which Proxy Statement will be filed under the Securities Exchange Act of 1934, as amended, within 120 days of the end of the registrant's fiscal year ended September 30, 2015, are incorporated by reference into Items 10-14 of Part III of this Form 10-K.

AMTECH SYSTEMS, INC. AND SUBSIDIARIES

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FORWARD-LOOKING STATEMENTS

Certain information contained or incorporated by reference in this Annual Report on Form 10-K is forward-looking in nature. All statements included or incorporated by reference in this Annual Report on Form 10-K, or made by management of Amtech Systems, Inc. and its subsidiaries (“the Company” or “Amtech”), 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). 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. 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. Any expectations based on these forward-looking statements are subject to risks and uncertainties and other important factors, including those discussed in the section entitled “ITEM 1A. RISK FACTORS.” 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.

All references to “we,” “our,” “us,” or “Amtech” refer to Amtech Systems, Inc. and its subsidiaries.

PART I

ITEM 1. BUSINESS

OUR COMPANY

We are a leading, global manufacturer of capital equipment, including thermal processing, silicon wafer handling automation, and related consumables used in fabricating solar cells, LED and semiconductor devices. Semiconductors, or semiconductor chips, are fabricated on silicon wafer substrates, sliced from ingots, and are part of the circuitry, or electronic components, of many products including solar cells, computers, telecommunications devices, automotive products, consumer goods, and industrial automation and control systems. The Company's wafer handling, thermal processing and consumable products currently address the diffusion, oxidation, and deposition steps used in the fabrication of solar cells, LEDs, semiconductors, microelectromechanical systems "(MEMS)" and the polishing of newly sliced silicon wafers.

Our major emphasis in the solar industry is the development of thermal processes, and deposition for solar cell manufacturing, which we believe, collectively, are key to driving higher cell efficiencies. The markets we serve are experiencing rapid technological advances and are, historically, cyclical. Therefore, future profitability and growth depend on our ability to develop or acquire and market profitable new technology products, and on our ability to adapt to cyclical trends.

We believe our product portfolio, developed through a track record of technological innovation as well as the successful integration of key acquisitions, reduces the cost of solar cell manufacturing by increasing solar cell efficiency, increasing throughput and increasing yields. We have been providing manufacturing solutions to the semiconductor industry for over 30 years and have leveraged our semiconductor technology and industry presence to capitalize on growth opportunities in the solar industry. Our customers use our equipment to manufacture solar cells, semiconductors, silicon wafers and MEMS, which are used in end markets such as solar power, telecommunications, consumer electronics, computers, automotive and mobile hand-held devices. Through the acquisition of BTU International, Inc. ("BTU") this past fiscal year, we expanded our thermal processing capability with the supply of solder reflow systems used for surface mount applications in the electronics assembly market, and custom equipment for multiple industrial markets. In addition, this past fiscal year we expanded our participation in the solar market through the acquisition of a controlling interest in SoLayTec B.V. ("SoLayTec"), which provides Atomic Layer Deposition ("ALD") systems used in high efficiency solar cells. To complement our research and development efforts, we also sell our equipment to, and coordinate certain development efforts with, research institutes, universities and customers.

For fiscal 2015, we recognized net revenue of $105 million, which included $57 million of solar revenue or approximately 54% of our total revenue. These results compare to $57 million of net revenue for fiscal 2014, which included $36 million of solar revenue or approximately 64% of our total revenue. Our order backlog as of September 30, 2015 and

2014 was $35 million and $29 million, respectively, a 21% increase. Our backlog as of September 30, 2015 included approximately $20 million of orders and deferred revenue from our solar industry customers compared to $21 million from our solar industry customers as of September 30, 2014. 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 in subsequent periods, nor is backlog any assurance that we will realize revenue or profit from completing these orders.

Orders from the solar industry totaled $61 million during fiscal 2015, compared to $40 million and $28 million in fiscal 2014 and 2013, respectively. The solar book to bill ratio for fiscal years 2015 and 2014 was 1.1:1 and 1.0:1, respectively.

Following the Company's acquisition of BTU, an evaluation was conducted of the Company's organizational structure. Beginning with the second quarter of fiscal 2015, the Company made changes to its reportable segments. Prior period amounts have been revised to conform to the current period segment reporting structure. The Company operates in three business segments: (i) solar, (ii) semiconductor and (iii) polishing. For information regarding net revenue, operating income and identifiable assets attributable to each of our three business segments for each of the past three fiscal years, see Note 8 of the Notes to Consolidated Financial Statements included herein and "ITEM 7, MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS" in this Annual Report. For information on the products of each segment, see "Solar and Semiconductor Equipment Products" and "Polishing Supplies Products" within this "ITEM 1. BUSINESS" section. For information regarding risks to our business, see "ITEM 1A. RISK FACTORS."

GROWTH STRATEGY

Capitalize on Growth Opportunities in the Solar Industry by Leveraging Our Leading Diffusion Furnace Market Share, Top-Tier Customer Relationships, and Track Record of Technological Innovation. We believe that long-term growth in the solar industry will be driven by several macro-economic factors, such as volatile energy prices, limited non-renewable energy resources, government incentives for solar generated electricity, increasing environmental awareness, energy security concerns and the expected decrease in the cost of solar energy. As the solar market continues to develop, advances in process technology will be vital to remaining competitive. We intend to continue leveraging our leading market position, relationships with leading global solar cell customers and demonstrated track record of technical innovation to maximize sales of our current and next-generation technology solutions.

Develop Multi-Product Solutions to Expand Our Addressable Market. We are focused on acquiring, developing and licensing new products across our business in response to customer needs in the solar market. As we add to our product portfolio, we plan to continue expanding our offerings within the solar cell production process, thus capturing a greater percentage of capital spent on building global solar cell manufacturing capacity. Our successful development of PECVD equipment is a recent example of meeting our customers' needs and expanding the size of our addressable market.

Pursue Strategic Acquisitions That Complement Our Strong Platform. Over the course of our history, we have developed an acquisition strategy consistent with our focus of maintaining market leadership and a technology roadmap leading to higher efficiency and lower cost solar cells. Based on our acquisition strategy, we continue to evaluate potential technology, product and business acquisitions or joint ventures that are intended to increase our existing market share in the solar, semiconductor and LED industries and expand our addressable market. In evaluating these opportunities, our objectives include: enhancing our earnings and cash flows, adding complementary product offerings, actively expanding our geographic footprint, improving our production efficiency and enhancing our customer base.

Contribute to the Solar Industry's Mission of Reaching Grid Parity. We believe next-generation process technology for solar cell manufacturing is the driver to increasing efficiency and lowering manufacturing costs and is key to enabling grid parity, where the cost of solar generated electricity is on parity with traditional, non-renewable sources of energy such as coal and natural gas. Our next-generation solar cell process technology has a demonstrated track record of increasing our customers' solar cell conversion efficiency. We will continue to develop next-generation solar cell manufacturing process technology that will enable our customers to displace non-renewable energy.

RECENT ACQUISITIONS AND DISPOSITIONS

In December 2014, the Company expanded our participation in the solar market by acquiring a 51% controlling interest in SoLayTec, based in Eindhoven, the Netherlands, which provides ALD systems used in high efficiency solar cells. The acquisition of the controlling interest in SoLayTec supports our business model of growth through strategic acquisition.

In January 2015, the Company completed its acquisition of BTU, a Delaware corporation, pursuant to which BTU became a wholly owned subsidiary of the Company. Amtech acquired all of the outstanding stock of BTU in an all-stock transaction. BTU stockholders received 0.3291 shares of Amtech common stock for every share of BTU stock.

The addition of BTU supports our business model of growth through strategic acquisition and continuous innovation. The combination with BTU further positions the Company as a leading, global supplier of solar and semiconductor production and automation systems. The acquisition also further advances our strategy to expand our technology portfolio in adjacent markets and creates a strong platform to drive the growth of our solar business. With the addition of BTU, the Company has a more diversified and profitable revenue base, allowing the Company to better scale production and distribution of our solar technology to meet accelerating demand for next-generation technology solutions.

In September 2015, the Company sold a portion of its interest in Kingstone Technology Hong Kong Limited ("Kingstone Hong Kong"), a partially owned subsidiary of the Company, for $4,000,000 plus the repayment of certain outstanding debt in the amount of approximately $4,000,000. Following the transaction, the Company's interest in Kingstone Hong Kong was reduced from 55% to 15%. Kingstone Hong Kong is the parent company of Shanghai Kingstone Semiconductor Company, Ltd. ("Shanghai Kingstone"), a Shanghai-based technology company specializing in ion implant solutions for the solar and semiconductor industries. Following the transaction, Kingstone Hong Kong's ownership interest in Shanghai Kingstone was reduced from 100% to 68.75% with the Company owning approximately 10% of Shanghai Kingstone. Proceeds from the sale of shares will be paid to Amtech and used to support the company's core strategic initiatives.

SOLAR INDUSTRY

We provide process equipment and related cell manufacturing equipment to many of the world's leading solar cell manufacturers.

Within process equipment, our primary focus is on our existing solar diffusion furnace and the development of next-generation diffusion furnaces, including our proprietary N-type, PECVD systems. Our N-type technology has been developed through a three-party research collaboration agreement with the Energy Research Centre of the Netherlands, or ECN, a leading solar research center in Europe and Yingli Green Energy Holding Company Limited, or Yingli, one of the world's leading vertically integrated photovolataic (PV) product manufacturers. In 2012, we launched our PECVD system. Through our acquisition of SoLayTec, we produce, develop, and deliver and service worldwide machines for ultrafast ALD Equipment used in high efficiency solar cells.

We also offer furnace automation and wafer handling systems used within the diffusion processing step of solar cell manufacturing. Our automation equipment includes mass wafer transfer systems, sorters, long-boat transfer systems, load station elevators, buffers and conveyers, which we sell both in connection with our diffusion furnaces and on a standalone basis.

Most solar cell manufacturers sell their products to manufacturers of solar modules or solar panels. Others are vertically integrated and use their cells in the production of solar modules and panels. Solar cells are the critical component of solar modules and solar panels, which are sold to the end user and used in residential homes, industrial applications, remote pumping, lighting and heating uses and central power stations.

Although the solar market has experienced tremendous growth over the past five years, it is characterized by short-term periods of rapid capacity expansion followed by periods of rapid contraction in our customers' capital spending.

When actual and expected end-user demand outstrips available capacity, this triggers the beginning of the next period of expansion.

SEMICONDUCTOR INDUSTRY

We provide diffusion equipment as well as handling, storage and automation equipment and related services to leading semiconductor manufacturers. Our products include horizontal and vertical diffusion furnaces used to produce semiconductors, silicon wafers and MEMS, as well as lapping equipment, polishing templates and wafer insert carriers, mass wafer transfer systems, loaders and sorters.

Although the semiconductor market has experienced significant growth over the past fifteen years, it remains cyclical by nature. The market is characterized by short-term periods of under or over utilization of capacity for most semiconductors, including microprocessors, memory, power management chips and other logic devices. When capacity utilization decreases due to the addition of excess capacity, semiconductor manufacturers typically slow their purchasing of capital equipment. Conversely, when capacity utilization increases, so does capital spending.

Most semiconductor chips are built on a silicon wafer, and include multiple layers of circuitry that connect a variety of circuit components, such as transistors, capacitors and other components. To build a chip, the transistors, capacitors and other components are first created on the surface of the wafer by performing a series of processes to deposit and remove selected film layers, including insulators. Similar processes are then used to build the layers of wiring structures on the wafer. These are all referred to as "front-end" processes.

As demand for increasingly sophisticated electronic devices continues; new technologies such as wireless networks, next generation cellular phones and tablets will help to drive future growth. Electronic equipment continues to become more complex, yet end users are still demanding smaller, lighter and less expensive devices. This, in turn, requires increased performance and reduced cost, size, weight and power requirements of electronic assemblies, printed circuit boards and semiconductors. In response to these developments, manufacturers are increasingly employing more sophisticated production and assembly techniques requiring more advanced manufacturing equipment, such as that supplied by BTU.

In the printed circuit board assembly process, semiconductor discrete-devices and various other components are attached to printed circuit boards. The attachment process, which creates a permanent physical and electrical bond, is called solder reflow or surface mount reflow. Manufacturers rely on high throughput and highly reliable equipment to get the maximum efficiency in their production process. Die level semiconductor packaging processes include precision thermal processing steps. Advancements in the semiconductor industry toward higher chip speeds, smaller form factors and reduced costs are driving the transition to wafer level packaging from the traditional wire bonding technique.

SOLAR AND SEMICONDUCTOR EQUIPMENT PRODUCTS

Our furnace and automation equipment is manufactured in our facilities in The Netherlands, France, Massachusetts, and China. The following paragraphs describe the products that comprise our solar, semiconductor and electronics assembly equipment business:

Horizontal Diffusion Furnaces. Through our subsidiaries, Tempress and Bruce Technologies, we produce and sell horizontal diffusion furnaces. Our horizontal furnaces currently address several steps in the solar and semiconductor manufacturing processes, including diffusion, phosphorus tetrachloride doping, or $POCl_3$, boron tribromide, or BBR_3, low-pressure chemical vapor deposition, or LPCVD, oxidation, and annealing.

Our horizontal furnaces generally consist of three large modules: the load station where the loading of the wafers occurs; the furnace section, which is comprised of one to four thermal reactor chambers; and the gas distribution cabinet where the flow of gases into the reactor chambers is controlled, and often customized to meet the requirements of our customers' particular processes. The horizontal furnaces utilize a combination of existing industry and proprietary technologies and are sold primarily to solar customers and semiconductor customers who do not require the advanced automation of, or cannot justify the higher expense of, vertical furnaces for some or all of their diffusion processes. Our models are capable of processing all currently existing wafer sizes.

Automation Products - Solar. Our automation technology products are used in several of the diffusion steps and in the anneal processing step of solar cell manufacturing. Our R2D Automation equipment includes mass wafer transfer systems, sorters, long-boat transfer systems, load station elevators, buffers and conveyers. We use a vacuum technology in our Comet Standalone and our Comet Full Automation solar wafer transfer systems designed to ensure high throughput, reduced breakage and thereby increased yield.

Plasma-Enhanced Chemical Vapor Deposition (PECVD). Our solar PECVD product applies an anti-reflective coating to solar wafers; a coating critical to the efficiency of solar cells. PECVD layers are also used for passivation of the front and/or back side of the solar cell. This solar product adds another solar cell processing step to Amtech's offerings. We are exploring next-generation high-efficiency technology and dedicating our efforts to that process development.

Atomic Layer Deposition. We produce, develop, deliver and service worldwide machines for ultrafast, spatial (ALD)equipment, a promising technology for ultrathin Al2O3 passivation layers on solar cells. The ALD machines from SoLayTec are intended for industrial production in the solar market. As such, following the acquisition of the majority interest in SoLayTec, the Company is now able to use ALD in the industrial production and solar market due to technology that was previously unavailable to the Company prior to the acquisition due to the very low speed of ALD and the associated high cost. The unique feature of the SoLayTec machines is the breakthrough speed that enables industrial application.

Automation Products - Semiconductor. Use of our automation products reduces human handling and, therefore, reduces exposure of wafers to particle sources during the loading and unloading of the process tubes and protects operators from heat and chemical fumes. The top reactor chamber of a horizontal furnace can be as much as eight feet from the floor on which the operator stands when manually loading wafer boats. Typical boats of 150mm to 300mm wafers weigh three to six pounds. Given these two factors, automating the wafer loading and unloading of a diffusion furnace improves employee safety and ergonomics in silicon wafer, solar cell and semiconductor manufacturing facilities.

S-300. Our patented S-300 model provides a very efficient method of automatically transporting a full batch of up to 300 wafers to the designated tube level and automatically placing them directly onto the cantilever loader of a diffusion furnace at one time. This product is suitable for the production of nearly all semiconductors manufactured using a horizontal furnace. The S-300 can be used in conjunction with all current wafer sizes and is particularly well suited for manufacturers of 300mm wafers.

Comet. Our Comet and Gemini series of wafer transfer systems include a wide range of throughputs and footprints to meet the needs of our customers who serve the semiconductor industry. Comet Sorter with Optical Character Recognition (OCR) is used in sorting, randomizing, compacting or tracking. The Comet Sorter is cassette to cassette with OCR front and back scribe functions, notch alignment and SECSII Gem communication. Comet ID Readers check tag carriers then read each wafer scribe. The Comet ID Reader sends the information to the host with SECSII Gem commands.

Small Batch Vertical Furnace. Our small batch, two-tube vertical furnace was developed internally with the active support from a large semiconductor manufacturer and long-term customer. The specifications for this furnace include a two-tube vertical furnace for wafer sizes of up to 200mm, with each tube having a small flat zone capable of processing 25-50 wafers per run. We are targeting niche applications, including research and development, while we continue to develop additional processes, since the competition in the large batch vertical furnace market is intense and our competitors are much larger and have substantially greater financial resources, processing knowledge and advanced technology.

Continuous Thermal Processing Systems. Through our recently acquired subsidiary BTU, we produce and sell thermal processing systems used in the solder reflow and curing stages of printed circuit board assembly as well as systems for the thermal processes used in advanced semiconductor packaging. Our printed circuit board assembly products are used primarily in the advanced, high-density segments of the market that utilize surface mount technology.

Flip-chip reflow provides the physical and electronic bond of the semiconductor device to its package. Our range of convection reflow systems, utilizing patented closed loop convection technology, rate at up to 400°C and operate in air or nitrogen atmospheres. These products utilize impingement technology to transfer heat to the substrate. Using thermal power arrays of five-kilowatt heaters, they can process substrates in dual lane, dual speed configurations, thereby enabling our customers to double production without increasing the machine’s footprint. These products are available in four models based on the heated lengths of thermal processing chambers. Heated length is based on the required production rate and loading requirements.

POLISHING SUPPLIES PRODUCTS

Our polishing supplies division provides solutions to the lapping and polishing marketplace. Lapping is the process of abrading components with a high degree of precision for flatness, parallelism and surface finish. Common applications for this technology are silicon wafers for semiconductor products, sapphire substrates for LED lighting and mobile devices, silicon carbide for LED lighting, various glass and silica components for 3D image transmission, quartz and ceramic components for telecommunications devices, medical device components and computer hard disks. We manufacture the products described below in Pennsylvania and sell them under our PR Hoffman brand name.

Wafer Carriers. Carriers are work holders into which silicon and sapphire wafers or other materials are inserted for the purpose of holding them securely in place during the lapping and polishing processes. We produce carriers for our line of lapping and polishing machines, as well as for those machines sold by our competitors. Substantially all of the carriers we produce are customized for specific applications. Insert carriers, our most significant category of carriers, contain plastic inserts molded onto the inside edge of the work-holes of the carrier, which hold the wafers in place during processing. Although our standard steel carriers are preferred in many applications because of their durability, rigidity and precise dimensions, they are typically not suited for applications involving softer materials or when metal contamination is an issue. Insert carriers, however, are well suited for processing large semiconductor wafers, up to 450mm in diameter, and other fragile materials or where contamination is an issue, because they provide the advantages of steel carriers while reducing the potential for damage to the edges of such sensitive materials. Our insert carriers are used for double-sided lapping or polishing of wafers up to 450mm in diameter.

Semiconductor Polishing Templates. Our polishing templates are used to securely hold sapphire or other wafer materials in place during single-sided polishing processes. Polishing templates are customized for specific applications and are manufactured to exacting tolerances. We manufacture polishing templates for most brands of tools and various processes. In addition to silicon wafers, these products are used in polishing silicon carbide wafers and sapphire crystals used in LEDs as well as mobile communication devices.

Double-Sided Planetary Lapping and Polishing Machines. Double-sided lapping and polishing machines are designed to process thin and fragile materials, such as semiconductor, sapphire and other wafer-like materials, precision optics, computer disk media and ceramic components for wireless communication devices, to exact tolerances of thickness, flatness, parallelism and surface finish. On average, we believe that we offer our surface processing systems with a lower cost of ownership than systems offered by our competitors. We target the LED, mobile device, semiconductor, optics, quartz, ceramics, medical, computer disk and metal working markets.

MANUFACTURING, RAW MATERIALS AND SUPPLIES

Our solar, semiconductor and electronics assembly equipment manufacturing activities consist primarily of engineering design to meet specific and evolving customer needs, and procurement and assembly of various commercial and proprietary components into finished thermal processing systems and related automation in Vaassen, The Netherlands, Clapiers, France, North Billerica, Massachusetts, and Shanghai, China.

Our manufacturing activities in the polishing supplies and equipment business include laser-cutting and other fabrication steps in producing lapping and polishing consumables, including carriers, templates, gears, wear items and spare parts in Carlisle, Pennsylvania, from raw materials manufactured to our specifications by our suppliers. These products are engineered and designed for specific applications and to meet the increasingly tight tolerances required by our customers. Many items, such as proprietary components for our solar and semiconductor equipment and lapping plates, are also purchased from suppliers who manufacture these items to our specifications.

Final assembly and tests of our equipment and machines are performed within our manufacturing facilities. Quality control is maintained through inspection of incoming materials and components, in-process inspection during equipment assembly, testing of assemblies and final inspection and, when practical, operation of manufactured equipment prior to shipment.

Since much of our polishing supplies know-how relates to the manufacture of its products, this business' facility is equipped to perform a significantly higher percentage of the fabrication steps required in the production of its products. However, injection molding for our insert carriers and the manufacture of raw cast iron plates are subcontracted out to various third parties. Our polishing supplies business relies on key suppliers for certain materials, including two steel mills in Germany and Japan, an injection molder, a single-sourced pad supplier from Japan and an adhesive manufacturer. To minimize the risk of production and service interruptions and/or shortages of key parts, we maintain appropriate inventories of key raw materials and parts. If for any reason we were unable to obtain a sufficient quantity of parts in a timely and cost-effective manner to meet our production requirements, our results of operations would be materially and adversely affected.

RESEARCH, DEVELOPMENT AND ENGINEERING

The markets we serve are characterized by evolving industry standards and rapid technological change. To compete effectively in our markets, we must continually maintain or exceed the pace of such change by improving our products and our process technologies and by developing new technologies and products that compete effectively on the basis of price and performance. To assure that these technologies and products address current and future customer requirements, we obtain as much customer cooperation and input as possible, thus increasing the efficiency and effectiveness of our research and development efforts. In addition, we look for strategic acquisitions, such as the acquisition of SoLayTec, which will provide us with new technologies to compete effectively in the markets in which we operate.

From time to time we add functionality to our products or develop new products during engineering and manufacturing to fulfill specifications in a customer's order, in which case the cost of development, along with other costs of the order, are charged to cost of sales. We periodically receive research grants for research and development of products, which are netted against our research and development costs. Our expenditures (net of grants earned) that have been accounted for as research and development were $6.9 million (7% of net revenue) for fiscal 2015, $6.3 million (11% of net revenue) for fiscal 2014, and $6.6 million (19.0% of net revenue) for fiscal 2013.

PATENTS

The following table shows our material patents, the patents licensed by us, and the expiration date of each patent and license:

Product	Countries	Expiration Date or Pending Approval
Multiple methods for manufacturing a solar cell and related equipment	Various	Various
Method for manufacturing a solar cell; N-type cells with reverse flow and metal wrap-through	Netherlands	2032
Method for manufacturing a solar cell; N-type cells with reverse flow and metal wrap-through	United States	2033
Wafer boat loader assembly, furnace system, use thereof and method for operating said assembly	Netherlands	Pending
IBAL Model S-300	United States	Various
Gas-bearing-based Atomic Layer Deposition (ALD)	Europe	2028
Carrier-less gas bearing ALD	Europe	2029
Reciprocal and helical-scan multi-nozzle ALD configurations	Europe	2030
Ultrafast gas bearing-based reactive ion etching	Europe	2030
Contactless ALD patterning process	Europe	2030
Maskless patterned fast ALD	Europe	2030
Thermal processing system having slot eductors	United States	2027
Thermal reactor	United States	Pending
Plasma generation and processing with multiple radiation sources	United States	2024
Plasma catalyst	United States	2026
Process for solid oxide fuel cell manufacture	United States	2025
Lapping Machine adjustable mechanism	United States	2027

To the best of our knowledge, there are currently no pending lawsuits against us regarding infringement of any existing patents or other intellectual property rights or any material unresolved claims made by third parties that we are infringing the intellectual property rights of such third parties.

SALES AND MARKETING

Due to the highly technical nature of our products, we market our products primarily by direct customer contact through our sales personnel and through a network of domestic and international independent sales representatives and distributors that specialize in solar and semiconductor equipment and supplies. Our promotional activities include direct sales contacts, participation in trade shows, an internet website, advertising in trade magazines and the distribution of product brochures.

Through the acquisition of BTU, we have expanded our global sales and support infrastructure contributing to our competitive position.

Sales to distributors are generally on terms comparable to sales to end user customers, as our distributors generally quote their customers after first obtaining a quote from us and have an order from the end-user before placing an order with us. Our sales to distributors are not contingent on their future sales and do not include a general right of return. Historically, returns have been rare. Distributors of our solar and semiconductor equipment do not stock a significant amount of our products, as the inventory they do hold is primarily limited to parts needed to provide timely repairs to the customer.

Payment terms of our parts, service and retrofit sales are generally net 30 days. The payment terms of equipment or systems sales vary depending on the size of the order and the size, reputation and creditworthiness of the customer. As a result, the financial terms of equipment sales can range from 80% due 30 days after shipment and 20% due 30 days after acceptance, to requiring a customer deposit 30 days after order placement, a portion due 30 days after shipment and the balance due 30 days after acceptance. Letters of credit are required of certain customers depending on the size of the order, creditworthiness of the customer and the customer's country of domicile.

During fiscal 2015, 74% of our net revenue came from customers outside of North America. This group represented 79% of revenues in fiscal 2014. In fiscal 2015, net revenue was distributed among customers in different geographic regions as follows: North/South America 26% (24% of which is in the United States), Asia 60% (including 26% to China 13% to Malaysia and 13% to Taiwan) and Europe 14%. In fiscal 2015, two customers individually accounted for 15% and 11% of net revenue, respectively. In fiscal 2014, two customers individually accounted for 18% and 11% of net revenue, respectively. In fiscal 2013, one customer accounted for 20% of net revenue. Our business is not seasonal in nature, but is cyclical based on the capital equipment investment patterns of solar cell and semiconductor manufacturers. These expenditure patterns are based on many factors, including capacity utilization, anticipated demand, the development of new technologies and global and regional economic conditions. See "Part 1 Financial Information, Item 1. Consolidated Financial Statements, Footnote 9 Geographic Regions" for information regarding our net long-lived assets.

COMPETITION

We compete in several distinct equipment markets for solar cells, semiconductor devices, semiconductor wafers, MEMS, electronics assembly, and the market for lapping and polishing machines and supplies used in the LED, mobile devices and semiconductor markets. Each of these markets is highly competitive. Our ability to compete depends on our ability to continually improve our products, processes and services, as well as our ability to develop new products that meet constantly evolving customer requirements. Significant competitive factors for succeeding in these markets include the product's technical capability, productivity and cost-effectiveness, overall reliability, ease of use and maintenance, contamination and defect control and the level of technical service and support.

The Solar Cell, Semiconductor Device, and MEMS Markets. Our thermal processing equipment and automation primarily compete with those produced by other original equipment manufacturers, some of which are well-established firms that are much larger and have substantially greater financial resources than we have. Some of our competitors have a diversified product line, making it difficult to quantify their sales of products that compete directly with our products. Competitors of our horizontal diffusion furnaces include Centrotherm GmbH, Koyo Systems Co. Ltd., Sandvik Thermal Process, Inc., a subsidiary of Sandvik AB, 48th Institute, Sevenstar Electronics, CVD Equipment, Inc., Semco Engineering S.A., S.C New Energy and Expertech, Inc. We are experiencing increased competition from local Chinese equipment manufacturers, including 48th Institute, S.C New Energy and Sevenstar Electronics, which may receive varying levels of financial support from the Chinese government. Our primary competitive advantages over such local manufacturers include our automation and higher-efficiency solar cell production technologies which we develop in collaboration with customers and research institutes. Also, our furnaces and lapping and polishing machines face, to a limited extent, competition from equipment on the low-end of the price spectrum.

Our principal competitors for printed circuit board assembly equipment and advanced semiconductor packaging vary by product application. The principal competitors for solder reflow systems are Vitronics-Soltec, Heller, Folungwin, ERSA, and Rehm. The principal competitors for advanced semiconductor packaging are Vitronics-Soltec and Heller. Our in-line, controlled atmosphere furnaces compete primarily against products offered by Centrotherm, and SierraTherm/Schmid Thermal Systems. We also face competition from emerging low cost Asian manufacturers and other established European manufacturers.

Although price is a factor in buying decisions, we believe that technological leadership, process capability, throughput, environmental safeguards, uptime, mean time-to-repair, cost of ownership and after-sale support have become increasingly important factors. We compete primarily on the basis of these criteria, rather than on the basis of price alone.

General Industrial Lapping and Polishing Machines, Supplies and Semiconductor Wafer Markets We experience price competition for wafer carriers produced by foreign manufacturers for which there is very little publicly available information. As a result, we are intensifying our efforts to reduce the cost of our carriers and will continue to compete with other manufacturers of carriers by continuing to update our product line to keep pace with the rapid changes in our customers' requirements and by providing a high level of quality and customer service. We produce steel carriers, including insert carriers, on an advanced laser-cutting tool, which reduces our costs and lead times and increases our control over quality. Competitors of our lapping and polishing machines and supplies include Peter Wolters and Speedfam, Lapmaster International, LLC, Hamai Co., Ltd., Onse, Inc. and Eminess Technologies, Inc. Our strategy to enhance our sales of wafer carriers includes developing additional niche markets for templates and providing a high level of customer support and products at a lower cost than our competitors.

EMPLOYEES

As of September 30, 2015, we employed 503 people. Of these employees, 15 were based at our corporate offices in Tempe, Arizona, 37 at our manufacturing plant in Carlisle, Pennsylvania, 90 at our manufacturing plants in N. Billerica, Massachusetts, 130 at our combined facilities in The Netherlands, 158 at our combined facilities in China, 13 at other Asia-Pacific offices, 53 at our facilities in France, and 7 at our office in the U.K . Of the 37 people employed at our Carlisle, Pennsylvania facility, 21 were represented by the United Auto Workers Union - Local 1443. We have never experienced a work stoppage or strike, and other than employees at the Carlisle facility, no other employees are represented by a union. We consider our employee relations to be good.

ENVIRONMENTAL

EPA Accrual - As a result of the acquisition of BTU, the Company 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 the Company's proportional responsibility, as negotiated with and agreed to by the EPA, the Company's liability related to this matter is $0.2 million. As of September 30, 2015, the remaining liability is $0.2 million, which is included in Other Accrued Liabilities on the Condensed Consolidated Balance Sheet as of September 30, 2015. In 2009, in accordance with the settlement agreement with the EPA, BTU established a letter of credit for $0.2 million for the benefit of the EPA to secure potential cash payments as part of BTU's settlement of their proportional liability.

CORPORATE INFORMATION

We were incorporated in Arizona in October 1981, under the name Quartz Engineering & Materials, Inc. We changed to our present name in 1987. We conduct operations through five wholly-owned subsidiaries: Tempress Systems, Inc., or Tempress, a Texas corporation with all of its operations in Vaassen, The Netherlands, acquired in 1994 and subsequently reincorporated in The Netherlands; P.R. Hoffman Machine Products, Inc., or P.R. Hoffman, an Arizona corporation based in Carlisle, Pennsylvania, acquired in July 1997; Bruce Technologies, Inc., or Bruce Technologies, a Massachusetts corporation based in North Billerica, Massachusetts, acquired in July 2004; R2D Automation SAS, or R2D, a French corporation located near Montpellier, France, acquired in October 2007; BTU International, Inc., a Delaware corporation based in North Billerica, Massachusetts, acquired in January 2015. In addition, we acquired a majority ownership of SoLayTec B.V., a private company based in Eindhoven, the Netherlands. We also own a 15% interest in Kingstone Hong Kong (which effectively represents a 10% beneficial ownership interest in the Shanghai operating entity, Shanghai Kingstone).

AVAILABLE INFORMATION

Our internet website address is www.amtechsystems.com. Through our website, we make available, without charge, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports, as soon as reasonably practicable after such materials are electronically filed, or furnished to, the Securities and Exchange Commission, or the SEC. The information found on our website, or information that may be accessed through links on our website, are not part of this or any other report we file with, or furnish to, the SEC. In addition, our SEC filings are available at the SEC's website at http://www.sec.gov.

ITEM 1A. RISK FACTORS

Our business faces significant risks. Because of the following factors, as well as other variables affecting our operating results and financial condition, past performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. The following risk factors should be read in conjunction with the other information and risks set forth herein.

Risks Related to our Business and Industry.

The ongoing volatility of the solar and semiconductor equipment industry may negatively impact our business and results of operations and our corresponding ability to efficiently budget our expenses.

The solar and semiconductor equipment industries are highly cyclical. As such, demand for, and the profitability of, our products can change significantly from period to period as a result of numerous factors, including, but not limited to:

- changes in global and regional economic conditions;
- changes in capacity utilization and production volume of manufacturers of solar cells, semiconductors, silicon wafers and MEMS;
- the profitability and capital resources of those manufacturers
- tariff and international trade barriers, including without limitation unfair trade proceedings against solar PV manufacturers in China
- challenges associated with marketing and selling manufacturing equipment and services to a diverse and diffuse customer base;
- the financial condition of solar PV customers and their access to affordable financing and capital; and
- the shift of solar and semiconductor production to Asia, where there often is increased price competition.

For these and other reasons, our results of operations for past periods may not necessarily be indicative of future operating results.

Since our business has historically been subject to cyclical industry conditions, we have experienced significant fluctuations in our quarterly new orders and net revenue, both within and across years. Demand for solar, semiconductor and silicon wafer manufacturing equipment and related consumable products has also been volatile as a result of sudden changes in solar and semiconductor supply and demand and other factors in both semiconductor devices and wafer fabrication processes. Our orders tend to be more volatile than our revenue, as any change in demand is reflected immediately in orders booked, which are net of cancellations, while revenue tends to be recognized over multiple quarters as a result of procurement and production lead times and the deferral of certain revenue under our revenue recognition policies. Customer delivery schedules on large system orders can also add to this volatility since we generally recognize revenue for new product sales on the date of customer acceptance or the date the contractual customer acceptance provisions lapse. As a result, the fiscal period in which we are able to recognize new product revenue is typically subject to the length of time that our customers require to evaluate the performance of our equipment after shipment and installation, which could cause our quarterly operating results to fluctuate.

The purchasing decisions of our customers are highly dependent on their capacity utilization, which changes when new facilities are put into production, and with the level of demand for solar cells and semiconductors. Purchasing decisions are also impacted by changes in the economies of the countries which our customers serve, as well as the state of the worldwide solar and semiconductor industries. The timing, length and severity of the up-and-down cycles in the solar and semiconductor equipment industries are difficult to predict. The cyclical nature of our marketplace affects our ability to accurately budget our expense levels, which are based in part on our projections of future revenue.

When cyclical fluctuations result in lower than expected revenue levels, operating results are adversely affected. Cost reduction measures may be necessary in order for us to remain competitive and financially sound. During a down cycle, our operating results may be adversely affected if we are unable to make timely adjustments to our cost and expense structure to correspond to the prevailing market conditions; effectively manage the supply chain; and motivate and retain key employees. In addition, during periods of rapid growth, our operating results may be adversely affected if we are unable to increase manufacturing capacity and personnel to meet customer demand, which may require additional liquidity. We can provide no assurance that we can timely and effectively respond to the industry cycles. Our failure to timely and effectively respond to these cyclical changes could have a material adverse effect on our business.

The Company is exposed to risks as a result of ongoing changes specific to the solar industry.

A significant portion of the Company's business is to supply the solar market, which, in addition to the general industry changes described above, is characterized by ongoing changes specific to the solar industry, including:

- the varying energy policies of governments around the world and their influence on the rate of growth of the solar PV market, including the availability and amount of government incentives for solar power such as tax credits, feed-in tariffs, rebates, renewable portfolio standards that require electricity providers to sell a targeted amount of energy from renewable sources, and goals for solar installations on government facilities;
- the need to continually decrease the cost-per-watt of electricity produced by solar PV products to or below competing sources of energy by, among other things, reducing operating costs and increasing throughputs for solar PV manufacturing, and improving the conversion efficiency of solar PV;
- the impact on demand for solar PV products arising from the cost of electricity generated by solar PV compared to the cost of electricity from the existing grid or other energy sources;
- the growing number of solar PV manufacturers and increasing global production capacity for solar PV, primarily in China as a result of increased solar subsidies and lower manufacturing costs;
- tariff and international trade barriers, including without limitation such barriers arising from any trade tensions between the United States and China and potential retaliatory actions;
- the varying levels of operating and industry experience among solar PV manufacturers and the resulting differences in the nature and extent of customer support services requested from the Company;
- challenges associated with marketing and selling manufacturing equipment and services to a diverse and diffuse customer base;
- the cost of polysilicon and other materials;
- access to affordable financing and capital by customers and end-users; and
- an increasing number of local equipment and parts suppliers based in Asia with certain cost and other advantages over suppliers from outside Asia.

In addition, current projections for global solar PV production exceed anticipated near-term end-use demand, which is heavily dependent on installed cost-per-watt, government policies and incentives, and the availability of affordable capital. An oversupply of solar PV may lead customers to delay or reduce investments in manufacturing capacity and new technology, and adversely impact the sales and/or profitability of our products. If the Company does not successfully manage the risks resulting from the ongoing changes occurring in the solar industry, its business, financial condition and results of operations could be materially and adversely affected.

The solar and semiconductor equipment industries are competitive and because we are relatively small in size and have fewer resources compared to our competitors, we may not be able to compete successfully with them.

Our industry includes large manufacturers with substantial resources to support customers worldwide. Our future performance depends, in part, upon our ability to continue to compete successfully in these markets. Some of our competitors are diversified companies having substantially greater financial resources and more extensive research, engineering, manufacturing, marketing and customer service and support capabilities than we can provide. We face competition from companies whose strategy is to provide a broad array of products, some of which compete with the products and services that we offer. These competitors may bundle their products in a manner that may discourage customers from purchasing our products. In addition, we face competition from smaller emerging semiconductor equipment companies whose strategy is to provide a portion of the products and services that we offer often at a lower price than ours and use innovative technology to sell products into specialized markets. Furthermore, we face competition from Chinese equipment manufacturers, including 48th Institute and Sevenstar Electronics, which may receive greater support from Chinese customers and governmental agencies because they are locally based. Loss of competitive position could impair our prices, customer orders, revenue, gross margin and market share, any of which would negatively affect our financial position and results of operations. Our failure to compete successfully with these other companies would seriously harm our business. There is a risk that larger, better-financed competitors will develop and market more advanced products than those that we currently offer, or that competitors with greater financial resources may decrease prices thereby putting us under financial pressure. The occurrence of any of these events could have a negative impact on our revenue and results of operations.

Our reliance on sales to a few major customers and granting credit to those customers places us at financial risk.

We currently sell to a relatively small number of customers, and we expect our operating results will likely continue to depend on sales to a relatively small number of customers for the foreseeable future. Our operating results, therefore, depend on the ability of these customers to sell products that require our equipment in their manufacture. Many of our customer relationships have been developed over a short period of time and certain customers are in their early stages of development. The loss of sales to any of these customers would have a significant negative impact on our business.

Our agreements with these customers may be canceled if we fail to meet certain product specifications, materially breach the agreement, or in the event of bankruptcy, and our customers may seek to renegotiate the terms of current agreements or renewals. We cannot be certain that these customers will generate significant revenue for us in the future nor that these customer relationships will continue to develop. If our relationships with other customers do not continue to develop, we may not be able to expand our customer base or maintain or increase our revenue.

As of September 30, 2015, no single customer represented greater than 10% of accounts receivable. As of September 30, 2014, two customers individually represented 14% and 10% of accounts receivable. A significant change in the liquidity or financial position of any of our customers that purchase large systems could have a material impact on the collectability of our accounts receivable and our future operating results. A concentration of our receivables from one or a small number of customers places us at risk. We attempt to manage this credit risk by performing credit checks, by requiring significant partial payments prior to shipment where appropriate and by actively monitoring collections. We also require letters of credit from certain customers depending on the size of the order, type of customer or its creditworthiness and its country of domicile. Our major customers may seek, and on occasion, may receive pricing, payment, intellectual property-related, or other commercial terms that are less favorable to the Company. If any one or more of our major customers does not pay us or continue business with us, it could adversely affect our financial position and results of operations.

If any of our customers cancels or fails to accept a large system order, our financial position and results of operations could be materially and adversely affected.

Our backlog includes orders for large systems, such as our diffusion furnaces, with system prices of up to and in excess of $1.0 million, depending on the system configuration, options and any special requirements of the customer. 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 revenue or profit from completing these orders. Our financial position and results of operations could be materially and adversely affected should any large systems order be canceled prior to shipment, or not be accepted by the customer. Cancellations may result in inventory that we may not be able to sell or reuse if those products have been tailored for a specific customer's requirements and cannot then be sold without significant incremental cost. We have experienced cancellations in the past. We cannot provide any assurance that we will realize revenue or profit from our backlog or for which period net revenue will be recognized, if ever.

Because we depend on revenue from international customers, our business may be adversely affected by changes in the economies and policies of the countries or regions in which we do business.

During fiscal 2014, 79% of our net revenue came from customers outside of North America. During fiscal 2015, 74% of our net revenue came from customers outside of North America as follows:

- Asia - 60% (including China - 26%, Malaysia 13% and Taiwan - 13%); and
- Europe – 14% (including Germany - 5%).

Each region in the global solar and semiconductor equipment markets exhibits unique characteristics that can cause capital equipment investment patterns to vary significantly from period to period. Our business and results of operations could be negatively affected by periodic local or international economic downturns, trade balance issues and political, social and military instability in countries such as China, India, South Korea, Taiwan and possibly elsewhere. In addition, we face competition from a number of suppliers based in Asia that have certain advantages over suppliers from outside of Asia. These advantages include lower operating, shipping and regulatory costs, proximity to customers, favorable tariffs and other government policies that favor local suppliers. Additionally, the marketing and sale of our products to international markets expose us to a number of risks, including, but not limited, to:

- increased costs associated with maintaining the ability to understand the local markets and follow their trends and customs, as well as develop and maintain effective marketing and distributing presence in various countries;
- the availability of advance payments made by our customers;
- difficulty in providing customer service and support in these markets;
- difficulty in staffing and managing overseas operations;
- longer sales cycles and time collection periods;

- fewer or weaker legal protections for our intellectual property rights;
- failure to develop appropriate risk management and internal control structures tailored to overseas operations;
- difficulty and costs relating to compliance with the different or changing commercial and legal requirements of our overseas markets;
- fluctuations in foreign currency exchange and interest rates, particularly in Asia and Europe;
- longer sales cycles and time collection periods;
- fewer or weaker legal protections for our intellectual property rights;
- failure to obtain or maintain certifications for our products or services in these markets; and
- international trade barriers such as export requirements, tariffs, taxes and other restrictions and expenses.

Our business may be adversely affected by significant exchange rate fluctuations and changes in foreign laws

Our net foreign currency transaction gains or losses were gains of $0.3 million for the fiscal year ended September 30, 2015 and less than $0.1 million for the fiscal year ended September 30, 2014. While our business generally has not been materially affected in the past by currency fluctuations, there is a risk that it may be materially adversely affected in the future, especially as we continue to expand operations into other countries. Such risk includes possible losses due to currency exchange rate fluctuations, possible future prohibitions against repatriation of earnings, or proceeds from disposition of investments. Our wholly-owned subsidiary, Tempress Systems, has conducted its operations in The Netherlands since 1995. In October 2007, we completed our acquisition of R2D, a French company. In December 2014, we acquired SoLayTec with operations in the Netherlands. BTU International, acquired in January 2015, has substantial operations in Shanghai, China. As a result of these acquisitions in Europe and Asia, the risk associated with foreign currency translation gains and losses has increased. Operations of these companies are subject to the taxation policies, employment and labor laws, transportation regulations, import and export regulations and tariffs, possible foreign exchange restrictions and international monetary fluctuations. Changes in such laws and regulations may have a material adverse effect on our revenue and costs. We are subject to the Foreign Corrupt Practices Act, which may place us at a competitive disadvantage to foreign companies that are not subject to similar regulations. We could be adversely affected by violations of applicable anti-corruption laws or violations of our internal policies designed to ensure ethical business practices.

We are exposed to risks associated with an uncertain global economy.

Uncertain global economic conditions and slowing growth in China, Europe and the United States, along with difficulties in the financial markets, national debt concerns in various regions and government austerity measures, pose challenges to the industries in which we operate. Economic uncertainty and related factors, including unemployment, inflation and fuel prices, exacerbate negative trends in business and consumer spending and may cause our customers to push out, cancel, or refrain from placing orders for equipment or services. This may, in turn, reduce our net sales, reduce backlog, and affect our ability to convert backlog to sales. Uncertain market conditions, difficulties in obtaining capital, or reduced profitability may also cause some customers to scale back operations, exit businesses, merge with other manufacturers, or file for bankruptcy protection and potentially cease operations, which can also result in lower sales and/or additional inventory or bad debt expense for us. These conditions may similarly affect key suppliers, impairing their ability to deliver parts and potentially causing delays or added costs for delivery of our products. In addition, these conditions may lead to strategic alliances by, or consolidation of, other equipment manufacturers, which could adversely affect our ability to compete effectively. Uncertainty about future economic and industry conditions also makes it more challenging for us to forecast our operating results, make business decisions, and identify and prioritize the risks that may affect our businesses, sources and uses of cash, financial condition and results of operations. We may be required to implement additional cost reduction efforts, including restructuring activities, and/or modify our business model, which may adversely affect our ability to capitalize on opportunities in a market recovery. If we do not timely and appropriately adapt to changes resulting from the uncertain macroeconomic environment and industry conditions, or to difficulties in the financial markets, our business, financial condition and results of operations may be materially and adversely affected.

Natural disasters, outbursts of infectious diseases, terrorist attacks and threats or actual war may negatively impact all aspects of our operations, revenue, costs and stock price.

Natural disasters such as earthquakes, floods, severe weather conditions or other catastrophic events, or outbreaks of infectious diseases may severely affect our operations or those of our suppliers and customers. Such catastrophic events or future disasters may have a material adverse effect on our business.

Acts of terrorism, as well as events occurring in response or connection to them, including potential future terrorist attacks, rumors or threats of war, actual military conflicts or trade disruptions impacting our domestic or foreign customers or suppliers of parts, components and subassemblies, may negatively impact our operations by causing, among other things, delays or losses in the delivery of supplies or finished goods and decreased sales of our products. More generally, any of these events could cause consumer confidence and spending to decrease or result in increased volatility in the worldwide financial markets and economy. They could also result in economic recession. Any of these occurrences could have a significant adverse impact on our financial position and results of operations.

If demand declines for horizontal diffusion furnaces and related equipment, or for other solar industry products, our financial position and results of operations could be materially and adversely affected.

The revenue of our solar equipment business is comprised primarily of sales of horizontal diffusion furnaces and our automation products. Our automation products are useable almost exclusively with horizontal diffusion furnaces. A significant part of our growth strategy involves expanding our sales to the solar industry. The solar industry is subject to risks relating to industry shortages of polysilicon, (which we discuss further herein), the continuation of government incentives, the availability of specialized capital equipment, global energy prices and rapidly changing technologies offering alternative energy sources and manufacturing processes. If the demand for solar industry products declines, the demand by the solar industry for our products would also decline and our financial position and results of operations would be harmed.

There is a trend in the semiconductor industry, related to the trend to produce smaller chips on larger wafers, towards the use in semiconductor manufacturing facilities of newer technology, such as vertical diffusion furnaces. Vertical diffusion furnaces are more efficient than horizontal diffusion furnaces in certain manufacturing processes for smaller chips on larger wafers. To the extent that the trend to use vertical diffusion furnaces over horizontal diffusion furnaces continues, our revenue may decline and our corresponding ability to generate income may be adversely affected.

We may not be able to manage the business successfully through severe business cycles.

We may be unable to successfully expand or contract our business to meet fluctuating demands. Market fluctuations place significant strain on our management, personnel, systems and resources. In fiscal years 2010 and 2011, we purchased additional equipment and real estate to significantly expand our manufacturing capacity and hired additional employees to support an increase in manufacturing, field service, research and development and sales and marketing efforts. During fiscal years 2012 through 2015, the rapid decline in demand has caused us to reduce headcount in manufacturing and field service and to reduce certain research and development costs. To successfully manage our growth, we believe we must effectively:

- maintain the appropriate number and mix of permanent, part-time, temporary and contract employees to meet the fluctuating demand for our products;
- train, integrate and manage personnel, particularly process engineers, field service engineers, sales and marketing personnel, and financial and information technology personnel to maintain and improve skills and morale;
- leverage our expanded global sales and service presence through the acquisition of BTU International
- retain key management and augment our management team, particularly if we lose key members;
- continue to enhance our customer resource and manufacturing management systems to maintain high levels of customer satisfaction and efficiencies, including inventory control;
- implement and improve existing and new administrative, financial and operations systems, procedures and controls;
- expand and upgrade our technological capabilities; and
- manage multiple relationships with our customers, suppliers and other third parties.

We may encounter difficulties in effectively managing the budgeting, forecasting and other process control issues presented by rapidly changing cycles. If we are unable to manage these cycles effectively, we may not be able to take advantage of market opportunities, develop new technologies for the production of solar cells and other products, satisfy customer requirements, execute our business plan or respond to competitive pressures.

If governmental subsidies decline or if demand for solar energy declines, our Company may not be able to continue making substantial investments in our organization to develop new products for the solar industry which may have a material adverse effect on our business.

The solar energy sector is dependent upon governmental subsidies, some of which have been scaled back and are not guaranteed to continue. A further decline in these subsidies could reduce our ability to make investments in our Company and grow our business in this market. The solar industry is currently facing overcapacity in production. This overcapacity has a significant adverse impact on the demand for the capital equipment we supply to this industry. As a result of these risks there is no assurance that we will realize a return on these investments which may have a material effect on our business.

We are dependent on key personnel for our business and product development and sales, and any loss of our key personnel to competitors or other industries could dramatically impact our ability to continue operations.

Historically, our product development has been accomplished through cooperative efforts with key customers. Our relationships with some customers are substantially dependent on personal relations and other contacts established by either our Executive Chairman or our President and Chief Executive Officer. Our relationships with major European customers that are strategically important to the development and testing of our N-type technology solar diffusion furnace and PECVD equipment are substantially dependent upon our President and Chief Executive Officer, Mr. Fokko Pentinga. While there can be no assurance that such relationships will continue, such cooperation is expected to continue to be a significant element in our future development efforts.

Furthermore, it may not be feasible for any successor to maintain the same business relationships that our Executive Chairman, Mr. J.S. Whang, has established. Even though we are the beneficiary of life insurance policies on the life of Mr. Whang, in the amount of $2.0 million, there is no assurance that such amount will be sufficient to cover the cost of finding and hiring a suitable replacement for Mr. Whang. If we were to lose the services of either Mr. Whang or Mr. Pentinga for any reason, it could have a material adverse effect on our business.

We also depend on the management efforts of our officers and other key personnel and on our ability to attract and retain key personnel. During times of strong economic growth, competition is intense for highly skilled employees. There can be no assurance that we will be successful in attracting and retaining such personnel or that we can avoid increased costs in order to do so. There can be no assurance that employees will not leave Amtech or compete against us. Our failure to attract additional qualified employees, or to retain the services of key personnel, could negatively impact our financial position and results of operations.

We may not be able to keep pace with the rapid change in the technology needed to meet customer requirements.

Success in the solar and semiconductor equipment industries depends, in part, on continual improvement of existing technologies and rapid innovation of new solutions. For example, the solar industry continues to develop new technologies to increase the efficiencies and lower the costs of solar cells. Also, the semiconductor industry continues to shrink the size of semiconductor devices. These and other evolving customer needs require us to continually respond with new product developments.

Technical innovations are inherently complex and require long development cycles and appropriate professional staffing. Our future business success depends on our ability to develop and introduce new products, or new uses for existing products, that successfully address changing customer needs and win market acceptance. We must also manufacture these new products in a timely and cost-effective manner. To realize future growth through technical innovations in the solar and semiconductor industries, we must either acquire the technology through product development, merger and acquisition activity or through the licensing of products from our technology partners. Potential disruptive technologies could have a material adverse effect on our business if we do not successfully develop and introduce new products, technologies or uses for existing products in a timely manner and continually find ways of reducing the cost to produce them in response to changing market conditions or customer requirements.

Acquisitions can result in an increase in our operating costs, divert management's attention away from other operational matters and expose us to other risks associated with acquisitions.

We continually evaluate potential acquisitions and consider acquisitions an important part of our future growth strategy. In the past, we have made acquisitions of, or significant investments in, other businesses with synergistic products, services and technologies and plan to continue to do so in the future. Acquisitions, including our acquisition of R2D, SoLayTec and BTU, involve numerous risks, including, but not limited to:

- difficulties and increased costs in connection with integration of geographically diverse personnel, operations, technologies and products of acquired companies;
- diversion of management's attention from other operational matters;
- the potential loss of our key employees and the key employees of acquired companies;
- the potential loss of our key customers and suppliers and the key customers and suppliers of acquired companies;
- disagreement with joint venture or strategic alliance partners;
- failure to comply with laws and regulations as well as industry or technical standards of the overseas markets into which we expand;
- our inability to achieve the intended cost efficiency, level of profitability or other intended strategic goals for the acquisitions, strategic investments, joint ventures or other strategic alliances;
- lack of synergy, or inability to realize expected synergies, resulting from the acquisition;
- the risk that the issuance of our common stock, if any, in an acquisition or merger could be dilutive to our shareholders, if anticipated synergies are not realized;
- acquired assets becoming impaired as a result of technological advancements or worse-than-expected performance of the acquired company;
- inability to complete proposed transactions as anticipated or at all and any ensuing obligation to pay a termination fee and any other associated transaction expenses;
- the potential impact of the announcement or consummation of a proposed transaction on relationships with third parties;
- potential changes in our credit rating, which could adversely impact the Company’s access to and cost of capital;
- potential litigation brought against the Company that may arise in connection with an acquisition;
- reductions in cash balances and/or increases in debt obligations to finance activities associated with a transaction, which reduce the availability of cash flow for general corporate or other purposes;
- inadequacy or ineffectiveness of an acquired company’s internal financial controls, disclosure controls and procedures, and/or environmental, health and safety, anti-corruption, human resource, or other policies or practices; and
- unknown, underestimated and/or undisclosed commitments or liabilities.

Our financial position and results of operations may be materially harmed if our R&D investments do not result in timely new products that can be sold at favorable prices and obtain market acceptance.

The rapid change in technology in our industry requires that we continue to make investments in research and development in order to enhance the performance, functionality and cost of ownership of our products to keep pace with competitive products and to satisfy customer demands for improved performance, features and functionality. There can be no assurance that revenue from future products or enhancements will be sufficient to recover the development costs associated with such products or enhancements, or that we will be able to secure the financial resources necessary to fund future development. Research and development costs are typically incurred before we confirm the technical feasibility and commercial viability of a product, and not all development activities result in commercially viable products. We cannot ensure that products or enhancements will receive market acceptance, or that we will be able to sell these products at prices that are favorable to us. In addition, from time to time we receive funding from government agencies for certain strategic development programs to increase our research and development resources and address new market opportunities. As a condition to this government funding, we may be subject to certain record-keeping, audit, intellectual property rights-sharing and/or other obligations. If we do not successfully manage risks resulting from diversification and entry into new markets and industries, our business, financial condition and results of operations could be materially and adversely affected.

If we fail to maintain optimal inventory levels, our inventory obsolescence costs could increase, our liquidity could be significantly reduced or our revenue could decrease, any of which could have a material adverse effect on our business, financial condition and results of operations.

While we must maintain sufficient inventory levels to operate our business successfully and meet our customers' demands, accumulating excess inventory may have a significant unfavorable impact on our operating results and financial condition. Changing customer demands, supplier lead-times and uncertainty surrounding new product launches expose us to risks associated with excess inventory or shortages. Demand for products can change rapidly and unexpectedly. Our products are manufactured using a wide variety of purchased parts and raw materials and we must maintain sufficient inventory levels to meet the demand for the products we sell. During peak years in the solar and semiconductor industries, increases in demand for capital equipment results in longer lead-times for many important system components. Future increases in demand could cause delays in meeting shipments to our customers. Because of the variability and uniqueness of customer orders, we try to avoid maintaining an extensive inventory of materials for manufacturing. However, long lead-times for important system components during industry upturns sometimes require us to carry higher levels of inventory and make larger purchase commitments than we would otherwise make. We may be unable to sell sufficient quantities of products in the event that market demand changes, resulting in increased risk of excess inventory that could lead to obsolescence or reduced liquidity as we fulfill our purchase commitments. On the other hand, if we do not have a sufficient inventory of a product to fulfill customer orders, we may lose orders or customers, which may adversely affect our business, financial condition and results of operations. We cannot assure that we can accurately predict market demand and events to avoid inventory shortages or inventories and purchase commitments in excess of our current requirements.

Supplier capacity constraints, supplier production disruptions, supplier quality issues or price increases could increase our operating costs and adversely impact the competitive positions of our products.

We use a wide range of materials and services in the production of our products including custom electronic and mechanical components, and we use numerous suppliers of materials. Although we make what we believe are reasonable efforts to ensure that parts are available from multiple suppliers, this may not always be practical or possible. Accordingly, some key parts are being procured from a single supplier or a limited group of suppliers. Key vendors include suppliers of controllers, quartz and silicon carbide for our diffusion systems, two steel mills capable of producing the types of steel to the tolerances needed for our wafer carriers, an injection molder that molds plastic inserts into our steel carriers, an adhesive manufacturer that supplies the critical glue and a pad supplier that produces a unique material used in the manufacture of our polishing templates. We also rely on third parties for certain machined parts, steel frames and metal panels and other components used particularly in the assembly of solar and semiconductor production equipment.

Because the selling price of some of our systems exceeds $1.0 million, the delay in the shipment of even a single system could cause significant variations in our quarterly revenue. In the event of supplier capacity constraints, production disruptions, or failure to meet our requirements concerning quality, cost or performance factors, we may transfer our business to alternative sourcing which could lead to further delays, additional costs or other difficulties. If, in the future, we do not receive, in a timely and cost-effective manner, a sufficient quantity and quality of parts to meet our production requirements, our financial position and results of operations may be materially and adversely affected.

If the practice of requiring certain customers to make advance payments when they place orders with us ceases, or if our customers fail to meet their payment obligations, we may experience increased needs to finance our working capital requirements and may be exposed to increased credit risk, which may materially and adversely affect our financial position and results of operations.

We require many of our customers to make an advance payment representing a percentage of their orders, which is a business practice that helps us manage our accounts receivable, prepay our suppliers and reduce the amount of funds that we need to finance our working capital requirements. We cannot assure that this practice will not cease in the future. If this practice ceases, we may not be able to secure additional financing on a timely basis or on terms acceptable to us or at all. Currently, a significant portion of our revenue is derived from credit sales to our customers, generally with payments due within less than three months after shipment. As a result, any future decrease in the use of cash advance payments by our customers may negatively impact our short-term liquidity and, coupled with increased credit sales to a small number of major customers, expose us to additional and more concentrated credit risk since a significant portion of our outstanding accounts receivable is derived from sales to a limited number of customers. We may need to from time to time commence legal proceedings to recover accounts receivables from customers, which may also increase our cost. Although we have been able to maintain adequate working capital primarily through cash from operations and a follow-on offering, any failure by our customers to settle outstanding accounts receivable in the future could materially and adversely affect our cash flow, financial condition and results of operations.

We may not be able to generate sufficient cash flows or obtain access to external financing necessary to fund and expand our operations as planned.

Cash flows may be insufficient to provide adequate working capital in the future and we may require additional financing for further implementation of our growth plans. There is no assurance that any additional financing will be available if and when required, or, even if available, that it would not materially dilute the ownership percentage of the then existing shareholders, result in increased expenses or result in covenants or special rights that would restrict our operations.

We may incur impairment charges to goodwill or long-lived assets.

We have acquired, and may acquire in the future, goodwill and other long-lived intangible assets. Goodwill and purchased intangible assets with indefinite useful lives are not amortized, but are reviewed for impairment at least annually, typically during the fourth quarter of each fiscal year, and more frequently when events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. The review compares the fair value for each of our reporting units to its associated carrying value, including goodwill. Factors that could lead to impairment of goodwill and intangible assets include adverse industry or economic trends, reduced estimates of future cash flows, declines in the market price of our common stock, changes in our strategies or product portfolio, and restructuring activities. Our valuation methodology for assessing impairment requires management to make judgments and assumptions based on historical experience and projections of future operating performance. We may be required to record a charge to earnings during the period in which an impairment of goodwill or amortizable intangible assets is determined to exist, which could materially and adversely affect our results of operations.

Most of our production, storage, and administrative facilities are located in close proximity to one another in The Netherlands. Any damage or disruption at these facilities could have a material adverse effect on our business, financial condition and results of operations.

Our production, storage and administrative facilities are located in close proximity to one another in The Netherlands. A natural disaster or other unanticipated catastrophic event, including flood, power interruption, and war, could significantly disrupt our ability to manufacture our products and operate our business. If any of our productions facilities or equipment were to experience any significant damage or downtime, we would be unable to meet our production targets, our business would suffer, and it could have a material adverse effect on our business, financial condition and results of operations.

If third parties violate our proprietary rights, in which we have made significant investments, such events could result in a loss of value of some of our intellectual property or costly litigation.

Our success is dependent in part on our technology and other proprietary rights. We own various United States and international patents and have additional pending patent applications relating to some of our products and technologies. Protecting and defending our patents domestically, and especially internationally, is costly. In addition, the process of seeking patent protection is lengthy and expensive. Therefore, we cannot be certain that pending or future applications will actually result in issued patents, or that issued patents will be of sufficient scope or strength to provide meaningful protection or commercial advantage to us. Other companies and individuals, including our larger competitors, may develop technologies that are similar or superior to our technology or design around the patents we own or license. We also maintain trademarks on certain of our products and claim copyright protection for certain proprietary software and documentation. However, we can give no assurance that our trademarks and copyrights will be upheld or will successfully deter infringement by third parties. The patent covering technology that we license and use in our manufacture of insert carriers has expired, which may have the effect of diminishing or eliminating any competitive advantage we may have with respect to this manufacturing process.

We attempt to protect our trade secrets and other proprietary information through confidentiality agreements with our customers, suppliers, employees and consultants and through other security measures. We also maintain exclusive and non-exclusive licenses with third parties for the technology used in certain products. However, these employees, consultants and third parties may breach these agreements, and we may not have adequate remedies for wrongdoing. In addition, the laws of certain territories, such as China, in which we develop, manufacture or sell our products may not protect our intellectual property rights to the same extent as do the laws of the United States.

We may face intellectual property infringement claims that could be time-consuming and costly to defend and could result in our loss of significant rights and the assessment of treble damages.

From time to time, we have received communications from other parties asserting the existence of patent rights or other intellectual property rights that they believe cover certain of our products, processes, technologies or information. In such cases, we evaluate our position and consider the available alternatives, which may include seeking licenses to use the technology in question on commercially reasonable terms or defending our position. We cannot ensure that licenses can be obtained, or if obtained will be on acceptable terms, or that litigation or other administrative proceedings will not occur.

Some of these claims may lead to litigation. We cannot assure that we will prevail in these actions, or that other actions alleging misappropriation or misuse by us of third-party trade secrets, infringement by us of third-party patents and trademarks or the validity of our patents, will not be asserted or prosecuted against us. Intellectual property litigation, regardless of outcome, is expensive and time-consuming, could divert management's attention from our business and have a material negative effect on our business, operating results or financial condition. If there is a successful claim of infringement against us, we may be required to pay substantial damages (including treble damages if we were to be found to have willfully infringed a third party's patent) to the party claiming infringement, incur costs to develop non-infringing technology, stop selling or using technology that contains the allegedly infringing intellectual property or, enter into royalty or license agreements that may not be available on acceptable or commercially practical terms, if at all. Our failure to develop non-infringing technologies or license the proprietary rights on a timely basis could harm our business. Parties making infringement claims on future issued patents may be able to obtain an injunction that would prevent us from selling or using our technology that contains the allegedly infringing intellectual property, which could harm our business.

Failure to manage our growth, or otherwise develop appropriate internal organizational structures, internal control environment and risk monitoring and management systems in line with our fast growth could result in a material adverse effect on our business, prospects, financial condition and results of operations.

Our business and operations have been expanding rapidly. Significant management resources must be expended to develop and implement appropriate structures for internal organization and information flow, an effective internal control environment and risk monitoring and management systems in line with our fast growth as well as to hire and integrate qualified employees into our organization. It is challenging for us to hire, integrate and retain qualified employees in key areas of operations, such as engineers and technicians who are familiar with the industries. In addition, disclosure and other ongoing obligations associated with being a public company further increase the challenges to our finance, legal and accounting team. It is possible that our existing risk monitoring and management system could prove to be inadequate. If we fail to appropriately develop and implement structures for internal organization and information flow, an effective internal control environment and a risk monitoring and management system, we may not be able to identify unfavorable business trends, administrative oversights or other risks that could materially and adversely affect our business, prospects, financial condition and results of operations.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results or prevent fraud. As a result, our stockholders could lose confidence in our financial reporting, which could have a negative impact on our business and the price of our common stock.

To maintain compliance with Section 404 of the Sarbanes-Oxley Act of 2002 we have assessed, strengthened and tested our system of internal controls. Despite our conclusion that our system of internal controls was effective as of September 30, 2015, we must continue to maintain our processes and systems and adapt them to changes in our business as it evolves. This continuous process of maintaining and adapting our internal controls and complying with Section 404 is expensive, time-consuming and requires significant management attention. We cannot be certain that our internal control measures will continue to provide adequate control over our financial reporting processes and ensure compliance with Section 404. Furthermore, as our business changes, our internal controls may become more complex and we may require significantly more resources to ensure our internal controls remain effective. In addition, if we reduce a portion of our workforce, as we have done recently, our ability to adequately maintain our internal controls may be adversely impacted. Failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to meet our reporting obligations. If we or our independent registered public accounting firm identify material weaknesses, the disclosure of that fact may result in negative investor perceptions of our Company and could cause a decline in the market price of our stock.

Unsatisfactory performance of, or defects in our products may cause us to incur additional warranty expenses, damage our reputation and cause our sales to decline.

As of September 30, 2015, 2014 and 2013, our accrued warranty costs amounted to $0.8 million, $0.6 million and $1.5 million, respectively. Our assumptions regarding the durability and reliability of our products may not be accurate, and because our products have relatively long warranty periods, we cannot assure you that the amount of accrued warranty by us for our products will be adequate in light of the actual performance of our products. If we experience a significant increase in warranty claims, we may incur significant repair and replacement costs associated with such claims. Furthermore, widespread product underperformances or failures will damage our reputation and customer relationships and may cause our sales to decline, which in turn could have a material adverse effect on our financial condition and results of operations.

We face the risk of product liability claims or other litigation, which could be expensive and may divert management's attention from running our business.

The Company and its subsidiaries are defendants from time to time in actions for matters arising out of our business operations. The manufacture and sale of our products, which, in our customers' operations, involve toxic materials and robotic machinery, involve the risk of product liability claims. In addition, a failure of one of our products at a customer site could interrupt the business operations of our customer. Our existing insurance coverage limits may not be adequate to protect us from all liabilities that we might incur in connection with the manufacture and sale of our products if a successful product liability claim or series of product liability claims were brought against us. We may also be involved in other legal proceedings or claims and experience threats of legal action from time to time in the ordinary course of our business.

Where appropriate, we intend to vigorously defend all claims. However, any actual or threatened claims, even if not meritorious or material, could result in the expenditure of significant financial and managerial resources. The continued defense of these claims and other types of lawsuits could divert management's attention away from running our business. In addition, required amounts to be paid in settlement of any claims, and the legal fees and other costs associated with their defense or also settlement, cannot be estimated and could, individually or in the aggregate, materially harm our financial condition. We may also experience higher than expected warranty claims.

We are subject to environmental regulations, and our inability or failure to comply with these regulations could result in significant costs or the suspension of our ability to operate portions of our business.

We are subject to environmental regulations in connection with our business operations, including regulations related to manufacturing and our customers' use of our products. From time to time, we receive notices regarding these regulations. It is our policy to respond promptly to these notices and to take any necessary corrective action. Our failure or inability to comply with existing or future environmental regulations could result in significant remediation liabilities, the imposition of fines and/or the suspension or termination of development, manufacturing or use of certain of our products or facilities, each of which could damage our financial position and results of operations.

Regulations related to conflict minerals could adversely impact our business.

The Dodd-Frank Wall Street Reform and Consumer Protection Act contains provisions to improve transparency and accountability concerning the supply of certain minerals, known as conflict minerals, originating from the Democratic Republic of Congo (DRC) and adjoining countries. As a result, the SEC has adopted annual disclosure and reporting requirements for those companies who use conflict minerals mined from the DRC and adjoining countries in their products. These new requirements require companies to conduct due diligence efforts to determine whether products contain such conflict minerals, with initial disclosure requirements beginning in May of 2014. Our supply chain is complex and we may be unable to verify the origins for all metals used in our products. As a result, we may be unable to certify that our products are conflict mineral free.

Our results of operations are difficult to predict, and if we do not meet the market expectations, the price of the our stock will likely decline.

Our results of operations are difficult to predict and have fluctuated from time to time in the past. We expect that our results of operations may continue to fluctuate from time to time in the future. It is possible that our results of operations in some reporting periods will be below market expectations. If our results of operations for a particular reporting period are lower than the market expectations for such reporting period, investors may react negatively, and as a result, the price of our stock may materially decline.

Information security breaches or failures of our information technology systems may have a negative impact on our operations and our reputation.

We may be subject to information security breaches or failures of our information technology systems caused by advanced persistent threats, unauthorized access, sabotage, vandalism, terrorism or accident. Compromises and failure to our information technology networks and systems could result in unauthorized release of our confidential or proprietary information, or that of our customers and suppliers, as well as employee personal data. The costs to protect against or alleviate against breaches and systems failures require significant human and financial capital expenditures, which in turn could potentially disrupt our continuing operations, increase our liability as a result of compromises to personally identifiable information, and may lead to a material and adverse effect on our financial reporting, reputation and business.

The Company's income taxes are subject to variables beyond our control.

The Company's net income and cash flow may be adversely affected by conditions affecting income taxes which are outside the Company's control. Examples of the potential uncontrollable circumstances that could affect our tax rate:

- The Company sells and operates globally in the United States, Europe and Asia. Disagreement could occur on the jurisdiction of income and taxation among different governmental tax authorities. Potential areas of dispute may include transfer pricing, intercompany charges and intercompany balances.
- The Company is subject to a China withholding tax on certain non-tangible charges made under our transfer pricing agreements. The interpretation of what charges are subject to the tax and when the liability for the tax occurs has varied and could change in the future.
- Tax rates may increase and, therefore, have a material adverse effect on our earnings and cash flows.

Securities litigation brought against the Company; including litigation related to the BTU acquisition could cause the Company to incur substantial costs and divert management's attention and resources

In the past, securities class action litigation often has been brought against a Company following periods of volatility in the market price of its securities or in connection with strategic transactions. The Company may in the future be the target of securities litigation. Any securities litigation could result in substantial costs and could divert the attention and resources of the Company's management.

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 were filed in the Court of Chancery of the State of Delaware (together, the "Stockholder Actions"). 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 January 16, 2015, the Company and BTU, along with the other defendants named therein, entered into a memorandum of understanding (the "MOU") to settle the Stockholder Actions. Pursuant to the MOU, the parties to the Stockholder Actions agreed to resolve the claims alleged and the Company and BTU agreed to make certain additional disclosures regarding the merger. On June 22, 2015, the Company and BTU, along with the other defendants named therein, filed a Stipulation and Agreement of Compromise and Settlement (the "Stipulation of Settlement") with the Court of Chancery in the State of Delaware to memorialize the MOU. The Stipulation of Settlement provides for a release of all claims against the Company and BTU, along with the other defendants named therein, subject to an exception for certain securities law claims. In addition, the Stipulation of Settlement provides that BTU will be responsible for the payment of certain amounts in plaintiffs' attorney fees and expenses in connection with the settlement. The Stipulation of Settlement is subject to court approval. The Company and BTU entered into the Stipulation of Settlement solely to avoid the costs, risks and uncertainties inherent in litigation and without admitting any liability or wrongdoing. There can be no assurance that the court will approve the Stipulation of Settlement. In such event, the proposed settlement as contemplated by the Stipulation of Settlement may be terminated.

These Stockholder Actions may cause the company to incur substantial costs and divert management's attention from operational matters. Additionally, no outcome is certain, so additional harm could potentially result to the Company from this litigation.

Our officers, directors, and largest stockholders could choose to act in their best interests and not necessarily those of our other stockholders.

Our directors, executive officers and holders of five percent or more of our outstanding common stock and their affiliates represent a significant portion of our common stock held as of September 30, 2015, and, therefore, have significant influence over the management and corporate policies of the Company. These stockholders have significant influence over all matters submitted to our stockholders, including the election of our directors and approval of business combinations, and could potentially initiate or delay, deter or prevent a change of control of our company. Circumstances may occur in which the interests of these stockholders may conflict with the interests of the Company or those of our other stockholders, and these stockholders may cause the Company to take actions that align with their interests. Should conflicts of interest arise, we can provide no assurance that these stockholders would act in the best interests of our other stockholders or that any conflicts of interest would be resolved in a manner favorable to our other stockholders. In addition, involvement of certain activist stockholders may impact our ability to recruit and retain talent or otherwise distract management or make decisions that we believe are in the long-term interest of all shareholders.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We believe that our properties are adequate for our current needs. In addition, we believe that adequate space can be obtained to meet our foreseeable business needs. The following chart identifies the principal properties which we own or lease.

Location	Use	Size
Corporate		
Tempe, AZ	Corporate	15,000 sf
Solar Equipment Segment		
Vaassen, The Netherlands	Office, Warehouse & Mfg.	54,000 sf
Vaassen, The Netherlands	Warehouse	23,000 sf
Clapiers, France	Office, Mfg. & Warehouse	21,000 sf
Semiconductor Equipment Segment		
N. Billerica, MA	Office, Mfg. & Warehouse	150,000 sf
N. Billerica, MA	Office, Mfg. & Warehouse	17,000 sf
Ashvale, Surrey, U.K.	Office	1,900 sf
Shanghai, China	Office	1,600 sf
Shanghai, China	Office, Mfg. & Warehouse	45,000 sf
Shanghai, China	Office & Warehouse	4,500 sf
Singapore	Office	1,600 sf
Penang, Malaysia	Office	1,570 sf
Polishing Supplies Segment		
Carlisle, PA	Office & Mfg.	22,000 sf

ITEM 3. LEGAL PROCEEDINGS

The Company and its subsidiaries are defendants from time to time in actions for matters arising out of their business operations. 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 January 16, 2015, the Company and BTU, along with the other defendants named therein, entered into a memorandum of understanding (the "MOU") to settle the Stockholder Actions. Pursuant to the MOU, the parties to the Stockholder Actions agreed to resolve the claims alleged and the Company and BTU agreed to make certain additional disclosures regarding the merger. On June 22, 2015, the Company and BTU, along with the other defendants named therein, filed a Stipulation and Agreement of Compromise and Settlement with the Delaware Court to memorialize the MOU. On November 6, 2015, the Company and BTU, along with the other defendants named therein, filed an Amended Stipulation and Agreement of Compromise and Settlement (the "Amended Stipulation of Settlement") with the Delaware Court. The Amended Stipulation of Settlement provides for a release of all claims against the Company and BTU, along with the other defendants named therein, subject to an exception for certain securities law claims. In addition, the Amended Stipulation of Settlement provides that BTU, its insurer(s), or its successor(s) in interest will be responsible for the payment of certain amounts in plaintiffs' attorney fees and expenses in connection with the settlement, and that the defendants in the Stockholder Actions agree not to oppose an application to the Delaware Court for fees and expenses not to exceed $325,000. The Amended Stipulation of Settlement is subject to court approval. The Company and BTU entered into the Amended Stipulation of Settlement solely to avoid the costs, risks, and uncertainties inherent in litigation and without admitting any liability or wrongdoing. There can be no assurance that the court will approve the Amended Stipulation of Settlement. In such event, the proposed settlement as contemplated by the Amended Stipulation of Settlement may be terminated.

These Stockholder Actions may cause the company to incur substantial costs and divert management's attention from operational matters. Additionally, no outcome is certain, so additional harm could potentially result to the Company from this litigation.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

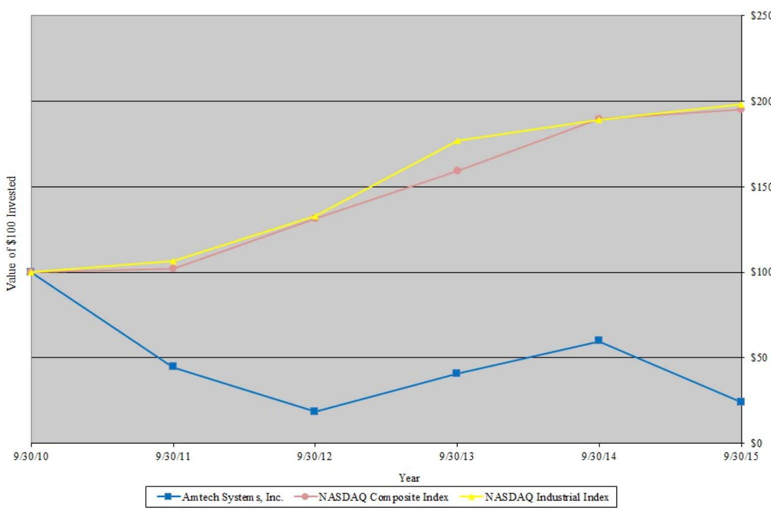
MARKET INFORMATION

Our common stock, par value $0.01 per share ("Common Stock"), is trading on the NASDAQ Global Market (formerly the NASDAQ National Market), under the symbol "ASYS." On November 12, 2015, the closing price of our Common Stock as reported on the NASDAQ Global Market was $5.28 per share. The following table sets forth the high and low bid price at which the shares of our Common Stock traded for each quarter of fiscal 2015 and 2014, as reported by the NASDAQ Global Market.

	Fiscal 2015		Fiscal 2014	
	High	Low	High	Low
First quarter	$ 11.15	$ 7.52	$ 9.21	$ 6.19
Second quarter	$ 12.59	$ 7.96	$ 13.74	$ 6.87
Third quarter	$ 12.93	$ 9.84	$ 13.00	$ 7.58
Fourth quarter	$ 11.11	$ 4.27	$ 12.37	$ 8.47

COMPARISON OF STOCK PERFORMANCE

The following line graph compares cumulative total shareholder return, assuming reinvestment of dividends, for: the Company's Common Stock, the NASDAQ Composite Index and the NASDAQ Industrial Index. Because the Company did not pay dividends on its Common Stock during the measurement period, the calculation of the cumulative total shareholder return on the Company's Common Stock did not include dividends. The following graph assumes that $100 was invested on October 1, 2010.



HOLDERS

As of November 12, 2015, there were 604 shareholders of record of our Common Stock. Based upon a recent survey of brokers, we estimate there were approximately an additional 4,920 beneficial shareholders who held shares in brokerage or other investment accounts as of that date.

DIVIDENDS

We have never paid dividends on our Common Stock. Our present policy is to apply cash to investment in product development, acquisition or expansion; consequently, we do not expect to pay dividends on Common Stock in the foreseeable future.

SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS

The following table sets forth certain information, as of September 30, 2015, concerning outstanding options and rights to purchase Common Stock granted to participants in all of the Company's equity compensation plans and the number of shares of Common Stock remaining available for issuance under such equity compensation plans.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders (1)	1,627,477	$ 9.11	1,083,638
Equity compensation plans not approved by security holders	—		—
Total	1,627,477		1,083,638

(1) Represents the 1998 Employee Stock Option Plan, the 2007 Employee Stock Incentive Plan and the Non-Employee Director Stock Option Plan and any respective amendments to each thereto.

COMPANY PURCHASES OF EQUITY SECURITIES

There were no purchases of equity securities in fiscal 2015.

ITEM 6. SELECTED FINANCIAL DATA

This selected financial data should be read in conjunction with Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," and our consolidated financial statements (including the related notes thereto) contained elsewhere in this report.

	Years Ended September 30,				
	2015	2014	2013	2012	2011
Operating Data:					
Net revenue	$ 104,883	$ 56,501	$ 34,798	$ 81,539	$ 246,705
Gross profit	$ 27,008	$ 11,626	$ 4,313	$ 9,193	$ 90,657
Operating income (loss) (1)	$ (13,521)	$ (13,089)	$ (19,994)	$ (32,984)	$ 38,279
Net income (loss) attributable to Amtech Systems, Inc. (2) (3)	$ (7,771)	$ (13,047)	$ (20,069)	$ (23,031)	$ 22,882
Earnings (loss) per share attributable to Amtech Systems, Inc.:					
Basic earnings (loss) per share	$ (0.65)	$ (1.34)	$ (2.11)	$ (2.43)	$ 2.41
Diluted earnings (loss) per share	$ (0.65)	$ (1.34)	$ (2.11)	$ (2.43)	$ 2.34
Order backlog	$ 34,589	$ 28,522	$ 26,766	$ 18,703	$ 85,892
Balance Sheet Data:					
Cash and cash equivalents	$ 25,852	$ 27,367	$ 37,197	$ 46,726	$ 67,382
Working capital	$ 46,331	$ 32,289	$ 42,861	$ 58,832	$ 89,797
Total assets	$ 125,456	$ 89,904	$ 110,947	$ 129,022	$ 205,865
Total current liabilities	$ 39,371	$ 33,136	$ 41,334	$ 42,611	$ 80,794
Total equity	$ 72,647	$ 53,588	$ 66,803	$ 84,051	$ 122,331

(1) Includes $0.1 million, $0.3 million and $3.7 million of expense related to inventory write-downs in fiscal 2015, 2014 and 2013, respectively. Includes $12.8 million of expense related to inventory write-downs and loss contracts for inventory purchase commitments, and $5.4 million of impairment charges in fiscal 2012.

(2) Includes $1.3 million, $1.7 million, $2.0 million, $5.6 million and $0.9 million of losses in fiscal 2015, 2014, 2013, 2012 and 2011, respectively, resulting from the 55% controlling interest in Kingstone acquired February 18, 2011 and the 51% interest in SoLayTec acquired December 24, 2014.

(3) Includes $8.8 million gain on deconsolidation resulting from the deconsolidation of Kingstone on September 16, 2015.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read in conjunction with our Consolidated Financial Statements and the related notes included in Item 8, "Financial Statements and Supplementary Data" in this Annual Report on Form 10-K. This discussion contains forward-looking statements, which involve risk and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of certain factors including, but not limited to, those discussed in "Risk Factors" and elsewhere in this Annual Report on Form 10-K.

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: a summary of our business.
- Results of Operations: a discussion of operating results.
- Liquidity and Capital Resources: an analysis of cash flows, sources and uses of cash, financial position and off-balance sheet arrangements.
- Contractual Obligations and Commercial Commitments: a list of obligations and commercial commitments.
- Critical Accounting Policies: a discussion of critical accounting policies that require the exercise of judgments and estimates.
- Impact of Recently Issued Accounting Pronouncements: a discussion of how we are affected by recent pronouncements.

Overview

We operate in three 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), 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 supplies 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 negatively impacted our results of operations.

Our strategy has been, and continues to be, to grow the Company through strategic product development and acquisitions. In addition to internal product development, we have acquired companies with complementary products or products that serve adjacent process steps. On January 30, 2015, we completed the acquisition of BTU, which provides complementary thermal processing technologies in the semiconductor, electronics and solar sectors, and strengthens our footprint in China and other key geographic markets. On December 24, 2014, we expanded our participation in the solar market by acquiring a 51% controlling interest in SoLayTec, which provides atomic layer deposition systems used in high efficiency solar cells. In February 2011, we acquired a 55% ownership interest in Kingstone. In October 2007, we acquired R2D Automation SAS, which allowed us to provide our solar diffusion furnaces with integrated automation which is also sold as a stand-alone product.

In September 2015, the Company sold a portion of its interest in Kingstone Semiconductor Company Ltd, a Shanghai-based technology company specializing in ion implant solutions for the solar and semiconductor industries, to a China-based venture capital firm. Proceeds from the sale of shares will be paid to Amtech and used to support the company's core strategic initiatives. Upon completion of the transaction, we own 15% of the Hong Kong holding company (effectively a 10% beneficial ownership in the Shanghai operating entity).

Results of Operations

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

	Years Ended September 30,		
	2015	2014	2013
Net revenue	100.0 %	100.0 %	100.0 %
Cost of sales	74.1 %	78.9 %	77.1 %
Write-down of inventory	0.1 %	0.5 %	10.5 %
Gross margin	25.8 %	20.6 %	12.4 %
Selling, general and administrative	31.5 %	32.6 %	48.4 %
Restructuring charges	0.6 %	— %	2.5 %
Research, development and engineering	6.6 %	11.1 %	19.0 %
Operating loss	(12.9)%	(23.1)%	(57.5)%
Gain on deconsolidation of Kingstone	8.4 %	— %	— %
Interest and other income, net	(0.1)%	0.0 %	0.5 %
Loss before income taxes	(4.6)%	(23.1)%	(57.0)%
Income tax provision	1.8 %	2.2 %	5.3 %
Net loss	(6.4)%	(25.3)%	(62.3)%
Add: net (income) loss attributable to noncontrolling interest	(1.0)%	2.2 %	4.7 %
Net loss attributable to Amtech Systems, Inc.	(7.4)%	(23.1)%	(57.6)%

Fiscal 2015 compared to Fiscal 2014

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. See Critical Accounting Policies – Revenue Recognition.

	Years Ended September 30,			
Segment	2015	2014	Inc (Dec)	%
	(dollars in thousands)			
Solar	$ 56,689	$ 36,069	$ 20,620	57%
Semiconductor	37,250	9,779	27,471	281%
Polishing	10,944	10,653	291	3%
Total net revenue	$ 104,883	$ 56,501	$ 48,382	86%

Net revenue for the years ended September 30, 2015 and 2014 were $104.9 million and $56.5 million, respectively; an increase of $48.4 million or 86%. Revenue from the solar segment increased 57% due primarily to increased sales of our expanded portfolio of solar products, including our PECVD equipment, as well as our solar diffusion systems and related automation. Revenue from the semiconductor segment increased 281% due primarily to the acquisition of BTU in January 2015.

Revenues from the polishing supplies segment increased slightly due to increases in sales of polishing templates which are used in single-sided polishing processes. Sales of polishing templates have improved, due primarily to the increased demand for sapphire substrates used in LED lighting and mobile communication devices.

Backlog and Orders

Our backlog as of September 30, 2015 and 2014 was $34.6 million and $28.5 million, respectively. Our backlog as of September 30, 2015 included approximately $19.6 million of orders and deferred revenue from our solar industry customers compared to $20.9 million as of September 30, 2014. New orders booked in fiscal 2015 were $109.9 million ($52.7 million solar) compared to $61.3 million ($34.0 million solar) in fiscal 2014. As the majority of the backlog is denominated in Euros, the weakening of the Euro during fiscal 2015 resulted in a decrease in backlog of approximately $4.6 million. At the end of fiscal 2015, two customers individually accounted for 15% and 14% of our total backlog. At the end of fiscal 2014, two customers individually accounted for 31% and 13% of our total backlog.

The orders included in our backlog are generally credit approved customer purchase orders 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 subsequent periods, nor is backlog any assurance that we will realize revenue or 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 or spare parts and the cost of service and support to customers for warranty, installation and paid service calls. Gross margin is gross profit as a percent of net revenue.

	Years Ended September 30,			
Segment	**2015**	**2014**	**Inc (Dec)**	**%**
		(dollars in thousands)		
Solar	$ 11,639	$ 5,263	$ 6,376	121 %
Semiconductor	11,442	1,949	9,493	487 %
Polishing	3,927	4,414	(487)	(11)%
Total gross profit	$ 27,008	$ 11,626	$ 15,382	132 %

Gross profit for the years ended September 30, 2015 and 2014 was $27.0 million and $11.6 million respectively; an increase of $15.4 million or 132%. Gross margin for fiscal 2015 increased to 26% from 21% in fiscal 2014. Gross margin for the solar segment increased to 21% in fiscal 2015, compared to 15% in fiscal 2014 due primarily to higher sales volumes. In the semiconductor segment gross margin was 31% in fiscal 2015, compared to 20% in fiscal 2014 primarily due to the BTU acquisition. In fiscal 2015 and 2014, use of previously written down inventory had a $4.0 million favorable impact. In fiscal 2015, we had a net recognition of previously deferred profit of $1.3 million compared to a net deferral of $6.1 million in fiscal 2014. Gross margin from our polishing supplies segment was 36% and 41% in fiscal 2015 and 2014, respectively. Lower margins in this segment resulted primarily from product mix.

Selling, General and Administrative Expenses

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

Total SG&A expenses for the years ended September 30, 2015 and 2014 were $33.0 million and $18.4 million respectively. SG&A increased due, in part, to the acquisition of BTU. In addition to SG&A expenses incurred by BTU, expenses were higher due to activity leading up to our acquisitions of BTU and SoLayTec and restructuring of our investment in Kingstone, as well as increases from higher shipping and commission expenses resulting from higher sales in fiscal 2015, partially offset by lower bad debt expenses. SG&A expense includes $1.2 million and $0.8 million of stock-based compensation expense for fiscal years 2015 and 2014, respectively.

Impairment and Restructuring Charges

Restructuring charges for the year ended September 30, 2015 was $0.6 million, related primarily to severance costs. There were no restructuring charges in fiscal 2014.

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.

	Years Ended September 30,			
	2015	2014	Inc (Dec)	%
	(dollars in thousands)			
Research, development and engineering	$ 13,214	$ 10,863	$ 2,351	22%
Grants earned	(6,296)	(4,572)	(1,724)	38%
Net research and development and engineering	$ 6,918	$ 6,291	$ 627	10%

RD&E expense, net of grants earned, for the fiscal year ended September 30, 2015 increased $0.6 million compared to fiscal 2014. Gross RD&E spending increased due primarily to the acquisition of BTU and SoLayTec. Increased RD&E spending was partially offset by increased recognition of grants earned. We receive reimbursements through governmental research and development grants which are netted against these expenses.

Income Tax Provision

Our effective tax rate was negative 39.8% and negative 9.5% in fiscal 2015 and 2014, respectively. The effective tax rate is the ratio of total income tax expense (benefit) to pre-tax income (loss). The negative effective tax rate in fiscal 2015 was due primarily to increasing the valuation allowance on the current period net operating loss and foreign withholding taxes associated with the partial sale of our investment in Kingstone. See Note 15 of the Notes to Consolidated Financial Statements included in this Annual Report. In 2014 the negative effective tax rate was due primarily to increasing the valuation allowance on the current period net operating losses and establishing an allowance on all deferred tax assets related to France in 2014. The increase in the valuation allowance was recorded due to cumulative losses in China, The Netherlands and France. The effective tax rates in 2015 and 2014 were different than the 34% U.S. tax rate primarily due to the valuation allowance on net operating losses in The Netherlands, China and France and the withholding taxes in 2015.

The Financial Accounting Standards require that a valuation allowance be established when it is “more likely than not” that all or a portion of deferred tax assets will not be realized. A review of all available positive and negative evidence needs to be considered, including a company's performance, the market environment in which the company operates and the length of carryback and carryforward periods. According to those 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 that it was appropriate to establish a full valuation allowance for net deferred tax assets in the Netherlands, France and China. Available tax planning strategies cause us to believe that it is more likely than not that the deferred tax assets related to the United States tax jurisdiction will be realized despite cumulative losses there.

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

Fiscal 2014 compared to Fiscal 2013

Net Revenue

Net revenue for the years ended September 30, 2014 and 2013 were \$56.5 million and \$34.8 million, respectively; an increase of \$21.7 million or 62%. Revenue from the solar segment increased 57% due primarily to increased shipments of n-type technology equipment to the solar industry in fiscal 2014. These increases were partially offset by deferred revenue related to the significant amount of new product shipped, including PECVD systems. Revenue from the semiconductor segment increased 186% due to an upturn in our semiconductor customers' capital equipment purchases.
Higher revenues from the polishing supplies segment resulted from significant increases in sales of polishing templates which are used in single-sided polishing processes. Sales of polishing templates have improved, due primarily to the increased demand for sapphire substrates used in LED lighting and mobile communication devices.

Backlog and Orders

Our backlog as of September 30, 2014 and 2013 was \$28.5 million and \$26.8 million, respectively. Our backlog as of September 30, 2014 included approximately \$20.9 million of orders and deferred revenue from our solar industry customers compared to \$17.1 million as of September 30, 2013. New orders booked in fiscal 2014 were \$61.3 million compared to \$43.6 million in fiscal 2013. As the majority of the backlog is denominated in Euros, the weakening of the Euro during fiscal 2014 resulted in a decrease in backlog of approximately \$2.3 million. At the end of fiscal 2014, two customers individually accounted for 31% and 13% of our total backlog, respectively. At the end of fiscal 2013, two customers individually accounted for 53% and 13% of our total backlog, respectively.

Gross Profit and Gross Margin

Gross profit for the years ended September 30, 2014 and 2013 was \$11.6 million and \$4.3 million respectively; an increase of \$7.3 million. Gross margin for fiscal 2014 increased to 21% from 12% in fiscal 2013. Gross margin for the solar segment was 15% in fiscal 2014, compared to 7% in fiscal 2013. In fiscal 2014, use of previously written down inventory had a \$4.0 million favorable impact on gross margins in the solar segment. Partially offsetting this improvement was recognition of previously-deferred revenue from relatively low-margin new product shipments in fiscal 2014. In fiscal 2014, we had a net profit deferral of \$6.1 million compared to a net recognition of previously-deferred profit of \$7.5 million in fiscal 2013. Gross margin for the semiconductor segment was 20% in fiscal 2014, compared to 1% in 2013. Gross margin from our polishing supplies segment was 41% and 32% in fiscal 2014 and 2013, respectively. Higher margins in this segment resulted primarily from improved operational efficiencies associated with increased sales of polishing templates.

Selling, General and Administrative Expenses

Total SG&A expenses for the years ended September 30, 2014 and 2013 were \$18.4 million and \$16.8 million respectively. This includes \$0.8 million and \$2.5 million of stock-based compensation expense for the respective fiscal years 2014 and 2013. The decrease in stock-based compensation expense was offset by bad debt expense of \$1.3 million related to financial difficulties encountered by certain customers, higher legal and consulting expenses, primarily related to activity leading to the successful integration with BTU International, and SoLayTec as well as increased commission expenses due to higher revenues.

Impairment and Restructuring Charges

Restructuring charges for the year ended September 30, 2013 were \$0.9 million, related primarily to severance costs. There were no impairment charges for the year ended September 30, 2013. There were no impairment or restructuring charges in fiscal 2014.

Research, Development and Engineering

	Years Ended September 30,			
	2014	2013	Inc (Dec)	%
	(dollars in thousands)			
Research, development and engineering	$ 10,863	$ 8,459	$ 2,404	28 %
Grants earned	(4,572)	(1,865)	(2,707)	145 %
Net research and development, and engineering	$ 6,291	$ 6,594	$ (303)	(5)%

RD&E expense (net of grants earned) for the fiscal year ended September 30, 2014 decreased $0.3 million compared to fiscal 2013. Gross R&D spending increased due primarily to higher activity in the development of equipment for the solar industry as well as ion implant technology for markets other than solar. Increased R&D spending was partially offset by increased recognition of grants earned. We receive reimbursements through governmental research and development grants which are netted against these expenses.

Income Tax Provision

Our effective tax rate was negative 9.5% and negative 9% in fiscal 2014 and 2013, respectively. The effective tax rate is the ratio of total income tax expense (benefit) to pre-tax income (loss). The negative effective tax rates in fiscal 2014 and 2013 were due primarily to increasing the valuation allowance on the current period net operating losses and establishing an allowance on all deferred tax assets related to France in 2014 and The Netherlands in 2013. The valuation allowance was recorded due to cumulative losses in China, The Netherlands and France. The effective tax rate in 2014 and 2013 were lower than the 34% U.S. tax rate primarily due to the valuation allowance on net operating losses in China, The Netherlands and France.

The Financial Accounting Standards require that a valuation allowance be established when it is “more likely than not” that all or a portion of deferred tax assets will not be realized. A review of all available positive and negative evidence needs to be considered, including a company's performance, the market environment in which the company operates and the length of carryback and carryforward periods. According to those 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 that it was appropriate to establish a full valuation allowance for net deferred tax assets in the Netherlands and China in fiscal 2013 and France in 2014. Available tax planning strategies cause us to believe that it is more likely than not that the deferred tax assets related to the United States tax jurisdiction will be realized despite cumulative losses there.

Our future effective income tax rate depends on various factors, such as the amount of income (loss) in each tax jurisdiction, tax regulations governing each region, non-tax deductible expenses incurred as a percent of pre-tax income and the effectiveness of our tax planning strategies. At the end of 2011 we restructured our European operations to lower the tax rate on the Netherlands operations from 35% to a marginal rate of 25% and to as low as 5% on income derived from qualified new technologies, as we intend to permanently reinvest future Dutch earnings in our foreign operations. The effect of the restructure on our tax rate depends on the amount of income or loss earned in the Netherlands, as well as the portion of such income that can be demonstrated to have been derived from qualified new technologies, as well as the factors mentioned above.

Liquidity and Capital Resources

As of September 30, 2015 and 2014, cash and cash equivalents were $25.9 million and $27.4 million, respectively. As of September 30, 2015 and 2014, cash and cash equivalents held by our foreign subsidiaries was $9.6 million and $7.5 million, respectively. As of September 30, 2015 and 2014, restricted cash was $0.6 million and $2.4 million, respectively. Restricted cash decreased due to partial sale of our interest in Kingstone, and a decrease in customer deposits requiring bank guarantees collateralized by cash. Our working capital was $46.3 million as of September 30, 2015 and $32.3 million as of September 30, 2014. The decrease in cash during fiscal 2015 of $1.5 million was primarily due to cash used by operating activities of $10.1 million, including tax payments of $5.1 million, capital expenditures of $0.6 million and cash provided by financing activities of $0.8 million, partially offset by $8.2 million of net cash acquired in the acquisition of BTU and SoLayTec and $0.7 million of proceeds from the sale of a portion of our investment in Kingstone. We received additional proceeds from the partial sale of Kingstone of $7.1 million in October and November 2015. We maintain a portion of our cash and cash equivalents in Euros at our Dutch and French operations; therefore, changes in the exchange rate have an impact on our cash balances. Our ratio of current assets to current liabilities was 2.2:1 and 2.0:1 as of September 30, 2015 and September 30, 2014 respectively.

In December 2014, we acquired long-term debt as part of the SoLayTec acquisition. Subsequent to the acquisition, there were additional borrowings of $0.7 million. As of September 30, 2015 the debt has a remaining balance of $2.4 million. The SoLayTec debt has interest rates ranging from 5.95% to 10% and maturity dates ranging from fiscal 2017 to fiscal 2021. Additionally, in January 2015, the Company acquired $7.2 million of long-term debt as part of the BTU acquisition. The debt acquired from BTU has an interest rate of 4.4% through September, 2018, at which time the interest rate will be adjusted and indexed to the Federal Home Loan Board Five Year Classic Advance Rate. The remaining balance on the BTU debt as of September 30, 2015 was $6.9 million.

See information below regarding payments expected as a result of contractual obligations. We have never paid dividends on our common stock. Our present policy is to apply cash to investments in product development, acquisitions or expansion; consequently, we do not expect to pay dividends on common stock in the foreseeable future. We believe that our current cash and other sources of liquidity discussed below are adequate to support operations for at least the next 12 months.

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 and long-term debt. There can be no assurance that we can raise such additional capital resources on satisfactory terms. We believe that our principal sources of liquidity discussed above are sufficient to support operations.

	Fiscal Years Ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Net cash provided by (used in) operating activities	$ (10,066)	$ (11,081)	$ (9,953)
Net cash provided by (used in) investing activities	$ 8,281	$ (462)	$ (178)
Net cash provided by (used in) financing activities	$ 805	$ 1,481	$ (238)

Cash Flows from Operating Activities

Cash used in operating activities was $10.1 million, $11.1 million, and $10.0 million in fiscal years 2015, 2014, and 2013 respectively. During fiscal 2015, 2014 and 2013, cash declined due to losses from operations, adjusted for non-cash charges. In fiscal 2015, cash was also used to make tax payments of $5.1 million and through increases in inventory and other working capital. Partially offsetting these uses of cash were increases in accounts payable and customer deposits. In fiscal 2014, significant uses of cash included increases in accounts receivable and decreases in customer deposits and other liabilities, partially offset by sources such as tax refunds and increases in deferred profit. Significant sources of cash in fiscal 2013 were primarily collections of accounts receivable and increases in accrued liabilities and customer deposits. Partially offsetting the fiscal 2013 sources were income tax payments of approximately $8.7 million and decreases in liabilities such as deferred profit, accounts payable and other accruals.

Cash Flows from Investing Activities

Investing activities in fiscal 2015 provided cash of $8.3 million due to $8.2 million of net cash acquired in the acquisition of BTU and SoLayTec and $0.7 million of proceeds from the sale of a portion of our investment in Kingstone. Investing activities in fiscal 2014 and 2013 resulted primarily from the solar and semiconductor industry downturn. During fiscal 2015, 2014 and 2013, capital expenditures were $0.6 million, $0.5 million and $0.2 million respectively.

Cash Flows from Financing Activities

In fiscal 2015, cash provided by financing activities was $0.8 million, consisting primarily of net borrowings on long-term obligations and net proceeds from the exercise of stock options. In fiscal 2014, cash provided by financing activities was $1.5 million, consisting primarily of proceeds from employee exercises of stock options and the related tax benefits. In fiscal 2013, there were few financing activities.

Off-Balance Sheet Arrangements

As of September 30, 2015, we 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 and Commercial Commitments

We had the following contractual obligations and commercial commitments as of September 30, 2015:

Contractual obligations	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
			(dollars in thousands)		
Debt obligations	$ 9,367	$ 919	$ 1,698	$ 926	$ 5,824
Operating lease obligations:					
Buildings	1,686	724	715	247	$ —
Office equipment	167	88	79	—	—
Vehicles	385	160	177	48	—
Total operating lease obligations	2,238	972	971	295	—
Purchase obligations	9,826	9,826	—	—	—
Total	$ 21,431	$ 11,717	$ 2,669	$ 1,221	$ 5,824
Other commercial obligations:					
Bank guarantees	$ 416	$ 416	$ —	—	—

Critical Accounting Policies

"Management's Discussion and Analysis of Financial Condition and Results of Operations" discusses our consolidated financial statements that have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amount of assets and liabilities at the date of the consolidated financial statements, the 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.

On an on-going basis, we evaluate our estimates and judgments, including those related to revenue recognition, inventory valuation and inventory purchase commitments, accounts receivable collectability, warranty and impairment of long-lived assets. We base our estimates and judgments on historical experience, expectations regarding the future 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 "ITEM 1A. RISK FACTORS." We believe the following critical accounting policies affect the more significant judgments and estimates used in the preparation of our consolidated financial statements.

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 our equipment business, transactions where legal title passes to the customer upon shipment, we recognize revenue 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. Our 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. Our recognition of revenue 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 the installation and acceptance of more than two similarly configured items of equipment 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 other 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.

2. 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. We have, on occasion, experienced longer than expected delays in receiving cash from certain customers pending final installation or system acceptance. If some of our customers refuse to pay the final payment, or otherwise delay final acceptance or installation, the deferred revenue would not be recognized, adversely affecting our future cash flows and operating results.

3. Sales of certain equipment, spare parts and consumables are recognized upon shipment, as there are no post shipment obligations other than standard warranties.

4. 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.

Income Taxes. The calculation of tax liabilities involves significant judgment in identifying uncertain tax positions and estimating the amount of deferred tax assets that will be realized in the future and the impact of uncertainties in the application of complex tax laws. Resolution of these uncertainties in a manner inconsistent with our expectations could have a material impact on our operations and financial condition.

We are required to apply a more likely than not threshold to the recognition and derecognition of uncertain tax positions and in determining whether certain tax benefits will be realized in the future. We are required to recognize the amount of tax benefit that has a greater than 50 percent likelihood of being ultimately realized upon settlement. It further requires that a change in judgment related to the expected ultimate resolution of uncertain tax positions be recognized in earnings in the period of such change.

In fiscal 2015, 2014 and 2013, judgment was also exercised in determining the amount of income taxes to recognize in those years in connection with the reorganization of our Netherlands operations and the related tax on those transfers. In fiscal 2015, judgment was necessary in the proper application of the tax regulations of foreign jurisdictions in conjunction with the partial sale of our investment in Kingstone.

Inventory Valuation and Inventory Purchase Commitments. We value our inventory at the lower of cost or net realizable value. Costs for approximately 60% of inventory are determined on an average cost basis with the remainder determined on a first-in, first-out (FIFO) basis. We regularly review inventory quantities and record a write-down to net realizable value for excess and obsolete inventory. The write-down is primarily based on historical inventory usage adjusted for expected changes in product demand and production requirements. Our industry is characterized by customers in highly cyclical industries, rapid technological changes, frequent new product developments and rapid product obsolescence. Changes in demand for our products and product mix could result in further write-downs.

We must order components for our products and build inventory in advance of product shipments through issuance of purchase orders based on projected demand. These commitments typically cover our requirements for periods ranging from 30 to 180 days or longer when there is a significant increase in demand or lead-times from suppliers. These purchase commitments may result in accepting delivery of components not needed to meet current demand. We accrue for estimated cancellation fees related to component orders that have been cancelled or are expected to be cancelled, and for excess inventories that will likely result in our taking delivery of ordered inventory items in excess of our projected needs. If there is an abrupt and substantial decline in demand for one or more of our products, an unanticipated change in technological requirements for any of our products, or a change in our suppliers' practice of not enforcing purchase commitments, we may be required to record additional charges for these items. This would negatively impact gross margin in the period when the charges are recorded.

Allowance for Doubtful Accounts. We maintain an allowance for doubtful accounts for estimated losses resulting from the inability or unwillingness of our customers to make required payments. This allowance is based on historical experience, credit evaluations, specific customer collection history and any customer-specific issues we have identified. Since a significant portion of our revenue is derived from the sale of high-value systems, our accounts receivable are often concentrated in a relatively few number of customers. A significant change in the liquidity or financial position of any one of these customers could have a material adverse impact on the collectability of our accounts receivable and our future operating results.

Warranty. We provide a limited warranty, generally for 12 to 24 months, to our customers. A provision for the estimated cost of providing warranty coverage is recorded upon acceptance of all systems. On occasion, we have been required and may be required in the future to provide additional warranty coverage to ensure that the systems are ultimately accepted or to maintain customer goodwill. While our warranty costs have historically been within our expectations and we believe that the amounts accrued for warranty expenditures are sufficient for all systems sold through September 30, 2015, we cannot guarantee that we will continue to experience a similar level of predictability with regard to warranty costs. In addition, technological changes or previously unknown defects in raw materials or components may result in more extensive and frequent warranty service than anticipated, which could result in an increase in our warranty expense.

Impairment of Long-lived Assets. We periodically evaluate whether events and circumstances have occurred that indicate the estimated useful lives of long-lived assets or intangible assets may warrant revision or that the remaining balance may not be recoverable. Goodwill and indefinite-lived intangible assets are also tested for impairment at least annually. When factors indicate that a long-lived asset should be evaluated for possible impairment, we use an estimate of the related undiscounted net cash flows generated by the asset over the remaining estimated life of the asset in measuring whether the asset is recoverable. We make judgments and estimates in establishing the carrying value of goodwill and other long-lived assets. Those judgments and estimates are modified as economic and market conditions change. Changes in these conditions may result in an inability to recover the carrying value of these assets and, therefore, may result in future impairment charges. Below is a more detailed explanation of the procedures we perform.

We first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. As a result of our qualitative assessment, we determined that the polishing segment required no further impairment testing. If the qualitative factors indicate that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, we perform a two-step impairment test of goodwill and indefinite-lived intangible assets. In the first step, we estimate the fair value of the reporting unit and compare it to its carrying value. When the carrying value exceeds the fair value of the reporting unit, the second step is performed to measure the amount of the impairment loss, if any. In the second step, the amount of the impairment loss is the excess of the carrying amount of the goodwill and other intangibles not subject to amortization over their implied fair value.

The methods used to estimate fair value of the reporting unit for the purpose of determining the implied fair value of goodwill include the market approach and discounted cash flows, as follows:

i. One valuation methodology used is to determine the multiples of market value of invested capital (“MVIC”) of similar public companies to their revenue for the last twelve months (“LTM”) and next twelve months (“NTM”), and apply those multiples to the revenue for the comparable periods of the reporting unit being tested for impairment. This approach provides the closest estimate to quoted market prices that are readily available. However, we generally give less weight to this method, because the market value of the minority interest of public companies may not be relevant to the fair value of our wholly-owned reporting units, which are not public companies. Also, MVIC to revenue for the LTM uses a historical value in the calculation, while the market values tend to be forward looking. MVIC of revenue for the NTM involves the use of projections for both the comparable companies and the reporting unit.

ii. Another market approach that we sometimes use is based upon prices paid in merger and acquisition transactions for other companies in the same industry, again applying the MVIC to revenue of those companies to the historical and projected revenue of the reporting unit. When we use both market prices determined as described in (i), above, and prices paid in merger and acquisition transactions, we weight them to determine an indicated value under the market approach.

iii. As stated, we also use discounted cash flows as an indication of a third-party market price for the reporting unit in an arms-length transaction. This method requires projections of EBITDA (earnings before interest, taxes, depreciation and amortization) and applying an appropriate discount rate based on the weighted average cost of capital for the reporting unit.

We generally give the greatest weight, often 75% or more, to the discounted cash flow method, due to difficulty in identifying a sufficient number of companies that are truly comparable to a given reporting unit. This is because some of our reporting units are relatively small businesses serving niche markets.

The material estimates and assumptions used in the discounted cash flows method of determining fair value include (i) the appropriate discount rate, given the risk-free rate of return and various risk premiums, (ii) projected revenues, (iii) projected material cost as a percentage of revenue, and (iv) the rate of change in payroll and other expenses. Quantitatively, the discount rate is the assumption that has the most significant effect on the discounted cash flows. We determine the discount rate used based on input from a valuation firm, which applies various approaches taking into account the particular circumstances of the reporting unit in arriving at a recommendation. For annual valuations, we test the sensitivity of the assumptions used in our discounted cash flow projection with the aid of a valuation firm, which utilizes a Monte Carlo simulation model, wherein various probabilities are assigned to the key assumptions. Changes to economic and market assumptions could materially change the estimated fair values of the Company's reporting units and, therefore, may result in future impairment changes.

Stock-Based Compensation. The Company measures 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 reported as cash flow from financing activities rather than as cash flow from operating activities.

Impact of Recently Issued Accounting Pronouncements

For discussion of the impact of recently issued accounting pronouncements, see “Item 8: Financial Statements and Supplementary Data” under Footnote 1 “Summary of Significant Accounting Policies” under “Impact of Recently Issued Accounting Pronouncements”.

ITEM 7A. 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 their functional currency, the U.S. dollar. Our operations in Europe, China and other countries are primarily conducted in their functional currencies and we occasionally 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 2015 and in 2014, we did not hold any stand-alone or separate derivative instruments. We incurred foreign currency translation losses of approximately $0.3 million and gains of less than $0.1 million, during the year ended September 30, 2015 and 2014, 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 $26.2 million as of September 30, 2015. A 10% change in the value of the foreign currencies relative to the U.S. dollar would cause approximately $2.6 million of other comprehensive income (loss).

As of September 30, 2015 sales commitments denominated in a currency other than the functional currency of our transacting operation totaled approximately $1.6 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 would not cause our gross profit on such orders to be significantly greater or less than expected on the date the order was taken.

As of September 30, 2015, purchase commitments denominated in a currency other than the functional currency of our transacting operation totaled $1.0 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 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The following documents are filed as part of this Annual Report on Form 10-K:

Financial Statements

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and

Stockholders of

AMTECH SYSTEMS, INC.

We have audited the accompanying consolidated balance sheets of Amtech Systems, Inc. and Subsidiaries as of September 30, 2015 and 2014, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the three years in the period ended September 30, 2015. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Amtech Systems, Inc. and Subsidiaries as of September 30, 2015 and 2014, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 2015, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of Amtech Systems, Inc. and Subsidiaries' internal control over financial reporting as of September 30, 2015, based on criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated November 19, 2015, expressed an unqualified opinion.

/s/ MAYER HOFFMAN MCCANN P.C.

Phoenix, Arizona

November 19, 2015

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and

Stockholders of

AMTECH SYSTEMS, INC.

We have audited Amtech Systems, Inc. and Subsidiaries' (the "Company") internal control over financial reporting as of September 30, 2015 based on criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, based on our audit, Amtech Systems, Inc. and Subsidiaries maintained, in all material respects, effective internal control over financial reporting as of September 30, 2015, based on criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows of the Company, and our report dated November 19, 2015, expressed an unqualified opinion.

/s/ MAYER HOFFMAN MCCANN P.C.

Phoenix, Arizona

November 19, 2015

PART I FINANCIAL INFORMATION

ITEM 1. Consolidated Financial Statements

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Consolidated Balance Sheets
(in thousands except share data)

Assets	September 30, 2015	September 30, 2014
Current Assets		
Cash and cash equivalents	$ 25,852	$ 27,367
Restricted cash	638	2,380
Accounts receivable		
Trade (less allowance for doubtful accounts of $5,009 and $2,846 at September 30, 2015 and September 30, 2014, respectively)	14,488	8,896
Unbilled and other	8,494	6,880
Inventories	23,329	16,760
Deferred income taxes	2,050	1,060
Notes and other receivable	7,079	—
Other	3,772	2,082
Total current assets	85,702	65,425
Property, Plant and Equipment - Net	17,761	9,752
Deferred income taxes - Long Term	430	1,300
Other Assets - Long Term	3,356	2,426
Investments	2,733	—
Intangible Assets - Net	4,939	2,678
Goodwill	10,535	8,323
Total Assets	$ 125,456	$ 89,904
Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts payable	$ 15,646	$ 6,003
Current maturities of long-term debt	919	—
Accrued compensation and related taxes	5,605	4,269
Accrued warranty expense	793	628
Deferred profit	4,873	6,908
Customer deposits	7,154	4,992
Other accrued liabilities	3,551	5,346
Income taxes payable	830	4,990
Total current liabilities	39,371	33,136
Long-term Debt	8,448	—
Income Taxes Payable Long-term	4,990	3,180
Total Liabilities	52,809	36,316
Commitments and Contingencies		
Stockholders' Equity		
Preferred stock; 100,000,000 shares authorized; none issued	—	—
Common stock; $0.01 par value; 100,000,000 shares authorized; shares issued and outstanding: 13,150,469 and 9,848,253 at September 30, 2015 and September 30, 2014, respectively	131	98
Additional paid-in capital	110,191	81,884
Accumulated other comprehensive loss	(8,666)	(5,790)
Retained deficit	(28,822)	(21,051)
Total Stockholders' Equity	72,834	55,141
Noncontrolling interest	(187)	(1,553)
Total Equity	72,647	53,588
Total Liabilities and Stockholders' Equity	$ 125,456	$ 89,904

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

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

	Years Ended September 30,		
	2015	2014	2013
Revenue, net of returns and allowances	$ 104,883	$ 56,501	$ 34,798
Cost of sales	77,737	44,581	26,833
Write-down of inventory	138	294	3,652
Gross profit	27,008	11,626	4,313
Selling, general and administrative	33,028	18,424	16,830
Research, development and engineering	6,918	6,291	6,594
Restructuring charges	583	—	883
Operating loss	(13,521)	(13,089)	(19,994)
Gain on deconsolidation of Kingstone	8,814	—	—
Interest and other (expense) income, net	(100)	40	147
Loss before income taxes	(4,807)	(13,049)	(19,847)
Income tax provision	1,910	1,240	1,860
Net loss	(6,717)	(14,289)	(21,707)
Add: net (income) loss attributable to noncontrolling interest	(1,054)	1,242	1,638
Net loss attributable to Amtech Systems, Inc.	$ (7,771)	$ (13,047)	$ (20,069)
Loss Per Share:			
Basic loss per share attributable to Amtech shareholders	$ (0.65)	$ (1.34)	$ (2.11)
Weighted average shares outstanding	12,022	9,732	9,529
Diluted loss per share attributable to Amtech shareholders	$ (0.65)	$ (1.34)	$ (2.11)
Weighted average shares outstanding	12,022	9,732	9,529

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

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

	Years Ended September 30,		
	2015	2014	2013
Net loss	$ (6,717)	$ (14,289)	$ (21,707)
Foreign currency translation adjustment	(3,010)	(1,202)	2,225
Comprehensive loss	(9,727)	(15,491)	(19,482)
Comprehensive (income) loss attributable to noncontrolling interest	(920)	1,210	1,674
Comprehensive loss attributable to Amtech Systems, Inc.	$ (10,647)	$ (14,281)	$ (17,808)

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

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Consolidated Statements Of Stockholders' Equity
(in thousands)

	Common Stock							
	Number of Shares	Amount	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity	Non-controlling Interest	Total Equity
Balance at September 30, 2012	9,484	$ 95	$ 77,377	$ (6,817)	$ 12,065	$ 82,720	$ 1,331	$ 84,051
Net loss					(20,069)	(20,069)	(1,638)	(21,707)
Translation adjustment				2,261		2,261	(36)	2,225
Tax deficiency of stock options			(264)			(264)		(264)
Stock compensation expense			2,472			2,472		2,472
Restricted shares released	59	1	1			2		2
Stock options exercised	8	—	24			24		24
Balance at September 30, 2013	9,551	$ 96	$ 79,610	$ (4,556)	$ (8,004)	$ 67,146	$ (343)	$ 66,803
Net loss					(13,047)	(13,047)	(1,242)	(14,289)
Translation adjustment				(1,234)		(1,234)	32	(1,202)
Tax benefit of stock compensation			345			345		345
Stock compensation expense			795			795		795
Restricted shares released	34	—	—			—		—
Stock options exercised	263	2	1,134			1,136		1,136
Balance at September 30, 2014	9,848	$ 98	$ 81,884	$ (5,790)	$ (21,051)	$ 55,141	$ (1,553)	$ 53,588
Net loss					(7,771)	(7,771)	1,054	(6,717)
Translation adjustment				(2,876)		(2,876)	(134)	(3,010)
Acquisition of interest in SoLayTec							1,221	1,221
Deconsolidation of Kingstone							(775)	(775)
Tax benefit of stock compensation			30			30		30
Stock compensation expense			1,162			1,162		1,162
Shares issued for BTU purchase	3,186	32	26,593			26,625		26,625
Restricted shares released	22	—	—			—		—
Stock options exercised	94	1	522			523		523
Balance at September 30, 2015	13,150	$ 131	$ 110,191	$ (8,666)	$ (28,822)	$ 72,834	$ (187)	$ 72,647

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

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Consolidated Statements Of Cash Flows
(in thousands)

	Year Ended September 30,		
	2015	2014	2013
Operating Activities			
Net loss	$ (6,717)	$ (14,289)	$ (21,707)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	3,357	2,410	2,667
Write-down of inventory	138	294	3,652
(Reversal of) provision for allowance for doubtful accounts	(194)	1,304	169
Deferred income taxes	454	194	1,368
Gain on deconsolidation of Kingstone	(8,814)	—	—
Non-cash share based compensation expense	1,162	795	2,472
Changes in operating assets and liabilities:			
Restricted cash	(1,731)	2,662	(326)
Accounts receivable	1,700	(11,786)	10,629
Inventories	(1,308)	3,636	(221)
Accrued income taxes	(4,329)	6,849	(7,818)
Other assets	2,119	782	(360)
Accounts payable	939	766	(495)
Accrued liabilities and customer deposits	4,647	(10,805)	7,489
Deferred profit	(1,490)	6,107	(7,472)
Net cash used in operating activities	(10,067)	(11,081)	(9,953)
Investing Activities			
Purchases of property, plant and equipment	(610)	(462)	(178)
Investment in acquisitions, net of cash	8,191	—	—
Proceeds from partial sale of subsidiary	700	—	—
Net cash provided by (used in) investing activities	8,281	(462)	(178)
Financing Activities			
Proceeds from issuance of common stock, net	523	1,136	26
Payments on long-term obligations	(482)	—	—
Borrowings on long term debt	734	—	—
Excess tax benefit (deficiency) of stock compensation	30	345	(264)
Net cash provided by (used in) financing activities	805	1,481	(238)
Effect of Exchange Rate Changes on Cash	(534)	232	840
Net Decrease in Cash and Cash Equivalents	(1,515)	(9,830)	(9,529)
Cash and Cash Equivalents, Beginning of Year	27,367	37,197	46,726
Cash and Cash Equivalents, End of Year	$ 25,852	$ 27,367	$ 37,197
Supplemental Cash Flow Information:			
Income tax refunds	$ 9	$ 6,474	$ 18
Income tax payments	5,113	184	8,678
Issuance of common stock for acquisitions	26,625	—	—
Cash paid for interest	440	—	163
Supplemental Non-cash Financing Activities:			
Transfer inventory to capital equipment	$ —	$ 527	$ —

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

Notes to Consolidated Financial Statements
For the Years Ended September 30, 2015, 2014 and 2013

1. Summary of Significant Accounting Policies

Nature of Operations and Basis of Presentation – Amtech Systems, Inc. (the "Company") is a global manufacturer of capital equipment, including thermal processing, silicon wafer handling automation, and related consumables used in fabricating solar cells, LED and semiconductor devices. The Company sells these products to solar cell and semiconductor manufacturers worldwide, particularly in Asia, United States and Europe.

The Company serves niche markets in industries that are experiencing rapid technological advances and which historically have been very cyclical. Therefore, future profitability and growth depend on the Company's ability to develop or acquire and market profitable new products and on its ability to adapt to cyclical trends.

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.

Change in Accounting Estimate - The Company regularly reviews inventory quantities and inventory purchase commitments and writes down excess and obsolete inventory to its net realizable value, and records a loss for expected purchase order cancellation charges and for excess inventory purchase commitments that cannot be cancelled. The write-down is primarily based on historical inventory usage adjusted for expected changes in product demand and production requirements. Due to a downturn in the solar industry since 2012, product demand and production requirements have continued to decline significantly. As a result, the Company recorded a write-down of inventory of $3.7 million for fiscal year 2013. The write-down of inventory reduced net income attributable to Amtech shareholders by$3.7 million and increased basic and diluted loss per share by $0.39 cents per share. In fiscal years 2014 and 2015, the Company had inventory write-downs of$0.3 million and $0.1 million, respectively, which increased basic and diluted loss per share by $0.03 cents per share and $0.01 cent per share, respectively.

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 our equipment business, transactions where legal title passes to the customer upon shipment, we recognize revenue 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. Our 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. Our recognition of revenue 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 the installation and acceptance of more than two similarly configured items of equipment 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 other 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.

2. 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. We have, on occasion, experienced longer than expected delays in receiving cash from certain customers pending final installation or system acceptance. If some of our customers refuse to pay the final payment, or otherwise delay final acceptance or installation, the deferred revenue would not be recognized, adversely affecting our future cash flows and operating results.

3. Sales of certain equipment, spare parts and consumables are recognized upon shipment, as there are no post shipment obligations other than standard warranties.

4. 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 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:

	September 30,		
	2015	**2014**	**2013**
		(dollars in thousands)	
Deferred revenue	$ 7,280	$ 8,118	$ 3,371
Deferred costs	2,407	1,210	304
Deferred profit	$ 4,873	$ 6,908	$ 3,067

Cash Equivalents – We consider all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents. Our 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 $0.6 million and $2.4 million as of September 30, 2015 and 2014, respectively, includes collateral for bank guarantees required by certain customers from whom deposits have been received in advance of shipment. Restricted cash as of September 30, 2015 includes $0.2 million relating the Company's proportional responsibility, assumed in connection with the BTU acquisition, for clean-up costs at a Superfund site. Restricted cash of September 30, 2014 includes cash received from research and development grants related to our ion implant technology to be used for research and development projects.

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.

The following is a summary of the activity in the Company's allowance for doubtful accounts:

	Years Ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Balance at beginning of year	$ 2,846	$ 638	$ 517
(Reversal) / Provision	(194)	1,304	199
Write offs	(130)	(13)	(78)
Acquired through business acquisitions	1,397	—	—
Adjustment	1,090	917	—
Balance at end of year	$ 5,009	$ 2,846	$ 638

Accounts Receivable - Unbilled and Other – Unbilled and other accounts receivable consist mainly of the 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.

Concentrations of Credit Risk – Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash and trade accounts receivable. The Company's 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 the customers' financial condition, by requiring significant deposits where appropriate, and by actively monitoring collections. Letters of credit are required of certain customers depending on the size of the order, type of customer or its creditworthiness, and country of domicile. Reserves for potentially uncollectible receivables are maintained based on an assessment of collectability.

The Company maintains its cash, cash equivalents and restricted cash in multiple financial institutions. Balances in the United States (approximately62% of total cash balances) are primarily invested in US Treasuries or are in financial institutions insured by the Federal Deposit Insurance Corporation (FDIC). The remainder of the Company's cash is maintained with financial institutions with reputable credit in The Netherlands, France and China.

As of September 30, 2015, no customer individually represented greater than10% of accounts receivable. As of September 30, 2014, two customers individually represented 14% and 10% of accounts receivable, respectively.

Refer to Note 9, Geographic Regions, for information regarding revenue and assets 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 approximately60% of inventory are determined on an average cost basis with the remainder determined on a first-in, first-out (FIFO) basis. The components of inventories are as follows:

	September 30, 2015	September 30, 2014
	(dollars in thousands)	
Purchased parts and raw materials	$ 6,065	$ 8,797
Work-in-process	5,669	4,809
Finished goods	11,595	3,154
	$ 23,329	$ 16,760

Notes and Other Receivables - Notes and other Receivable consists amounts due the Company for the sale of Kingstone shares and repayment of a loan (see Note 15 "Deconsolidation"). The carrying amount of the notes receivable approximates fair value due to the short-term nature of the notes.

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 and amortization 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. Depreciation expense was $2.2 million, $1.7 million and $2.0 million in fiscal 2015, 2014 and 2013, respectively. 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 20-30 years.

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

	September 30, 2015	September 30, 2014
	(dollars in thousands)	
Land, building and leasehold improvements	$ 18,095	$ 10,414
Equipment and machinery	9,709	8,189
Furniture and fixtures	5,465	5,453
	33,269	24,056
Accumulated depreciation and amortization	(15,508)	(14,304)
	$ 17,761	$ 9,752

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. During the fourth quarter of 2015, the Company obtained additional information relating to the fair value of tangible and intangible assets acquired from SoLayTec and BTU, resulting in an increase to goodwill of $0.9 million and a decrease of $0.2 million, respectively . As detailed in Note 15 "Deconsolidation", the Company deconsolidated Kingstone as of September 16, 2015. The adjustment to goodwill as a result of the deconsolidation of Kingstone is shown in the table below.

The changes in the carrying amount of goodwill for the year ended September 30, 2015 are as follows.

	Solar	Semiconductor	Polishing	Total
	(dollars in thousands)			
Goodwill	$ 12,315	$ —	$ 728	$ 13,043
Accumulated impairment losses	(4,720)		—	(4,720)
Carrying value at September 30, 2014	7,595	—	728	8,323
Goodwill recognized due to acquisitions	3,218	4,463	—	7,681
Goodwill derecognized due to deconsolidation	(5,198)	—	—	(5,198)
Net exchange differences	(271)	—	—	(271)
Carrying value at September 30, 2015	$ 5,344	$ 4,463	$ 728	$ 10,535
Goodwill	9,899	4,463	728	15,090
Accumulated impairment losses	(4,555)	—	—	(4,555)
Carrying value at September 30, 2015	$ 5,344	$ 4,463	$ 728	$ 10,535

Intangibles - Intangible assets are capitalized and amortized on a straight-line basis over their useful life if the life is determinable. If the life is not determinable, amortization is not recorded. Amortization expense related to intangible assets was $1.2 million, $0.7 million and $0.6 million in fiscal 2015, 2014 and 2013, respectively. The aggregate amortization expense for the intangible assets for each of the five succeeding fiscal years is estimated to be $0.8 million, $0.7 million, $0.6 million, $0.6 million and $0.6 million in 2016, 2017, 2018, 2019 and 2020.

On December 24, 2014, the Company acquired a 51% controlling interest in SoLayTec. The intangible assets of SoLayTec total $2.0 million, of which $1.8 million is included in "Technology" and $0.2 million is included in "Trade names" in the table below. During the fourth quarter of 2015, the Company obtained additional information relating to the fair value of intangible assets acquired from SoLayTec and made an adjustment of $0.2 million. On January 30, 2015, the Company completed the merger with BTU. The intangible assets of BTU total $2.9 million, of which $1.2 million is included in "Trade names" and $1.7 million is included in "Customer lists" in the table below. During the fourth quarter of 2015, the Company obtained additional information relating to the fair value of tangible and intangible assets acquired from BTU. Using this new information, $1.7 million was recorded for the fair value of acquired "Customer lists". See Note 14, “Acquisitions,” for more information regarding the acquisition of SoLayTec and the merger with BTU.

As a result of the sale of the Company's partial ownership in Kingstone in the fourth quarter of fiscal 2015, the Company derecognized $3.2 million of intangible assets and $1.9 million of accumulated amortization. See Note 15 "Deconsolidation" for additional details relating to the deconsolidation of Kingstone.

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
		Years Ended September 30,					
		2015			2014		
		(dollars in thousands)					
Non-compete agreements	4-8 years	$ 137	$ (137)	$ —	$ 1,055	$ (955)	$ 100
Customer lists	6-10 years	2,434	(808)	1,626	817	(592)	225
Technology	5-10 years	3,223	(1,368)	1,855	2,319	(1,682)	637
In-process research and development	5 years	—	—	—	1,600	(27)	1,573
Trade names	10-15 Years	1,456	(72)	1,384	—	—	—
Other	2-10 years	278	(204)	74	321	(178)	143
		7,528	(2,589)	4,939	6,112	(3,434)	2,678

Warranty – A limited warranty is provided free of charge, generally for periods of 12 to 24 months to all purchasers of the Company’s new products and systems. Accruals are recorded for estimated warranty costs at the time revenue is recognized. The following is a summary of activity in accrued warranty expense:

	Years Ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Beginning balance	$ 628	$ 1,454	$ 2,687
Warranty expenditures	(706)	(819)	(1,360)
Reserve provision/(adjustment)	871	(7)	127
Ending balance	$ 793	$ 628	$ 1,454

Research, Development and Engineering Expenses - Research, development and engineering expenses consist of the cost of employees, consultants and contractors who design, engineer and develop new products and processes as well as materials, supplies and facilities used in producing prototypes. Payments received for research and development grants prior to the meeting of milestones are recorded as unearned research and development grant liabilities and included in other accrued liabilities on the balance sheet. When certain contract requirements are met, governmental research and development grants are netted against research and development expenses.

	Years Ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Research, development and engineering	$ 13,214	$ 10,863	$ 8,459
Grants earned	(6,296)	(4,572)	(1,865)
Net research, development and engineering	$ 6,918	$ 6,291	$ 6,594

Shipping Expense – Shipping expenses of $2.5 million, $1.0 million and $0.8 million for fiscal 2015, 2014 and 2013 are included in selling, general and administrative expenses.

Foreign Currency Transactions and Translation – The functional currency of the Company's European operations is the Euro. Net income includes pretax net gains from foreign currency transactions of $0.3 million in fiscal 2015, and pretax net gains and losses of less than $0.1 million in fiscal 2014 and 2013. The gains or losses resulting from the translation of foreign financial statements have been included in other comprehensive income (loss).

Income Taxes - The Company files consolidated federal income tax returns in the United States for all subsidiaries except those in the Netherlands, France, Hong Kong and China, where separate returns are filed. The Netherlands operations file separate returns in that country. The Company computes deferred income tax assets and liabilities based upon cumulative temporary differences between financial reporting and taxable income, carryforwards available and enacted tax laws. The Company also accrues a liability for uncertain tax positions when it is more likely than not that such tax will be incurred.

Deferred tax assets 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. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management and based on the weight of available evidence, it is more likely than not that a portion or all of the deferred tax asset will not be realized. Each quarter the valuation allowance is re-evaluated.

Stock-Based Compensation - The Company measures 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 or deficiencies of tax deductions in excess of or less than recognized compensation cost are reported as cash flow from financing activities rather than as cash flow from operating activities.

In the third quarter of fiscal 2013, the Company's Board of Directors approved the acceleration of the vesting of one half of the unvested stock options with an exercise price of $2.95 and all of the remaining unvested stock options with exercise prices of $6.15 and $7.98 per share for approximately 110 employees holding options to purchase approximately 0.4 million shares of common stock. The Company concluded that the modification to the stated vesting provisions was substantive after the Company considered the volatility of its share price and the exercise price of the amended options in relation to recent share values. Because the modification was considered substantive, the remaining unearned compensation expense of $0.9 million was recorded as an expense in the third quarter of fiscal 2013. The weighted-average exercise price of the options that were accelerated was $5.77.

Effective June 30, 2013, current and former executive officers of the Company voluntarily cancelled approximately 0.1 million stock options, vested and unvested, that were issued with exercise prices of $14.79 and $17.12 per share. At the time of the cancellation, all of the options with an exercise price of $14.79 were fully vested. The Company recognized the remaining unearned compensation expense of $0.3 million for the unvested portion of the stock options with an exercise price of $17.12 per share in the third quarter of fiscal 2013.

Stock-based compensation expense for the fiscal years ended September 30, 2015, 2014 and 2013 reduced the Company's results of operations as follows:

	Years Ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Effect on income before income taxes (1)	$ (1,162)	$ (795)	$ (2,472)
Effect on income taxes	$ 221	$ 326	$ 512
Effect on net income	$ (941)	$ (469)	$ (1,960)

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

The Company awards restricted shares under the existing share-based compensation plans. Our restricted share-awards vest in equal annual installments over atwo or 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 employed for the shares granted to fully vest.

Qualified stock options issued under the terms of the plans have, or will have, an exercise price equal to, or greater than, the fair market value of the common stock at the date of the option grant, and expire no later than ten years from the date of grant, with the most recent grant expiring in 2025. Options vest over2 to 4 years. The Company estimates the fair value of stock option awards on the date of grant using the Black-Scholes option pricing model using the following assumptions:

	Years Ended September 30,		
	2015	2014	2013
Risk free interest rate	2%	2%	1%
Expected life	6 years	6 years	6 years
Dividend rate	0%	0%	0%
Volatility	67%	69%	70%

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. The Company uses historical stock prices to determine the volatility factor.

Fair Value of Financial Instruments - In accordance with the requirements of the Fair Value Measurements and Disclosures Topic of the Financial Accounting Standards Board ("FASB") Accounting Standards Codification (ASC), the Company groups its 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 on 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 the Company's policy to use observable inputs whenever reasonably practicable in order to minimize the use of unobservable inputs when developing fair value measurements. When available, the Company uses 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, the Company is 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 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.

Pensions—The Company has retirement plans covering substantially all employees. The principal plans are the multiemployer defined benefit pension plans of the Company's operations in the Netherlands and France and the multiemployer plan for hourly union employees in Pennsylvania and the Company's defined contribution plan that covers substantially all of the employees in the United States. The multiemployer plans in the United States and France are insignificant.

The Company's employees in The Netherlands, approximately 120, participate in a multi-employer pension plan Pensioenfonds Metaal en Techniek (PMT), determined in accordance with the collective bargaining agreements effective for the industry in the Netherlands. This collective bargaining agreement has no expiration date. This multiemployer pension plan covers approximately 33,000 companies and 1.2 million participants. Amtech's contribution to the multiemployer pension plan is less than 5.0% of the total contributions to the plan. The plan monitors its risks on a global basis, not by company or employee, and is subject to regulation by Dutch governmental authorities. By law (the Dutch Pension Act), a multiemployer pension plan must be monitored against specific criteria, including the coverage ratio of the plan assets to its obligations. This coverage ratio must exceed 105% for the total plan. Every company participating in a Dutch multiemployer union plan contributes a premium calculated as a percentage of its total pensionable salaries, with each company subject to the same percentage contribution rate. The premium can fluctuate yearly based on the coverage ratio of the multiemployer union plan. The pension rights of each employee are based upon the employee's average salary during employment, the years of service, and the participant's age at the time of retirement.

The Company's net periodic pension cost for this multiemployer pension plan for any period is the amount of the required contribution for that period. A contingent liability may arise from, for example, possible actuarial losses relating to other participating entities because each entity that participates in a multiemployer union plan shares in the actuarial risks of every other participating entity or any responsibility under the terms of a plan to finance any shortfall in the plan if other entities cease to participate

The coverage ratio of the Dutch multiemployer union plan is 95.3% as of September 30, 2015. In 2013, PMT prepared and executed a "Recovery Plan" which was approved by De Nederlandsche Bank, the Dutch central bank, which is the supervisor of all pension companies in the Netherlands. As a result of the Recovery Plan, the pension rights decreased 6.3% in April 2013 and the employer's premium percentage increased to 16.6% of pensionable wages. The coverage ratio is calculated by dividing the plan assets by the total sum of pension liabilities and is based on actual market interest. The coverage ratio of PMT fluctuates during a year due to the changes in the value of the assets and the present value of the liabilities, at the end of Q3 of Fiscal 2015 it reached a high of 103% but decreased in the fourth quarter of fiscal 2015 due to the reduction in the ultimate forward rate (which increases the present value of the liabilities) and a decrease in the value of global equities. As of September 30, 2015 PMT's total plan assets were $66.3 billion and the actuarial present value of accumulated plan benefits was $69.6 billion.

Below is a table of contributions made by the Company to multiemployer pension plans.

	Contributions		
	Years Ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Pensioenfonds Metaal en Techniek (PMT)	$ 805	$ 929	$ 879
Other plans	158	158	163
Total	$ 963	$ 1,087	$ 1,042

The Company matches employee funds to the Company's defined contribution plans on a discretionary basis. The match was insignificant in fiscal years 2015, 2014 and 2013.

Impact of Recently Issued Accounting Pronouncements

In April 2015, the FASB issued ASU No. 2015-03, Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs. The amendments in ASU No. 2015-03 require that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability. The recognition and measurement guidance for debt issuance costs are not affected by the amendments. ASU No. 2015-03 must be applied retrospectively and is effective for interim and annual periods beginning after December 15, 2015, with early adoption permitted. In August 2015, the FASB issued ASU No. 2015-15, Interest - Imputation of Interest (Subtopic 835-30): Presentation and Subsequent Measurement of Debt Issuance Costs Associated with Line-of-Credit Arrangements. ASU No. 2015-15 states that for debt issuance costs related to line-of-credit arrangements, the SEC staff would not object to an entity deferring and presenting such costs as an asset and subsequently amortizing the deferred debt issuance costs ratably over the term of the line-of-credit arrangement, regardless of whether there are any outstanding borrowings on the line-of-credit arrangement. The adoption of the new guidance is not expected to materially impact the Company's consolidated financial position or results of operations

In August 2015, the FASB issued ASC Update No. 2015-12, Plan Accounting: Defined Benefit Pension Plans (Topic 960), Defined Contribution Pension Plans (Topic 962), and Health and Welfare Benefit Plans (Topic 965). Update No. 2015-12 has three parts. Part I designates contract value as the only required measure for fully benefit-responsive investment contracts. Part II simplifies the investment disclosure requirements under Topics 820, 960, 962, and 965 for employee benefits plans and Part III provides an alternative measurement date for fiscal periods that do not coincide with a month-end date. Update No. 2015-12 is effective for fiscal years beginning after December 15, 2015. The adoption of Update No. 2015-12 is not expected to have a material impact on our financial position or results of operations.

In July 2015, the FASB issued Accounting Standards Update ("ASU") No. 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.

In June 2015, the FASB issued ASU 2015-10, Technical Corrections and Improvements , which clarifies various topics in the FASB Accounting Standards Codification. ASU 2015-10 is effective for the interim and annual periods ending after December 15, 2015. Early adoption is permitted. We are currently assessing the impact of this ASU, but do not expect it to have a material impact on our consolidated financial position and results of operations.

In May 2015, the FASB issued ASU 2015-08, Business Combinations (Topic 805): Pushdown Accounting - Amendments to SEC Paragraphs Pursuant to Staff Accounting Bulletin No. 115, or ASU 2015-08. The amendments in ASU 2015-08 amend various SEC paragraphs included in the FASB's Accounting Standards Codification to reflect the issuance of Staff Accounting Bulletin No. 115, or SAB 115. SAB 115 rescinds portions of the interpretive guidance included in the SEC's Staff Accounting Bulletins series and brings existing guidance into conformity with ASU No. 2014-17, Business Combinations (Topic 805): Pushdown Accounting, which provides an acquired entity with an option to apply pushdown accounting in its separate financial statements upon occurrence of an event in which an acquirer obtains control of the acquired entity. We have adopted the amendments in ASU 2015-08, effective May 8, 2015, as the amendments in the update are effective upon issuance. The adoption did not have a material impact on our consolidated financial position and results of operation.

In April 2015, the FASB issued ASU No. 2015-05, Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40). This ASU provides guidance that will help entities evaluate the accounting for fees paid by a customer in a cloud computing arrangement, including whether a cloud computing arrangement includes a software license. If a cloud computing arrangement includes a software license, then this ASU requires the customer to account for the software license consistent with the acquisition of other software licenses; otherwise, the customer should account for the arrangement as a service contract. The ASU is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2015. Entities can elect to adopt the amendments either prospectively to all arrangements entered into after the effective date or retrospectively to all prior periods. We are currently assessing the impact of this ASU.

In April 2015, the FASB issued ASU No. 2015-3, Interest-Imputation of Interest (Subtopic 835-30). This ASU requires debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of the related debt liability instead of being presented as an asset. The ASU requires retrospective application and represents a change in accounting principle. The ASU is effective for fiscal years beginning after December 15, 2015. Early adoption is permitted for financial statements that have not been previously issued. We are currently assessing the impact of this ASU.

In January 2015, the FASB issued ASU No. 2015-1, Income Statement - Extraordinary and Unusual Items (Subtopic 225-20). The FASB is issuing this ASU as part of its initiative to reduce costs and complexity in accounting standards, known as its Simplification Initiative. This ASU eliminates from generally accepted accounting principles in the United States (" GAAP") the concept of extraordinary items in an effort to save time and reduce costs, while alleviating uncertainty and maintaining accurate and fulsome disclosure. The amendments in this ASU are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2015. We are currently assessing the impact of this ASU but do not expect it to have a material impact on our consolidated financial position and results of operations.

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers, which supersedes most of the current revenue recognition requirements. The core principle of the new guidance is that an entity should recognize 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 these goods or services. New disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers are also required. This guidance is effective for the Company in the first quarter of fiscal year 2018 and early application is not permitted. Entities must adopt the new guidance using one of two retrospective application methods. The Company is currently evaluating the the standard and the impact on our financial position and results of operations.

2. Stock-Based Compensation

Stock-Based Plans –The 2007 Employee Stock Incentive Plan (the “2007 Plan), under which 500,000 shares could be granted, was adopted by the Board of Directors in April 2007, and approved by the shareholders in May 2007. The 2007 Plan was amended in 2009, 2014, and 2015 to add 2,500,000 shares. The Non-Employee Directors Stock Option Plan was approved by the shareholders in 1996 for issuance of up to 100,000 shares of Common Stock to directors. shares. The Non-Employee Directors Stock Option Plan was amended in 2005, 2009, and 2014 to add 400,000 shares.

Stock options issued under the terms of the plans have, or will have, an exercise price equal to or greater than the fair market value of the Common Stock at the date of the option grant and expire no later than 10 years from the date of grant, with the most recent grant expiring in 2025. Options issued by the Company vest over 2 to 4 years. The Company may also grant restricted stock awards under the 2007 Plan.

As of September 30, 2015 and 2014, the unamortized expense related to restricted shares was less than $0.1 million and $0.1 million, respectively, and it is expected to be recognized over one year.

Restricted stock transactions and outstanding awards are summarized as follows:

	Years Ended September 30,					
	2015		2014		2013	
	Awards	Weighted Average Grant Date Fair Value	Awards	Weighted Average Grant Date Fair Value	Awards	Weighted Average Grant Date Fair Value
Beginning Outstanding	35,203	$ 10.13	69,154	$ 10.13	127,975	$ 9.06
Awarded	—	—	—	—	—	—
Released	(21,663)	11.47	(33,951)	10.13	(58,771)	7.81
Forfeited	—	—	—	—	(50)	7.98
Ending Outstanding	13,540	$ 7.98	35,203	$ 10.13	69,154	$ 10.13

Stock-based compensation plans are summarized in the table below:

Name of Plan	Shares Authorized	Shares Available	Options Outstanding	Plan Expiration
2007 Employee Stock Incentive Plan	3,000,000	916,038	1,425,297	Mar. 2020
1998 Employee Stock Option Plan	500,000	—	23,710	Jan. 2008
Non-Employee Directors Stock Option Plan	500,000	167,600	178,470	Mar. 2020
		1,083,638	1,627,477	

Stock options were valued using the Black-Scholes option pricing model. See Note 1 for further discussion. Stock option transactions and the options outstanding are summarized as follows:

	Years Ended September 30,					
	2015		2014		2013	
	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price
Outstanding at beginning of period	1,063,324	$ 7.37	1,059,567	$ 6.71	891,293	$ 9.37
Granted	327,500	9.74	272,906	7.01	312,850	2.95
Assumed - merger	367,229	14.19	—		—	
Exercised	(94,701)	5.52	(263,643)	4.31	(8,450)	3.08
Forfeited/canceled	(35,875)	24.71	(5,506)	9.63	(136,126)	15.75
Outstanding at end of period	1,627,477	$ 9.11	1,063,324	$ 7.37	1,059,567	$ 6.71
Exercisable at end of period	1,002,421	$ 9.74	674,237	$ 8.18	874,591	$ 7.13
Weighted average grant-date fair value of options granted during the period	$ 5.91		$ 4.38		$ 1.82	

The following tables summarize information for stock options outstanding and exercisable as of September 30, 2015:

Range of Exercise Prices	Options Outstanding			
	Number Outstanding	Remaining Contractual Life	Average Exercise Price	Aggregate Intrinsic Value
		(in years)		(in thousands)
2.95-3.30	165,310	7.1	$ 2.96	
3.80-7.00	143,402	3.4	5.69	
7.01-7.14	269,106	8.2	7.01	
7.15-7.87	60,223	5.5	7.60	
7.88-8.00	246,806	6.2	7.98	
8.01-9.94	99,338	6.4	8.93	
9.95-10.49	282,500	9.1	9.98	
10.50-15.23	184,041	2.7	11.80	
15.24-22.26	161,489	3.1	18.00	
27.47-25.00	15,262	2.5	27.47	
	1,627,477	6.1	$ 9.11	$ 238
Vested and expected to vest as of September 30, 2015	1,624,545	6.1	$ 9.11	$ 238

Range of Exercise Prices	Options Exercisable		
	Number Exercisable	Weighted Average Exercise Price	Aggregate Intrinsic Value
			(in thousands)
2.95-3.30	99,968	$ 2.97	
3.80-7.00	143,402	5.69	
7.01-7.14	81,327	7.01	
7.15-7.87	23,144	7.15	
7.88-8.00	246,806	7.98	
8.01-9.94	43,566	9.42	
9.95-10.49	6,000	9.98	
10.50-15.23	181,457	11.81	
15.24-22.26	161,489	18.00	
27.47-25.00	15,262	27.47	
	1,002,421	9.74	$ 150

The aggregate intrinsic value in the tables above represents the total pretax intrinsic value, based on the Company’s closing stock price of$4.30 per share as of September 30, 2015, which would have been received by the option holders had all option holders exercised their options as of that date. The total intrinsic value of stock options exercised during the fiscal years ended September 30, 2015, 2014 and 2013 was $1.1 million, $1.3 million and less than $0.1 million, respectively.

3. Earnings Per Share

Basic earnings per share is computed by dividing net income (loss) available to common stockholders by the weighted average number of common shares outstanding for the period. Diluted earnings (loss) per share is computed similarly to basic earnings per share 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, and the numerator is based on net income (loss). In the case of a net loss, diluted earnings per share is calculated in the same manner as basic earnings per share. Options and restricted stock of approximately 1,640,000, 1,099,000 and 1,130,000 shares are excluded from the fiscal2015, 2014 and 2013 earnings per share calculations as they are anti-dilutive.

	Years ended September 30,		
	2015	2014	2013
	(dollars in thousands, except per share amounts)		
Basic Earnings Per Share Computation			
Net loss attributable to Amtech Systems, Inc.	$ (7,771)	$ (13,047)	$ (20,069)
Weighted Average Shares Outstanding:			
Common stock	12,022	9,732	9,529
Basic loss per share attributable to Amtech shareholders	$ (0.65)	$ (1.34)	$ (2.11)
Diluted Earnings Per Share Computation			
Net loss attributable to Amtech Systems, Inc.	$ (7,771)	$ (13,047)	$ (20,069)
Weighted Average Shares Outstanding:			
Common stock	12,022	9,732	9,529
Common stock equivalents (1)	—	—	—
Diluted shares	12,022	9,732	9,529
Diluted loss per share attributable to Amtech shareholders	$ (0.65)	$ (1.34)	$ (2.11)

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

4. Stockholders' Equity

Shareholder Rights Plan – On December 15, 2008, the Company 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 the Company's Series A Participating Preferred Stock ("Series A Preferred") currently attached to each of the Company's outstanding Common Shares, par value $0.01 per share ("Common Shares"). As amended, each Right entitles the registered holder to purchase from the Companyone 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 expire10 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 the Company's common stock. The Final Expiration Date (as defined in the Restated Rights Agreement) is December 14, 2018.

On October 1, 2015, the Company entered into a Second Amended and Restated Rights Agreement (the "Second Restated Rights Agreement") with Computershare Trust Company, N.A., 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, the Company entered into a Letter Agreement (the "Agreement") by and between the Company and certain shareholders of the Company who jointly file (the "Joint Filers") under Section 13 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The Agreement permits the Joint Filers, pursuant to the Restated Rights Agreement, to individually acquire shares of common stock of the Company that would, in the aggregate, bring the Joint Filers' collective ownership to no more than 19.9% of the Company's issued and outstanding common stock at any time. In the event the Joint Filers' collective ownership at any time exceeds 19.9% of the Company's issued and outstanding shares of common stock, the Company is entitled to specific performance and all other remedies entitled to the Company at law or equity, among others. The Company's board of directors approved the Agreement and transactions contemplated thereunder, and has the sole authority to terminate the Agreement at any time.

5. Other Accrued Liabilities

Other accrued liabilities consist of the following:

	September 30, 2015	September 30, 2014
	(dollars in thousands)	
Unearned research and development grants	$ 103	$ 3,989
Other	3,448	1,357
	$ 3,551	$ 5,346

6. Commitments and Contingencies

Purchase Obligations – As of September 30, 2015, the Company had unrecorded purchase obligations in the amount of$9.8 million. These purchase obligations consist of outstanding purchase orders for goods and services. While the amount represents purchase agreements, the actual amounts to be paid may be less in the event that any agreements are renegotiated, canceled or terminated.

Development Projects

In fiscal 2014, Tempress Systems, Inc. ("Tempress") 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, Tempress sold an ion implanter ("Equipment") to ECN for $1.4 million. Both Tempress and ECN are performing research and development projects utilizing the Equipment at the ECN facilities. Each party to the agreement will have100% rights to the results of the projects developed separately by the individual parties. Any results co-developed will be jointly owned. Over the four-year period of the agreement, Tempress is required 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.

Legal Proceedings – The Company and its subsidiaries are defendants from time to time in actions for matters arising out of their business operations. 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 January 16, 2015, the Company and BTU, along with the other defendants named therein, entered into a memorandum of understanding (the "MOU") to settle the Stockholder Actions. Pursuant to the MOU, the parties to the Stockholder Actions agreed to resolve the claims alleged and the Company and BTU agreed to make certain additional disclosures regarding the merger. On June 22, 2015, the Company and BTU, along with the other defendants named therein, filed a Stipulation and Agreement of Compromise and Settlement with the Delaware Court to memorialize the MOU. On November 6, 2015, the Company and BTU, along with the other defendants named therein, filed an Amended Stipulation and Agreement of Compromise and Settlement (the "Amended Stipulation of Settlement") with the Delaware Court. The Amended Stipulation of Settlement provides for a release of all claims against the Company and BTU, along with the other defendants named therein, subject to an exception for certain securities law claims. In addition, the Amended Stipulation of Settlement provides that BTU, its insurer(s), or its successor(s) in interest will be responsible for the payment of certain amounts in plaintiffs' attorney fees and expenses in connection with the settlement, and that the defendants in the Stockholder Actions agree not to oppose an application to the Delaware Court for fees and expenses not to exceed $325,000. The Amended Stipulation of Settlement is subject to court approval. The Company and BTU entered into the Amended Stipulation of Settlement solely to avoid the costs, risks, and uncertainties inherent in litigation and without admitting any liability or wrongdoing. There can be no assurance that the court will approve the Amended Stipulation of Settlement. In such event, the proposed settlement as contemplated by the Amended Stipulation of Settlement may be terminated.

These Stockholder Actions may cause the company to incur substantial costs and divert management's attention from operational matters. Additionally, no outcome is certain, so additional harm could potentially result to the Company from this litigation.

Operating Leases – The Company leases buildings, vehicles and equipment under operating leases. Rental expense under such operating leases was $1.2 million, $1.0 million, and $1.0 million in fiscal 2015, 2014 and 2013, respectively. As of September 30, 2015, future minimum rental commitments under non-cancelable operating leases with initial or remaining terms of one year or more totaled $2.2 million, of which $0.9 million, $0.6 million, $0.4 million, $0.2 million and $0.1 million is payable in fiscal 2016, 2017, 2018, 2019 and 2020, respectively, and none thereafter.

7. Major Customers and Foreign Sales

In fiscal 2015, two customers accounted for 15% and 11% of net revenue. In fiscal 2014, two customers individually accounted for 18% and 11% of net revenue. In fiscal 2013, one customer accounted for 20% of net revenue .

Our net revenues for fiscal 2015, 2014 and 2013 were to customers in the following geographic regions:

	Years Ended September 30,		
	2015	2014	2013
United States	24%	21%	20%
Other	2%	—%	—%
Total Americas	**26%**	**21%**	**20%**
Taiwan	13%	16%	14%
Malaysia	13%	3%	3%
China	26%	14%	39%
Other	8%	12%	8%
Total Asia	**60%**	**45%**	**64%**
Germany	5%	16%	5%
Other	9%	18%	11%
Total Europe	**14%**	**34%**	**16%**
	100%	**100%**	**100%**

8. Business Segments

Following the Company's acquisition of BTU, an evaluation was conducted of the Company's organizational structure. Beginning with the second quarter of fiscal 2015, the Company made changes to its reportable segments. Prior period amounts have been revised to conform to the current period segment reporting structure. The Company's three reportable segments are as follows:

Solar - In the Company's Solar segment, we are a leading supplier of thermal processing systems, including 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.

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

Polishing - In the Company's Polishing segment, the Company produces 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.

On December 24, 2014, the Company acquired a 51% controlling interest in SoLayTec, and on January 30, 2015, the Company completed its acquisition of BTU. Beginning in the second quarter of 2015, SoLayTec's business is included in the results for the solar segment, and BTU's business is included in the results for the semiconductor segment. See Note 14, "Acquisitions", for additional information with respect to the Company's recent acquisitions.

Information concerning our business segments is as follows:

	Years ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Net revenue:			
Solar*	$ 56,689	$ 36,069	$ 22,943
Semiconductor	37,250	9,779	3,425
Polishing	10,944	10,653	8,430
	$ 104,883	$ 56,501	$ 34,798
Operating income (loss):			
Solar*	$ (4,741)	$ (11,010)	$ (13,720)
Semiconductor	(1,268)	851	(657)
Polishing	1,935	2,805	1,282
Non-segment related	(9,447)	(5,735)	(6,899)
	$ (13,521)	$ (13,089)	$ (19,994)

* 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

	Years ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Capital expenditures:			
Solar	$ 411	$ 282	$ 90
Semiconductor	136	110	8
Polishing	63	70	80
	$ 610	$ 462	$ 178
Depreciation and amortization expense:			
Solar	$ 2,940	$ 2,236	$ 2,451
Semiconductor	318	40	50
Polishing	99	134	166
	$ 3,357	$ 2,410	$ 2,667

	September 30, 2015	September 30, 2014
	(dollars in thousands)	
Identifiable assets:		
Solar*	$ 45,717	$ 50,197
Semiconductor	46,912	5,281
Polishing	5,793	6,377
Non-segment related	27,034	28,049
	$ 125,456	$ 89,904
Goodwill:		
Solar*	$ 5,344	$ 7,595
Semiconductor	4,463	—
Polishing	728	728
	$ 10,535	$ 8,323

9. Geographic Regions

The Company has operations in The Netherlands, United States, France and China. Revenues, operating income (loss) and identifiable assets by geographic region are as follows:

	Years Ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Net revenue:			
The Netherlands	$ 46,982	$ 31,779	$ 17,615
United States	37,483	20,433	11,855
France	8,387	4,218	5,328
China	9,725	71	—
Other	2,306	—	—
	$ 104,883	$ 56,501	$ 34,798
Operating income (loss):			
The Netherlands	$ (9,069)	$ (9,403)	$ (11,139)
United States	(5,541)	(207)	(4,346)
France	(330)	(611)	(815)
China	986	(2,868)	(3,694)
Other	433	—	—
	$ (13,521)	$ (13,089)	$ (19,994)

	As of September 30,	
	2015	2014
Net long-lived assets (excluding intangibles and goodwill)		
The Netherlands	$ 6,677	$ 7,617
United States	10,162	1,016
France	346	475
China	576	644
	$ 17,761	$ 9,752

10. Income Taxes

The components of the provision (benefit) for income taxes are as follows:

	Year Ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Current:			
Domestic Federal	$ (320)	$ 370	$ (150)
Foreign	500	530	800
Foreign withholding taxes	1,240	—	—
Domestic state	—	80	(110)
Total current	1,420	980	540
Deferred:			
Domestic Federal	720	(490)	(290)
Foreign	(210)	750	1,610
Domestic state	(20)	—	—
Total deferred	490	260	1,320
Total provision	$ 1,910	$ 1,240	$ 1,860

A reconciliation of actual income taxes to income taxes at the expected United States federal corporate income tax rate ofhirty-four percent is as follows:

	Year Ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Tax benefit at the U.S. rate	$ (1,630)	$ (4,440)	$ (6,750)
Effect of permanent book-tax differences	(1,570)	30	970
State tax provision	(40)	80	(110)
Valuation allowance for net deferred tax assets	2,490	3,900	5,850
Uncertain tax items	330	370	450
Foreign tax rate differential	1,890	1,000	1,440
Other items	440	300	10
	$ 1,910	$ 1,240	$ 1,860

Deferred income taxes 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. The tax effects of temporary book-tax differences that give rise to significant portions of the deferred tax assets and deferred tax liability are as follows:

	Year Ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Deferred tax assets - current:			
Capitalized inventory costs	$ 340	$ 230	$ 130
Inventory write-downs	4,840	950	620
Accrued warranty	280	180	200
Deferred profits	1,180	1,460	800
Accruals and reserves not currently deductible	1,920	520	490
Deferred tax assets - current	$ 8,560	$ 3,340	$ 2,240
Valuation allowance	(6,510)	(2,280)	(910)
Deferred tax assets - current, net of valuation allowance	$ 2,050	$ 1,060	$ 1,330
Deferred tax assets (liabilities)- non-current:			
Stock option expense	$ 680	$ 670	$ 700
Book vs. tax basis of acquired assets	(1,350)	(1,210)	(1,130)
Federal net operating loss caryforwards	5,570	900	—
Foreign and state net operating losses	10,550	8,070	9,000
Book vs. tax depreciation and amortization	(2,030)	(10)	60
Foreign tax credits	3,950	—	520
Other deferred tax assets	360	2,950	(350)
Total deferred tax assets - non-current	17,730	11,370	8,800
Valuation allowance	(17,300)	(10,070)	(7,540)
Deferred tax assets (liabilities) - non-current, net of valuation allowance	$ 430	$ 1,300	$ 1,260

Changes in the deferred tax valuation allowance are as follows:

	Year Ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Balance at the beginning of the year	$ 12,350	$ 8,450	$ 2,600
Additions to valuation allowance	11,460	3,900	5,850
Balance at the end of the year	$ 23,810	$ 12,350	$ 8,450

The deferred tax valuation allowance increased by$11.5 million and by $3.9 million for the years ended September 30, 2015 and 2014, respectively. A significant portion of this increase is related to the acquisition of BTU. In assessing the realizability of deferred tax assets, the Company considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. The Company considers the scheduled reversal of deferred tax liabilities, projected future income, and tax planning strategies in making this assessment. We have recorded a full valuation allowance against the net deferred tax assets of the China, Dutch and French subsidiaries and of certain states since we believe that, after considering all of the available objective evidence, both positive and negative, historical and prospective, with greater weight given to historical evidence, it is not more likely than not that these assets will be realized.

The Company has federal net operating loss carryforwards of approximately$16.9 million that expire at various times between 2024 and 2035. The company also has foreign net operating loss carryforwards of approximately $37.8 million which expire at various times through 2024. The Company also has state net operating loss carryforwards of $11.4 million. In addition, the Company has approximately $3.6 million of foreign tax credits that expire at various times through 2025.

The Company's historical and continuing policy is that its undistributed foreign earnings are indefinitely reinvested and, accordingly, no related provision for U.S. federal and state income taxes has been provided on the $0.9 million of undistributed foreign earnings at September 30, 2015. The amount of taxes attributable to these undistributed earnings is immaterial.

The Company applies the provisions of FASB Interpretation No. 48 ("FIN 48"), "Accounting for Uncertainty in Income Taxes", (now codified as FASB ASC 740, "Income Tax"). In this regard, an uncertain tax position represents the Company's expected treatment of a tax position taken in a filed tax return, or planned to be taken in a future tax return, that has not been reflected in measuring income tax expense for financial reporting purposes. Approximately $1.8 million of this total represents the amount that, if recognized, would favorably affect our effective income tax rate in future periods.

A reconciliation of the beginning and ending amount of our unrecognized tax benefits is summarized as follows:

	Year Ended September 30,		
	2015	2014	2013
	(dollars in thousands)		
Balance at beginning of the year	$ 3,180	$ 2,810	$ 2,360
Additions related to tax positions taken in prior years	330	370	530
Reductions due to lapse of statute of limitations	—	—	(80)
Balance at the end of the year	$ 3,510	$ 3,180	$ 2,810

We have classified all of our liabilities for uncertain tax positions as income taxes payable long-term. Income taxes long-term also includes other items, primarily withholding taxes that are not due until the related intercompany service fees are paid.

We report accrued interest and penalties related to unrecognized tax benefits in income tax expense. We recognized a net expense for interest and penalties of $0.3 million, $0.4 million, and $0.5 million for fiscal years 2015, 2014 and 2013 respectively. Income taxes payable long-term on the consolidated balance sheets includes a cumulative accrual for potential interest and penalties of $1.8 million and $1.6 million as of September 30, 2015 and 2014, respectively.

The Company does not expect that the amount of our tax reserves for uncertain tax positions will materially change in the next 12 months other than the continued accrual of interest and penalties.

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

These open years contain certain matters that could be subject to differing interpretations of applicable tax laws and regulations as they relate to the amount, timing, or inclusion of revenues and expenses, or the sustainability of income tax positions of the Company and its subsidiaries.

11. Restructuring Charges

During fiscal 2015, the company recorded a net charge of $0.6 million, which is reported in restructuring and other charges in the consolidated statement of operations, for employee related costs, including costs for severance related to the BTU acquisition.

12. Selected Quarterly Data (Unaudited)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(in thousands, except per share amounts)			
Fiscal Year 2015:				
Revenue	$ 12,396	$ 24,273	$ 40,016	$ 28,198
Gross margin	$ 3,428	$ 6,889	$ 10,128	$ 6,563
Provision for income taxes	$ 180	$ 170	$ 290	$ 1,270
Net income (loss) attributable to Amtech Systems, Inc.	$ (5,195)	$ (2,321)	$ (1,604)	$ 1,349
Comprehensive income (loss) attributable to Amtech Systems, Inc.	$ (6,247)	$ (4,470)	$ (1,344)	$ 1,414
Net income (loss) per share attributable to Amtech Systems, Inc.:				
Basic earnings per share	$ (0.53)	$ (0.19)	$ (0.12)	$ 0.10
Shares used in calculation	9,854	11,997	13,103	13,150
Diluted earnings per share	$ (0.53)	$ (0.19)	$ (0.12)	$ 0.10
Shares used in calculation	9,854	11,997	13,103	13,259
Fiscal Year 2014:				
Revenue	$ 14,772	$ 12,717	$ 9,190	$ 19,822
Gross margin	$ 4,535	$ 2,898	$ 1,631	$ 2,562
Provision for (benefit of) for income taxes	$ 560	$ —	$ 1,325	$ (645)
Net loss attributable to Amtech Systems, Inc.	$ (794)	$ (3,751)	$ (5,257)	$ (3,245)
Comprehensive loss attributable to Amtech Systems, Inc.	$ (66)	$ (3,756)	$ (5,568)	$ (4,892)
Net loss per share attributable to Amtech Systems, Inc.:				
Basic earnings per share	$ (0.08)	$ (0.39)	$ (0.53)	$ (0.33)
Shares used in calculation	9,560	9,679	9,843	9,846
Diluted earnings per share	$ (0.08)	$ (0.39)	$ (0.53)	$ (0.33)
Shares used in calculation	9,560	9,679	9,843	9,846

13. Long-term Debt

In January 2015, the Company acquired $7.2 million of long-term debt as part of the BTU acquisition. The debt acquired is a mortgage note secured by its real property in Billerica, Massachusetts, and has a remaining balance of $6.9 million as of September 30, 2015. The debt acquired has an interest rate of 4.4% through September 26, 2018, 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 loan agreement requires compliance with certain covenants. One covenant requires that the outstanding principal plus accrued interest and fees thereon is not greater than 80% of the appraised value of the mortgaged premises. The company was not in compliance with this covenant as of September 30, 2015. As of the date hereof, we have not received any notice of acceleration from the lender, nor have we received a waiver. Due to non-compliance, we have reclassified $0.2 million to current liabilities. The maturity date of the debt acquired is September 26, 2023.

In December 2014, the Company acquired long term debt as part of the SoLayTec acquisition. Subsequent to the acquisition, there were additional borrowings of $0.7 million. As of September 30, 2015 the debt has a remaining balance of $2.4 million. The debt acquired has interest rates ranging from 5.95% to 10% and maturity dates ranging from fiscal 2017 to fiscal 2021.

Annual maturities relating to the Company's long-term debt as of September 30, 2015 are as follows:

	Annual Maturities *(in thousands)*
2016	919
2017	1,122
2018	576
2019	453
2020	473
Thereafter	5,824
Total	$ 9,367

14. Acquisitions

Merger with BTU International

On January 30, 2015, the Company completed its acquisition of BTU (the "Merger"). In connection with the Merger, each share of BTU common stock outstanding immediately prior to the effective time of the Merger, including BTU restricted stock units that vested immediately prior to the effective time of the Merger, was converted to 0.3291 shares of common stock of the Company. The Company issued 3,185,852 shares of Company common stock on the Merger date. Pursuant to the terms of the Merger Agreement, options to purchase BTU common stock held by BTU employees were assumed by the Company and converted into options to purchase shares of Company common stock on substantially the same terms and conditions as were applicable to such BTU stock options, with appropriate adjustments based upon the exchange ratio of 0.3291 to the exercise price and the number of shares of Company common stock subject to such stock option. As a result of the Merger, the company owns 100% of the outstanding stock of BTU.

The following unaudited pro forma data has been prepared by adjusting the Company's historical data to give effect to the Merger as if it had occurred on October 1, 2013 and includes adjustments for depreciation expense, amortization of intangibles, and the effect of other purchase accounting adjustments:

	Years Ended (unaudited)		
	September 30, 2015	**September 30, 2014**	**September 30, 2013**
	(dollars in thousands, except per share data)		
Revenue, net	$ 121,186	$ 111,531	$ 84,641
Net loss	$ (9,223)	$ (15,586)	$ (40,108)
Earnings per share available to Amtech stockholders:			
Basic	$ (0.70)	$ (1.21)	$ (3.03)
Diluted	$ (0.70)	$ (1.21)	$ (3.03)

The unaudited pro forma financial data was prepared in accordance with the acquisition method of accounting under existing standards and is not necessarily indicative of the results of operations that would have occurred if the Merger had been completed on the date indicated, nor is it indicative of the future operating results of the Company.

The unaudited pro forma results do not reflect certain future events that either have occurred or may occur after the Merger, including, but not limited to, the anticipated realization of ongoing cost reductions from other operating synergies in subsequent periods. They also do not give effect to certain charges that the Company expects to incur in connection with the Merger, including, but not limited to, additional professional fees and other restructuring costs.

The Merger was an all-stock transaction. The following table summarizes the consideration transferred:

(In thousands, except per share amounts)		
BTU common shares and restricted stock units exchanged		9,681
Exchange ratio		0.3291
Amtech common stock issued for consideration		3,186
Amtech common stock per share price on January 30, 2015	$	8.20
Consideration for BTU common shares and restricted stock units	$	26,125
Vested BTU stock options exchanged for Amtech stock options	$	500
Total fair value of consideration transferred	$	26,625

The following table summarizes the allocation of the consideration for the assets acquired and liabilities assumed onJanuary 30, 2015:

(In thousands)		
Fair value of net tangible assets acquired	$	19,232
Goodwill		4,463
Identifiable intangible assets		2,930
Total consideration allocated	$	26,625

The acquired intangible assets are the trade name "BTU", which has a fair value of$1.2 million and 15 year useful life, and customer lists of $1.7 million and a useful life of 6 years. Goodwill of $4.5 million was assigned to the semiconductor segment. Goodwill will not be amortized but instead tested for impairment at least annually (more frequently if certain indicators are present). Goodwill as of September 30, 2015, is not expected to be deductible for tax purposes. During the fourth quarter of 2015, the Company obtained additional information relating to the fair value of net tangible and intangible assets acquired. Refer to Note 1 "Summary of Significant Accounting Policies" for details on the adjustments that were made. As of September 30, 2015, the accounting for the BTU acquisition has not been finalized due to pending items on the valuation of acquired assets and liabilities.

Under the guidance on accounting for business combinations, merger and integration costs are not included as components of consideration transferred but are accounted for as expenses in the period in which the costs are incurred. Transaction-related expenses of $4.0 million and $1.3 million for fiscal 2015 and 2014, respectively, are included in the Selling, General and Administrative line in the Condensed Consolidated Statements of Operations.

Acquisition of SoLayTec B.V.

On December 24, 2014, the Company expanded our participation in the solar market by acquiring a51% controlling interest in SoLayTec, which provides ALD systems used in high efficiency solar cells, for a total purchase price consideration of $1.9 million.

The Company consolidated the results of operations for SoLayTec beginning on December 24, 2014, the effective date of the acquisition, which were not material to our consolidated statement of operations for fiscal 2015. Additionally, the Company's historical results would not have been materially affected by the acquisition of SoLayTec and, accordingly, has not presented pro forma information as if the acquisition had been completed at the beginning of each period presented in our consolidated statements of operations. As of September 30, 2015, the accounting for the SoLayTec acquisition has not been finalized due to pending items on the valuation of acquired assets and liabilities.

15. Deconsolidation

In September 2015, the Company entered into transactions pursuant to which the Company has received$0.7 million as of September 30th, and will receive approximately $7.1 million, $3.6 million in return for shares of Kingstone and

$3.5 million for the repayment of a loan, including interest, reducing its ownership to15% of the Hong Kong holding company (effectively a 10% beneficial ownership in the Shanghai operating entity). The loan carries interest at 1% per annum and the balance and interest were paid in full in October 2015. The cash for the sale of shares was received in November 2015. According to the terms of the transaction agreements, the Company will receive $5.6 million, approximately $3.1 million net of tax, by March 31, 2016, for its exclusive sales and service rights in the solar ion implant equipment. Following closing, the Company no longer held a controlling interest in Kingstone and as a result, Kingstone was deconsolidated on September 16, 2015, eliminating the assets, liabilities and non-controlling interests recorded for Kingstone from the Company's Consolidated Balance Sheet. The Company's investment in Kingstone will be accounted for using the equity method for periods subsequent to the deconsolidation due to the Company's ability to exert significant influence over the financial and operating policies of Kingstone, primarily through our representation on the board of directors. See Note 16 - Investment for additional details.

The Company recorded a gain of $8.8 million as a result of the deconsolidation. The gain was computed as follows: the fair value of consideration received, plus the fair values of the retained non-controlling interest and the sales and service rights, less the carrying value of Kingstone's net assets.

16. Investments

As discussed in Note 15 "Deconsolidation", on September 16, 2015, the Company deconsolidated Kingstone, reducing its ownership to15% of the Hong Kong holding company (effectively a 10% beneficial ownership in the Shanghai operating entity). The Company's investment in Kingstone will be accounted for using the equity method for periods subsequent to the deconsolidation due to the Company's ability to exert significant influence over the financial and operating policies of Kingstone, primarily through our representation on the board of directors. The resulting equity method investment was initially recorded at fair value at $2.7 million using the value the third party purchaser placed on their investment in Kingstone Shanghai, a Level 2 input in the fair value hierarchy.

The recognition of the Company's retained interest in Kingstone at fair value upon deconsolidation resulted in a basis difference between the carrying value of the Company’s investment in Kingstone and its proportionate share in net assets of Kingstone. The difference (the “basis difference”) between the initial fair value of the Company's investment and the proportional interest in the underlying net assets of Kingstone will be allocated to the Company's proportionate share of Kingstone’s identifiable assets and liabilities. The portion of the basis difference attributable to tangible and definite lived intangible assets will be amortized over their respective estimated useful lives and reflected as a component of “Income (loss) from equity method investment”.

The Company is currently determining the fair value of certain assets of Kingstone. The valuation is expected to be finalized in fiscal 2016. The Company has estimated that the amortization of the basis difference allocable to the period from September 16, 2015 to September 30, 2015 (“the short period”) was not material. However, once a final allocation of fair value is made, the related depreciation and amortization for the short period may be significantly different from its initial estimate. The Company’s loss from equity method investment in Kingstone during the short period was immaterial and it is not expected that the loss will be materially different as a result of the fair value determination.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Our management, including our Chief Executive Officer (“CEO”) and Chief Financial Officer (“CFO”), has carried out an evaluation of the effectiveness of our disclosure controls and procedures as defined in Exchange Act Rules 13a-15(e) and 15(d)-15(e). Based upon that evaluation, our CEO and CFO have concluded that our disclosure controls and procedures in place were effective as of September 30, 2015.

Management's Report on Internal Control Over Financial Reporting

To the Shareholders of Amtech Systems, Inc.,

The management of Amtech Systems, Inc. is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Internal control over financial reporting is a process designed 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.

Because of its inherent limitations, our controls and procedures may not prevent or detect misstatements. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the controls system are met. Because of the inherent limitations in all controls systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected.

Management assessed the effectiveness of our internal control over financial reporting based on the criteria in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on its evaluation under the criteria in *Internal Control — Integrated Framework*, management concluded that our internal control over financial reporting was effective as of September 30, 2015.

During the quarter ended March 31, 2015, the Company acquired BTU. Other than the addition of BTU's internal control over financial reporting and any related changes in control to integrate BTU into the Company, there have been no changes to Amtech's internal control over financial reporting during fiscal year ended September 30, 2015.

The Company's independent registered public accounting firm, Mayer Hoffman McCann P.C., has issued an audit report on the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

Pursuant to Paragraph G(3) of the General Instructions to Form 10-K, the information required by Part III of Form 10-K is incorporated by reference to Amtech's Definitive Proxy Statement to be filed with the Securities and Exchange Commission in connection with its 2015 Annual Meeting of Stockholders (the "Proxy Statement") to be filed within 120 days of this filing. In the event the Proxy Statement will not be filed within 120 days, the information required by Part III of this Form 10-K will be filed pursuant to an amendment to this annual report on Form 10-K within the 120 day period.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND GOVERNANCE

The information required by this item (i) is incorporated herein by reference to the Proxy Statement or (ii) will be filed pursuant to an amendment to this annual report on Form 10-K, in each case, within 120 days of this filing.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item (i) is incorporated herein by reference to the Proxy Statement or (ii) will be filed pursuant to an amendment to this annual report on Form 10-K, in each case, within 120 days of this filing.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item (i) is incorporated herein by reference to the Proxy Statement or (ii) will be filed pursuant to an amendment to this annual report on Form 10-K, in each case, within 120 days of this filing.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item (i) is incorporated herein by reference to the Proxy Statement or (ii) will be filed pursuant to an amendment to this annual report on Form 10-K, in each case, within 120 days of this filing.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item (i) is incorporated herein by reference to the Proxy Statement or (ii) will be filed pursuant to an amendment to this annual report on Form 10-K, in each case, within 120 days of this filing.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1) The consolidated financial statements required by this item are set forth on the pages indicated at Item 8.

(2) All financial statement schedules are omitted because they are either not applicable, or because the required information is shown in the consolidated financial statements or notes thereto.

(3) Exhibits: The response to this section of Item 15 is included in the Exhibit Index of this annual report on Form 10-K and is incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this report on Form 10-K has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

SIGNATURE	TITLE	DATE
* Jong S. Whang	Executive Chairman and Chairman of the Board	November 19, 2015
* Fokko Pentinga	Chief Executive Officer and President (Principal Executive Officer)	November 19, 2015
/s/ Bradley C. Anderson Bradley C. Anderson	Executive Vice President – Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	November 19, 2015
* Michael Garnreiter	Director	November 19, 2015
* Paul J. van der Wansem	Director	November 19, 2015
* Egbert J.G. Goudena	Director	November 19, 2015
* Robert F. King	Director	November 19, 2015
* Sukesh Mohan	Director	November 19, 2015

*By: /s/ Bradley C. Anderson
Bradley C. Anderson, Attorney-In-Fact**

**By authority of the power of attorney filed as Exhibit 24 hereto.

EXHIBIT INDEX

EXHIBIT NO.	DESCRIPTION	METHOD OF FILING
2.1	Agreement and Plan of Merger, dated October 21, 2014, by and among Amtech Systems, Inc., BTU Merger Sub, Inc., and BTU International, Inc.	A
3.1	Amended and Restated Articles of Incorporation, as amended through February 6, 2012.	B
3.2	Certificate of Designations, Preferences and Privileges of the Series A Convertible Preferred Stock (Par Value $.01 Per Share) of Amtech Systems, Inc., dated as of April 21, 2005.	C
3.3	Amended and Restated Bylaws of Amtech Systems, Inc., dated as of January 4, 2008.	D
3.4	First Amendment to the Company's Amended and Restated Bylaws, dated January 30, 2015.	E
4.1	Second Amended and Restated Rights Agreement, dated as of October 1, 2015, by and between Amtech Systems, Inc. and Computershare Trust Company, N.A.	F
4.2	Form of Accredited Investor Subscription Agreement for the Series A Convertible Preferred Stock.	C
10.1	Amtech Systems, Inc. 1998 Stock Option Plan, as amended through March 29, 2002.	G
10.2	Non-Employee Directors Stock Option Plan, effective July 8, 2005 as amended through May 8, 2014.	H
10.3	2007 Employee Stock Incentive Plan of Amtech Systems, Inc., as amended, effective April 9, 2015.	I
10.4	Second Amended and Restated Employment Agreement between Amtech Systems, Inc. and Jong S. Whang, dated February 9, 2012.	B
10.5	Amendment, dated as of July 1, 2012, to the Second Amended and Restated Employment Agreement between Amtech Systems, Inc. and Jong S. Whang, dated as of February 9, 2012.	J
10.6	Employment Agreement between Amtech Systems, Inc. and Fokko Pentinga, dated June 29, 2012.	K
10.7	Amendment, dated as of July 1, 2012, to the Employment Agreement between Amtech Systems, Inc. and Fokko Pentinga, dated as of June 29, 2012.	J
10.8	Second Amendment, dated June 28, 2013, to the Second Amended and Restated Employment Agreement between Amtech Systems, Inc. and Jong S. Whang, dated as of February 9, 2012.	L
10.9	Second Amendment, dated June 28, 2013, to the Employment Agreement between Amtech Systems, Inc. and Fokko Pentinga, dated as of June 29, 2012.	L
10.10	Employment Agreement, dated October 21, 2014, by and between Paul J. van der Wansem and the Company.	M
10.11	Consulting Agreement, dated October 21, 2014, by and between Paul J. van der Wansem and the Company.	M
10.12	Fourth Amendment to Employment Agreement between Amtech Systems, Inc. and Jong S. Whang, dated April 9, 2015.	N
10.13	Fourth Amendment to Employment Agreement between Amtech Systems, Inc. and Fokko Pentinga, dated April 9, 2015.	N
10.14	Employment Agreement between Amtech Systems, Inc. and Bradley C. Anderson, dated April 9, 2015.	N
10.15	Investment Agreement regarding Shanghai Kingstone Semiconductor Company, Ltd., dated July 17, 2015, by and between Kingstone Technology Hong Kong Limited and Suzhou Zhou Jing Investment Center (LP).	O+
21.1	Subsidiaries of the Registrant	*
23.1	Consent of Independent Registered Public Accounting Firm - Mayer Hoffman McCann P.C.	*
24.1	Powers of Attorney	*

31.1	Certification Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as Amended	*
31.2	Certification Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as Amended	*
32.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	*
32.2	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	*
99.1	Letter Agreement, dated October 8, 2015, by and between the Company and the Joint Filers.	P
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	*

+ This agreement is written in both the English and Chinese languages, and both versions are equally binding pursuant to the agreement. The English version was filed with the SEC and the Chinese language version is available from the Company upon request.

* Filed herewith.

A Pursuant to applicable securities laws and regulations, the Company is deemed to have complied with the reporting obligation relating to the submission of interactive data files in such exhibits and is not subject to liability under any anti-fraud provisions or other liability provisions of the federal securities laws as long as the Company has made a good faith attempt to comply with the submission requirements and promptly amends the interactive data files after becoming aware that the interactive data files fail to comply with the submission requirements. In addition, users of this data are advised that, pursuant to Rule 406T of Regulation S-T, these interactive data files are deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933 or Section 18 of the Securities Exchange Act of 1934 and otherwise are not subject to liability under these sections.

B Incorporated by reference to Amtech's Quarterly Report on Form 10-Q for the quarterly period ended December 31, 2011.

C Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on April 28, 2005.

D Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 8, 2008.

E Incorporated by reference to Amtech's Current Report on Form 8-K filed with the SEC on February 2, 2015.

F Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on October 5, 2015.

G Incorporated by reference to Amtech's Form S-8 Registration Statement (related to the 1998 Stock Option Plan), filed with the Securities and Exchange Commission on February 11, 2003.

H Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 14, 2014.

I Incorporated by reference to Exhibit 10.4 to Amtech's Current Report on Form 8-K filed with the SEC on April 10, 2015.

J Incorporated by reference to Amtech's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2012.

K Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 6, 2012.

L Incorporated by reference to Amtech's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2013.

M Incorporated herein by reference to the Company's Current Report on Form 8-K filed with the SEC on February 2, 2015.

N Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on April 10, 2015.

O Incorporated by reference to Amtech's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2015.

P Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on October 8, 2015.

Exhibit 21.1

AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES

SUBSIDIARIES OF THE REGISTRANT

Name	Jurisdiction in which incorporated
Tempress Systems, Inc.	State of Texas
Tempress Group Holding BV	The Netherlands
Tempress Holdings BV	The Netherlands
Tempress Systems BV	The Netherlands
Tempress Manufacturing BV	The Netherlands
Tempress Engineering BV	The Netherlands
Tempress Onroerend Goed BV	The Netherlands
Tempress IP BV	The Netherlands
Tempress Asia Holding BV	The Netherlands
Tempress Hong Kong Limited	Hong Kong
P.R. Hoffman Machine Products, Inc	State of Arizona
Bruce Technologies, Inc	State of Massachusetts
Bruce Technologies Europe GmbH	Federal Republic of Germany
R2D Automation SAS	France
Amtech Tempress New Energy Technologies Limited	China
BTU International, Inc.	State of Delaware
BTU Overseas, Ltd.	State of Delaware
BTU Europe Ltd.	State of Delaware
BTU Overseas (Shanghai) Co., Ltd	State of Delaware
BTU Ltd. (Shanghai)	State of Delaware
SoLayTec B.V.	The Netherlands

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTANTS

As independent registered public accountants, we hereby consent to the incorporation by reference in the Registration Statements Nos. 333-139592, 333-140372, 333-146856, and 333-147440 on Form S-1, Nos. 333-09917, 333-10117, 333-47098, and 333-131044 on Form S-3, Nos. 333-09909, 333-09911, 333-46086, 333-76812, 333-103101, 333-131051, 333-145454, 333-168606, 333-168607, 333-196937, 333-196940, and 333-204431 on Form S-8 and No. 333-200558 on Form S-4 of our reports dated November 19, 2015, with respect to the consolidated financial statements of Amtech Systems, Inc. as of September 30, 2015 and 2014 and for the years ended September 30, 2015, 2014, and 2013, and with respect to the effectiveness of internal control over financial reporting as of September 30, 2015, included in this Annual Report on Form 10-K.

/s/ MAYER HOFFMAN MCCANN P.C.

Phoenix, Arizona
November 19, 2015

Exhibit 24

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT EACH PERSON WHOSE SIGNATURE APPEARS BELOW CONSTITUTES AND APPOINTS JONG S. WHANG AND BRADLEY C. ANDERSON, AND EACH OF THEM, HIS TRUE AND LAWFUL ATTORNEYS-IN-FACT AND AGENTS, WITH FULL POWER OF SUBSTITUTION AND RESUBSTITUTION, FOR HIM AND IN HIS NAME, PLACE AND STEAD, IN ANY AND ALL CAPACITIES, TO SIGN AMTECH SYSTEMS, INC.'S ANNUAL REPORT ON FORM 10-K FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2015, AND ANY AND ALL AMENDMENTS TO SUCH ANNUAL REPORT ON FORM 10-K, AND TO FILE THE SAME, WITH ALL EXHIBITS THERETO, AND OTHER DOCUMENTS IN CONNECTION THEREWITH WITH THE SECURITIES AND EXCHANGE COMMISSION, GRANTING UNTO SAID ATTORNEYS-IN-FACT AND AGENTS, AND EACH OF THEM, FULL POWER AND AUTHORITY TO DO AND PERFORM EACH AND EVERY ACT AND THING REQUISITE AND NECESSARY TO BE DONE IN AND ABOUT THE PREMISES, AS FULLY AND TO ALL INTENTS AND PURPOSES AS HE MIGHT OR COULD DO IN PERSON HEREBY RATIFYING AND CONFIRMING ALL THAT SAID ATTORNEYS-IN-FACT AND AGENTS, OR HIS SUBSTITUTE OR SUBSTITUTES, MAY LAWFULLY DO OR CAUSE TO BE DONE BY VIRTUE HEREOF.

Signature	Title	Date
/s/ Jong S. Whang Jong S. Whang	Executive Chairman and Chairman of the Board	November 19, 2015
/s/ Fokko Pentinga Fokko Pentinga	Chief Executive Officer and President (Principal Executive Officer)	November 19, 2015
/s/ Bradley C. Anderson Bradley C. Anderson	Executive Vice President -- Finance, Chief Financial Officer, Treasurer and Secretary (Principal Financial Officer)	November 19, 2015
/s/ Paul J. van der Wansem Paul J. van der Wansem	Member, Management Executive Committee and Director	November 19, 2015
/s/ Michael Garnreiter Michael Garnreiter	Director	November 19, 2015
/s/ Egbert Jan Geert Goudena Egbert Jan Geert Goudena	Director	November 19, 2015
/s/ Robert F. King Robert F. King	Director	November 19, 2015
/s/ Sukesh Mohan Sukesh Mohan	Director	November 19, 2015

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 Annual Report on Form 10-K of Amtech Systems, Inc. (the "registrant");

2. Based on my knowledge, this 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 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 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 (the registrant's fourth fiscal quarter in the case of an annual report) 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 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
Chief Executive Officer
Amtech Systems, Inc.
Date: November 19, 2015

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, Bradley C. Anderson, certify that:

1. I have reviewed this Annual Report on Form 10-K of Amtech Systems, Inc. (the "registrant"),

2. Based on my knowledge, this 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 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 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)) 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 (the registrant's fourth fiscal quarter in the case of an annual report) 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 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/ Bradley C. Anderson

Bradley C. Anderson
Executive Vice President – Finance and Chief Financial Officer
Amtech Systems, Inc.
Date: November 19, 2015

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 Annual Report of Amtech Systems, Inc. (the "Company") on Form 10-K for the period ended September 30, 2015, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Fokko Pentinga, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. ss. 1350, as adopted pursuant to ss. 906 of the Sarbanes-Oxley Act of 2002, that:

(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 result of operations of the Company.

By /s/ Fokko Pentinga

Fokko Pentinga
Chief Executive Officer
Date: November 19, 2015

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 Annual Report of Amtech Systems, Inc. (the "Company") on Form 10-K for the period ended September 30, 2015, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Bradley C. Anderson, Executive Vice President – Finance and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. ss. 1350, as adopted pursuant to ss. 906 of the Sarbanes-Oxley Act of 2002, that:

(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 result of operations of the Company.

By /s/ Bradley C. Anderson

Bradley C. Anderson
Executive Vice President – Finance and Chief Financial Officer
Amtech Systems, Inc.
Date: November 19, 2015