30 YEARS

GROWTH INNOVATION

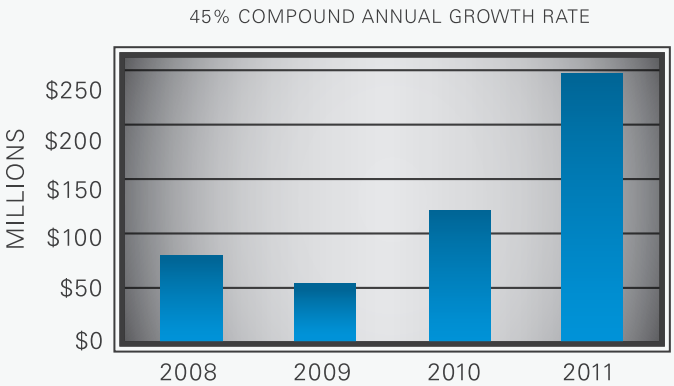
AMTECH SYSTEMS

ANNUAL REPORT ▲ 2011

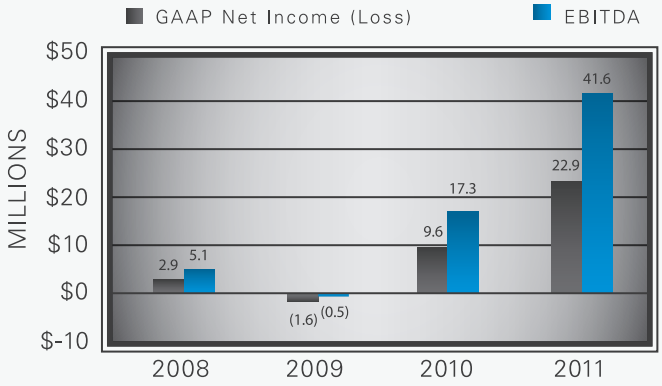
SOLAR ▲ SEMICONDUCTOR ▲ LED

AMTECH SYSTEMS

REVENUE SUMMARY



EARNINGS SUMMARY



EBITDA (2008 - $5.1; 2009 - $(0.5); 2010 - $17.3; 2011 - $41.6) equals Net Income (loss) (2008 - $2.9; 2009 - $(1.6); 2010 - $9.6; 2011 - $22.9) after adding back depreciation and amortization (2008 - $1.3; 2009 - $1.6; 2010 - $1.7; 2011 - $2.8), income tax (benefit) (2008 - $1.7; 2009 - $(0.5); 2010 - $6.2; 2011 - $16.2) and interest expense (income) - net (2008 - $(0.8); 2009 - $(0.0); 2010 - $(0.2); 2011 - $(0.3)).

Amtech Systems, (NASDAQ: ASYS) is a leading manufacturer and supplier of horizontal diffusion furnace systems, related automation and polishing supplies that enable key steps of the front end manufacturing process for both solar cells and semiconductor chips. Amtech's products are recognized under the leading brand names Tempress Systems ™, Bruce Technologies™, P.R. Hoffman™, R2D automation™ and are sold to a large and diverse worldwide customer base that consists primarily of manufacturers of solar cells, integrated circuits, and silicon wafers. Amtech is leveraging its proven technology, established brands and strong industry presence to further expand its penetration into the large and growing solar, LED and semiconductor markets. The 2011 acquisition of Kingstone Semiconductor provides an ion implant roadmap for next generation higher efficiency cell processes.

APPLICATIONS, PRODUCTS AND BRANDS

SOLAR CELLS AND SEMICONDUCTOR CHIPS

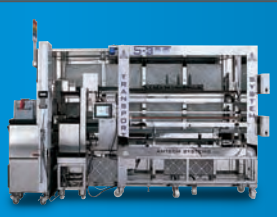
- DIFFUSION FURNACES
  - P-Type
  - N-Type
- SOLAR R&D

Bruce Technologies®

TEMPRESS®

Semiconductor KINGSTONE

- FURNACE AUTOMATION
- WAFER HANDLING SYSTEMS



S-300

R2D automation™

SILICON/LED WAFERS

- POLISHING & LAPPING MACHINES
- WAFER CARRIERS

PR HOFFMAN®

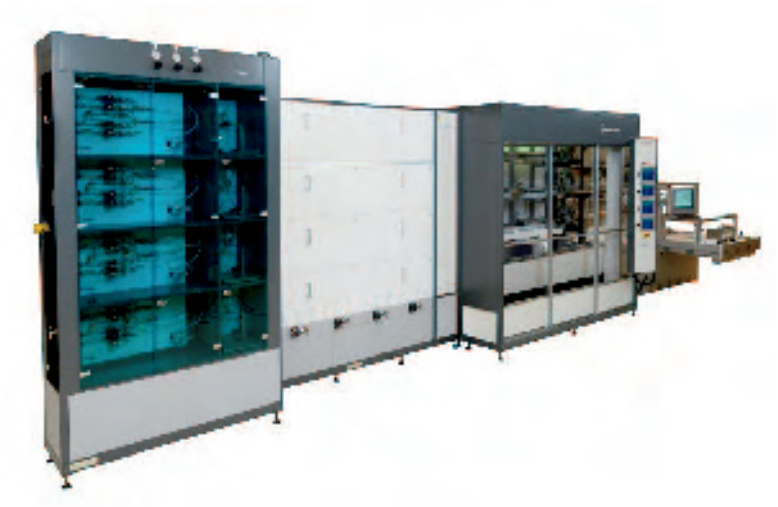
AMTECH'S PRODUCT PORTFOLIO

TEMPRESS®

Tempress develops and manufactures furnace equipment for the solar and semiconductor industries. They offer innovative and creative solutions combined with safety, quality and advanced technology.

High-end equipment and advanced processing

- POCl3/BBr3 diffusion, oxidation, annealing, and CVD furnace systems with automated wafer handling for production of N-type & P-type mono & multi crystalline solar cells, with low cost of ownership, high efficiencies and high uptime
- PECVD systems (Anti-Reflective coating)



High volume Solar Cell manufacturing

5-zone heating sections

500 cells back to back per tube
High throughput with high yield

Short process and cycle times

Full Integration with our Alix automation

Low maintenance and fast PM's

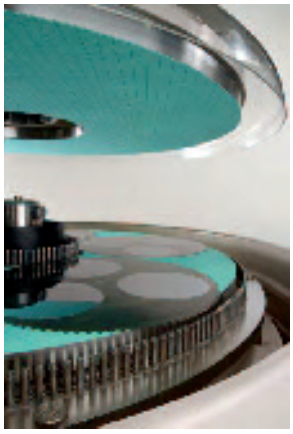
Ease of use and operation
Typical: 98% uptime

PR HOFFMAN

Semiconductor, sapphire, optics, ceramics, electronics, metalworking, quartz and medical...
Customers who require exacting tolerances for flat and parallel surfaces as well as precise thickness and surface finish, will find an application for PR Hoffman Machine Products. Since 1938, PR Hoffman has brought leading-edge technologies to some of the world's high-tech industries. Our broad line of machines, carriers, templates and consumable products are designed to exceed customer requirements worldwide.

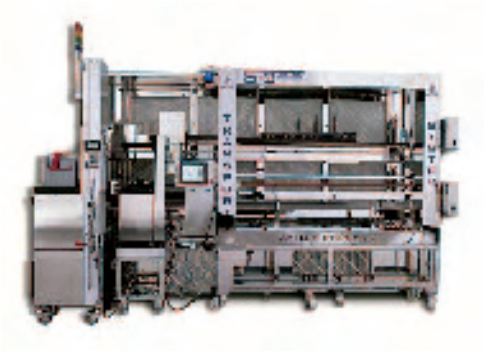
- Double Sided Lapping & Polishing Machines
- Lapping Carriers
- Polishing Templates
- Lapping Plates and Gears

Servo RS™
Model 5400



Bruce Technologies Inc. is the OEM of the Bruce Diffusion Furnace serving the Semiconductor market since 1968. BTI's main product is the BDF 41, a four-stack, horizontal furnace with over 500 systems still in production worldwide for both 150 & 200mm IC fabrication.

In addition to its horizontal furnace, BTI is the OEM for high-temperature heating elements and wafer automation systems (S300) that serve not only BTI furnaces but other horizontal furnace manufacturers as well.



R2D automation®

R2D Automation develops and manufactures automation solutions for the solar and semiconductor industries. In addition to fully integrated automation solutions, R2D Automation supplies the STANDALONE CTS which is used to transfer cells from plastic cassettes to quartz boats. The Standalone CTS, located between two furnace stacks, provides these customers with the necessary throughput for loading and unloading two furnaces.

The Standalone CTS is easy to use, allowing each transfer of cassette to quartz boat to be completed with the push of a button. An audible tone and tower light alert the operator when the quartz boat is available for pick up.

- Wafer thickness range 160 to 240 um
- Actual throughput over 3000 wafers/hour
- Process types possible: back to back proximity or same slot, half pitch (2.38mm)
- Transfers square to diamond or square to square
- 125/156mm transfer possible on the same tool
- Software recovery
- Wafer breakage rate: 0.1%

Dear Shareholders,

We are pleased to report another year of record-breaking financial progress. Our continuous focus on innovation and technology solutions for our customers has further solidified Amtech as a market leader in high efficiency solar diffusion.

We achieved total revenue that exceeded our prior year's record by more than 100 percent. Solar revenue grew to $211 million which was more than double the strong prior year solar revenue achieved. Fiscal year 2011 record financial highlights included:

- Net revenue of $246.7 million, compared to $120.0 million in fiscal 2010
- Solar revenue of $211.9 million, compared to $99.0 million in fiscal 2010
- Record bookings of $239.8 million ($199.4 million solar)
- Record Net income of $22.9 million, or $2.34 per diluted share, compared to net income of $9.6 million in fiscal 2010, or $1.04 per fully diluted share

Our ongoing objective to continuously strengthen our product solutions platform through research and development and the acquisition of complementary technologies remains our highest priority. In February 2011 we acquired a controlling interest in Kingstone Semiconductor a Chinese-based technology company specializing in ion implant solutions for the solar and semiconductor industry. At that time, we put in place an 18-24 month technology development plan. We see ion implant as a next generation solar solution to deliver higher efficiency at a lower cost.

In the fourth quarter of the fiscal year, the operating environment quickly transitioned from robust growth with continuous financial progress to an operating environment with significant headwinds. The change represented the onset of a significant global supply-demand imbalance with an accelerating decline in the visibility of forward demand. Macro factors changed the environment from robust global capacity expansion to one of underutilized capacity and declining orders.

Amtech quickly organized to address these headwinds. We are positioned to stay the course and continue to invest in growth and innovation through the cycle. We believe the industry's goal to reach grid parity requires continued investment in advancing technologies for higher efficiency at a lower cost. This is a period where our market position and leading-edge technologies can distinguish Amtech as a highly relevant company. As we have done over time, we will continue to invest in complementary technology solutions both organically and through acquisitions over the long term. We intend to meet future demand with solar and non-solar technologies that are required to advance the industries, keep our customers highly competitive and deliver attractive returns for our key stakeholders.

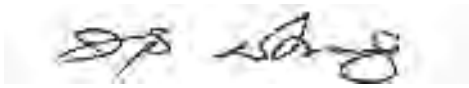
We celebrated our 30th anniversary demonstrating stability, growth, and innovation. Over the years, we have built on prior successes and further strengthened our technology portfolio. We are focused today on further diversifying our technologies. As has been the approach over time, our long-term strategies continue to be to:

- Seek new technology solutions
- Develop new products
- Grow through highly relevant, complementary acquisitions

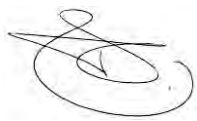
Effective January 1, 2012, Fokko Pentinga assumed the title of Chief Executive Officer while retaining his title of President and J.S. Whang assumed the title of Executive Chairman retaining the title of Chairman of the Board. The intent is to best channel our leadership strengths with Fokko overseeing our organic growth strategies, R&D and China strategy while J.S. dedicates time to the pursuit of external solar and non-solar growth opportunities to further strengthen the company's business platform. We believe this leadership structure, in combination with our strong R&D team and highly productive global operations, positions us to optimize what we see as very attractive growth opportunities.

Our employees are the foundation of our strong market position, profitable growth in fiscal year 2011 and ability to develop successful, differentiating technologies. Our innovative culture, successful collaboration with industry-leading clients and research institutes make the difference. We wish to recognize each and every one for their outstanding contribution to fiscal 2011's profitable growth.

Sincerely,



J.S. Whang
Executive Chairman and Chairman of the Board



Fokko Pentinga
Chief Executive Officer and President

This page intentionally left blank.

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, 2011

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, 2011, the aggregate market value of the voting and non-voting stock held by non-affiliates of the registrant was approximately $223,206,000, based upon the closing sales price reported by the NASDAQ Global Market on that date.

As of November 4, 2011, the registrant had outstanding 9,431,393 shares of Common Stock, $0.01 par value.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Definitive Proxy Statement related to the registrant's 2011 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, 2011, are incorporated by reference into Items 10-14 of Part III of this Form 10-K.

AMTECH SYSTEMS, INC. AND SUBSIDIARIES

Table of Contents

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 provider of thermal processing systems, including related automation, parts and services for the solar / photovoltaic, semiconductor, silicon wafer and MEMS industries. We also manufacture and sell polishing templates, steel carriers and double-sided polishing and lapping machines to fabricators of LED's, optics, quartz, ceramics and metal parts.

Our major emphasis is the development of next-generation thermal process and ion implant equipment for solar cell manufacturing, which we believe is the key to driving increased efficiency and lowering cost and will ultimately lead to grid parity. 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 products, and on our ability to adapt to cyclical trends.

We believe our product portfolio, developed through a strong 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 reducing yield losses. 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, now the dominant portion of our business. Our customers use our furnaces and automation to manufacture solar cells, semiconductors, silicon wafers and microelectromechanical systems (MEMS), which are used in end markets such as solar power, telecommunications, consumer electronics, computers, automotive and mobile hand-held devices. Through our recent acquisition of a controlling interest in Kingstone Technology Hong Kong Limited ("Kingstone"), we have expanded our development efforts in the area of solar ion implant. To complement our research and development efforts, we also sell our equipment to, and coordinate certain development efforts with, research institutes and universities. Revenue from the LED market is very small, but growing rapidly.

For fiscal 2011, we recognized net revenue of $247 million, which included $212 million of solar revenue or approximately 86% of our total revenue. These results compare to $120 million of net revenue for fiscal 2010, which included $99 million of solar revenue or approximately 82% of our total revenue. Our order backlog as of September 30, 2011 and 2010 was $86 million and $94 million, respectively, a 9% decrease. Our backlog as of September 30, 2011 included approximately $71 million of orders from our solar industry customers compared to $85 million of orders from our solar industry customers as of September 30, 2010. 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 $199 million during fiscal 2011, compared to $162 million and $22 million in fiscal 2010 and 2009, respectively. The solar book to bill ratio for fiscal years 2011 and 2010 is 0.9:1 and 1.5:1, respectively. Our order pipeline has slowed due mainly to a worldwide overcapacity of solar cell production. The pipeline is also negatively influenced by slower growth in demand for solar modules, caused by the frequently-fluctuating government support (subsidies) for solar energy installations.

For information regarding risks to our business, see "ITEM 1A. RISK FACTORS."

COMPETITIVE STRENGTHS

We believe that our competitive strengths include:

Market Leader in Solar Diffusion Processing Systems. We are a leading provider of horizontal diffusion furnaces to the global solar cell market and count many of the world's leading solar cell manufacturers as customers. Since we entered the solar market in 2006, we have shipped approximately 500 diffusion furnaces globally. Our diffusion furnaces enable our customers to produce high quality solar cells with higher efficiencies and result in lower total cost of ownership.

Technology Enabling High Efficiency, Low Cost Solar Cell Manufacturing. Our technology platform provides key components to the solar cell manufacturing industry that enable lower cost of ownership and improved customer economics by increasing solar cell efficiency, increasing throughput, reducing yield losses, reducing labor costs, enhancing quality and cutting operating and maintenance expenses. We are continually developing next-generation process technology for solar cell manufacturing to further drive increased efficiency and lower cost which is expected to ultimately lead to grid parity.

Technology Roadmap for Continued Product Differentiation. We are continually developing next-generation technology which we believe will help increase solar cell efficiency to higher than 20%. Our proprietary N-type furnace has a track record of mass production and has played a critical role in achieving significant efficiency gains over conventional P-type solar cells. We developed our N-type furnace in collaboration with the Energy Research Centre of the Netherlands, a leading solar research center in Europe and Yingli Green Energy Holding Company Limited, one of the world's leading vertically integrated PV product manufacturers. Also in our product pipeline is a future high efficiency cell processing technology based on the ion implant process, which we acquired through our acquisition of Kingstone. Further, we have developed a roadmap of identified technologies supported by partnerships that will enable continued improvements in solar cell conversion efficiency as the market shifts from a capacity driven marketplace to a technology driven marketplace over time.

Key Equipment Supplier to the World's Leading Solar Cell Manufacturers. We have developed a large and growing global customer base and currently provide systems and equipment to many of the world's leading solar cell manufacturers. Asia represents one of the largest and fastest growing solar cell manufacturing regions in the world and for fiscal year 2011, Asian customers represented 88% of our net revenues. We believe our alignment with many of the leading Asian global solar cell manufacturers represents a significant endorsement of our technology value proposition, which in turn, we believe, will help us pursue our strategy of expanding our product suite to capture a greater percentage of capital spent in building future solar cell manufacturing capacity.

Track Record of Successful Acquisitions, Integration and New Product Development. Over the course of our history, we have built a leading technology platform based on the successful integration of six strategic acquisitions, several value-added collaboration and partnership agreements as well as an aggressive internal product innovation program. We believe that our track record of success illustrates our ability to both maintain our technology leadership and expand our customer base going forward. Select acquisitions include:

- Tempress Systems, acquired in 1994 and based in Vaassen, The Netherlands, and Bruce Technologies, acquired in July 2004 and based in North Billerica, Massachusetts. Our market-leading horizontal diffusion furnace systems are sold under these well-known and respected brand names to customers for use in solar cell and semiconductor manufacturing. In addition, our customers have come to rely upon the leading Tempress and Bruce solutions for chemical vapor deposition, or CVD, and automation equipment.

- R2D Automation, acquired in October 2007 and based in Clapiers, France - R2D is a solar and semiconductor

automation company. We believe R2D enhances our addressable market by increasing our product offerings under the Tempress brand to the global solar cell manufacturing industry.

- Kingstone, a majority interest in Hong Kong-based Kingstone Technology Limited, acquired in 2011, which owns 100% of Kingstone Semiconductor Company Ltd, a Shanghai-based technology company specializing in ion implant solutions for the solar and semiconductor industries. The combination of our leadership in horizontal diffusion furnaces and Kingstone's expertise in ion implant technology creates a more complete and complementary solution for our solar customers. We believe that the acquisition of Kingstone is a critical addition in support of our strategy to provide our customers with next-generation process technologies that enable the development of higher-efficiency, lower cost solar cells.

Strength of Management. We are led by a highly experienced management team. Our Chief Executive Officer and Chairman, Jong S. Whang, has over 38 years of industry experience, including 30 years with Amtech and our President, Fokko Pentinga, has over 30 years of industry experience. Our general managers have an average of nearly 18 years of solar and semiconductor industry experience. The experience of our leadership team is derived from years of industry experience while at leading companies such as Samsung, Westinghouse, Texas Instruments, LG Semicon Company, and ASM International. Our collective team includes 14 Ph.D.'s.

On January 1, 2012, Fokko Pentinga will assume the position of CEO in addition to that of President and lead our global business. While continuing as Chairman of the Board, J.S. Whang will assume the role of Executive Chairman and will continue to participate in the oversight of Amtech's global business but also further intensify our pursuit of external growth opportunities having strategic importance to our future success. We believe these newly defined responsibilities allow us to give undivided attention to the successful execution of our long-term organic and external growth objectives.

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, scarce non-renewable energy resources, growing adoption of government incentives for solar generated electricity, increasing environmental awareness 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.

Provide Next-Generation Technology Solutions that will Enable Higher Solar Conversion Efficiency. We will continue to build on our track record of developing next-generation solar cell process solutions. Our proprietary next-generation N-type furnace already has a demonstrated record of significantly improving customer solar cell efficiency over conventional P-type solar cells. Furthermore, our recent acquisition of Kingstone provides us with a technological foundation for execution of our product roadmap to drive customer solar cell efficiency higher than 20%. We will continue to develop process solutions that enable the next generation of solar cell technology.

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.

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 customer's 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.

SOLAR AND SEMICONDUCTOR INDUSTRIES

Our systems and equipment are sold into two primary end-markets:

Solar. 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 and ion implant systems. Our N-type furnace 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 PV product manufacturers. Additionally, our recent acquisition of Kingstone provides us with a technological foundation for execution of our product roadmap to compete in the future ion implant market.

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 remains cyclical by nature. The market is characterized by short-term periods of under or over supply of solar cells and panels. When demand decreases, solar cell manufacturers typically slow their purchasing of capital equipment. Conversely, when demand increases, so does capital spending.

Semiconductors. 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 microelectromechanical systems, or 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 supply for most semiconductors, including microprocessors, memory, power management chips and other logic devices. When demand decreases, semiconductor manufacturers typically slow their purchasing of capital equipment. Conversely, when demand increases, so does capital spending.

Most semiconductor chips are built on a base of silicon, called a 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.

SOLAR AND SEMICONDUCTOR EQUIPMENT PRODUCTS

Our furnace and automation equipment is manufactured in our facilities in The Netherlands, France, and Massachusetts. The following paragraphs describe the products that comprise our solar and semiconductor 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 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 a customer's particular processes. The horizontal furnaces utilize existing industry technology 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 semiconductor manufacturing steps and the diffusion and anneal processing step in solar cell manufacturing. Our automation equipment includes mass wafer transfer systems, sorters, long-boat transfer systems, load station elevators, buffers and conveyers. We use a vacuum technology for our solar wafer transfer systems designed to ensure high throughput, reduce breakage and thereby increase yield.

PSG Dry Etch. The PSG dry etch process step in the manufacturing of solar cells removes phosphorus silicate glass (PSG) that naturally occurs during the diffusion process. We are exploring next-generation high-efficiency technology and dedicating our efforts to that process development.

Plasma-Enhanced Chemical Vapor Deposition (PECVD). Our new solar PECVD product applies an anti-reflective coating to solar wafers; a coating critical to the efficiency of solar cells. 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.

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 or compacting. The Comet Sorter is cassette to cassette with OCR front and back scribe functions, notch alignment and SECSII Gem communication. Comet ID Reader checks tag carriers then reads 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. The market for vertical furnaces is much larger than the total of all the other semiconductor markets we currently serve. We are initially 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 semiconductor competitors are much larger and have substantially greater financial resources, processing knowledge and advanced technology.

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 and silicon carbide substrates for LED devices, 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 300mm 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 300mm 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.

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 and target the LED, semiconductor, optics, quartz, ceramics, medical, computer disk and metal working markets.

MANUFACTURING, RAW MATERIALS AND SUPPLIES

Our solar and semiconductor 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 diffusion furnace systems in Vaassen, The Netherlands, Clapiers, France, and North Billerica, Massachusetts.

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 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.

With our acquisition of Kingstone in February 2011, we expanded our development efforts in a future high efficiency cell processing technology based on the ion implant process, We believe that the acquisition of Kingstone is a critical addition in support of our strategy to provide our customers with next-generation process technologies that enable the development of higher-efficiency, lower cost solar cells.

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 customer-partnered approach to such expenditures has allowed us to produce a number of new products while spending amounts that we believe are generally modest in relation to most solar and semiconductor equipment manufacturers. Our expenditures (net of grants earned) that have been accounted for as research and development were $5.8 million (2.3% of net revenue) for fiscal 2011, $2.1 million (1.8% of net revenue) for fiscal 2010, and $0.5 million (1.0% of net revenue) for fiscal 2009.

PATENTS

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

Product	Country (number of patents)	Expiration Date or Pending Approval
IBAL Model S-300	France,	March 21, 2021
	Germany,	Pending
	Italy,	Pending
	The Netherlands,	Pending
	United Kingdom	Pending
Heating Element Wire Spacer	Europe	Pending
RFID use in Carrier Products	United States	Pending
Photo CVD	United States	November 15, 2011
Charge Control	United States	Pending
Charge Control	Europe	Pending
Potential Damage-free Asher	United States	September 8, 2018
IBAL Model S-300	United States	July 7, 2019
IBAL Model S-300	United States	July 26, 2019
IBAL Model E-300	United States	July 13, 2021
Fast, Safe, Pyrogenic External Torch Assembly (*)	United States	December 17, 2011
Lapping Machine adjustable mechanism	United States	February 15, 2027
Lapping Machine	Germany	Pending
Lapping Machine	Japan	Pending
System and method of ion implantation	USA (3)	Pending
System and method of ion implantation	China (17)	Pending
Ion beam transportation	China (10)	Pending
Wafer handling	China (5)	Pending
System and method of high voltage power supply	China	Pending
System and method of making solar cells	China (13)	Pending
Vacuum chamber apparatus and method of moving objects within vacuum	China (3)	Pending
Method of making and transporting SiC layer	China (2)	Pending
Method of making solar IBC structure	China (7)	Pending
System of quadruple bar magnet	China (3)	Pending

(*) Patent is licensed from the patent holder or co-owner on a non-exclusive basis.
(#) Number of patents related to the particular product, process or method.

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

Because of 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.

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 2011, 94% of our net revenue came from customers outside of North America. This group represented 93% of revenues in fiscal 2010. In fiscal 2011, net revenue was distributed among customers in different geographic regions as follows: North America 6% (all of which is in the United States), Asia 88% (including 69% to China and 16% to Taiwan) and Europe 6%. In fiscal 2011, two customers individually accounted for 15% and 14% of net revenue. In fiscal 2010, one customer accounted for 28% of net revenue. In fiscal 2009, one customer accounted for 16% of net revenue. Yingli accounted for 15%, 28% and 4% of our net revenues in fiscal 2011, 2010 and 2009, respectively. Yingli accounts for 33% and 25% of our accounts receivable balance as of September 30, 2011 and 2010, respectively. 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.

COMPETITION

We compete in several distinct markets including semiconductor devices, semiconductor wafer, solar cell, MEMS and the market for lapping and polishing machines and supplies used in the LED 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 the semiconductor manufacturing equipment market include the equipment'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 diffusion furnaces and automation processing equipment primarily compete with those produced by other domestic and foreign 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., and Expertech, Inc. Such competition could intensify in the future if the industry trend to produce smaller chips on larger wafers accelerates, or the newer technology represented by vertical furnaces results in a material shift in the purchasing habits of our targeted customers. Our furnaces and lapping and polishing machines also face, to a limited, but increasing extent, competition from equipment on the low-end of the price spectrum.

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, divisions of Novellus, 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, 2011, we employed approximately 420 people. Of these employees, approximately 10 were based at our corporate offices in Tempe, Arizona, 40 at our manufacturing plant in Carlisle, Pennsylvania, 20 at our manufacturing plant in Billerica, Massachusetts, 250 at our operations in The Netherlands, 40 at our facilities in China and 60 at our facilities in France. Of the approximately 40 people employed at our Carlisle, Pennsylvania facility, 16 were represented by the United Auto Workers Union - Local 1443. We have never experienced a work stoppage or strike. We consider our employee relations to be good. Of these, approximately 80 people are temporary employees, providing us greater flexibility to adjust to changing industry and macro-economic conditions.

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; 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; and Kingstone Technology Hong Kong Limited, or Kingstone, a Hong Kong-based company that owns 100% of Kingstone Semiconductor Company Ltd., located in Shanghai, China, acquired in February 2011. We acquired a 55% interest in Kingstone.

AVAILABLE INFORMATION

Our annual, quarterly and current reports, proxy statements and other information, including the amendments to those reports, are available, without charge, on our website, www.amtechsystems.com, as soon as reasonably practicable after they are filed electronically with the Securities and Exchange Commission ("SEC"). In addition, our SEC filings are available over the internet at the SEC's website at http://www.sec.gov.

You may also read and copy any document that we file at the SEC's public reference room at:

Public Reference Room
100 F Street, N.E.
Washington, D.C. 20549
1-800-SEC-0330

Please call the SEC at 1-800-SEC-0330 for more information on the public reference room and their copy charges. Copies of our key governance documents, code of ethics, and charters of our audit committee, compensation and options committee and nominating and governance committee are also available on our website.

Information contained on our website is not part of this Annual Report and is not incorporated in this Annual Report by reference.

ITEM 1A. RISK FACTORS

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.

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 and
- the shift of 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 that changes with the level of demand for solar cells and semiconductors and also reflect changes in the economies of both their domestic and foreign markets 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 may be adversely affected and cost reduction measures may be necessary in order for us to remain competitive and financially sound. During a down cycle, we must be able to make timely adjustments to our cost and expense structure to correspond to the prevailing market conditions. In addition, during periods of rapid growth, we must be able to increase manufacturing capacity and personnel to meet customer demand, which may require additional liquidity. We can provide no assurance that these objectives can be met in a timely manner in response to changes within the industry cycles. Our failure to respond to these cyclical changes could have a material adverse effect on our business.

We do not have long-term volume production contracts with our customers and we do not control the timing or volume of orders placed by our customers. Whether and to what extent our customers place orders for any specific products and the mix and quantities of products included in those orders are factors beyond our control. Insufficient orders would result in under-utilization of our manufacturing facilities and infrastructure and will negatively affect our financial position and results of operations.

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

The revenue of our solar and semiconductor 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. 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 the 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. 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 below), 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.

We may not be able to increase or sustain our recent growth rate, and we may not be able to manage our future growth effectively.

We may be unable to successfully expand our business or manage future growth. Our recent acquisition of Kingstone and our recent expansion of operations has placed and any future expansion will continue to place, a significant strain on our management, personnel, systems and resources. In the past two years, we purchased additional equipment and real estate to significantly expand our manufacturing capacity and we have hired additional employees to support an increase in manufacturing, field service, research and development and sales and marketing efforts. To successfully manage our growth, we believe we must effectively:

- hire, train, integrate and manage additional process engineers, field service engineers, sales and marketing personnel, and financial and information technology personnel;
- retain key management and augment our management team, particularly if we lose key members;
- continue to enhance our customer resource management and manufacturing management systems;
- 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 rapid growth. If we are unable to manage our growth effectively, we may not be able to take advantage of market opportunities, develop new solar cells and other products, satisfy customer requirements, execute our business plan or respond to competitive pressures.

The Company makes substantial investments in its organization to develop new products for the solar industry. Sales of our products to the solar industry are subject to substantial risks.

The solar energy sector is dependent upon governmental subsidies that are not guaranteed to continue. A decline in these subsidies would reduce our ability to grow our business in this market.

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 effect in influencing 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 photovoltaic (PV) products to or below grid parity 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;
- 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 growth rates and/or profitability of our products. Sales of our solar products are also affected by those factors described in the following risk factor related to the semiconductor equipment industry. 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 semiconductor equipment industry is competitive and we are relatively small in size and have fewer resources in comparison with our competitors.

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 the semiconductor market. 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 at often a lower price than ours, using innovative technology to sell products into specialized markets. 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.

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 relationship with some customers is substantially dependent on personal relations and other contacts established by our Chairman and Chief Executive Officer. Furthermore, our relationship with a major European customer that has been instrumental in the development of our small batch vertical furnace is substantially dependent upon our President. 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 thereby continuing our reliance on certain of our key personnel.

We are the beneficiary of life insurance policies on the life of our Chairman and Chief Executive Officer, Mr. J. S. Whang, in the amount of $2.0 million, but there is no assurance that such amount will be sufficient to cover the cost of finding and hiring a suitable replacement for Mr. Whang. It may not be feasible for any successor to maintain the same business relationships that Mr. Whang has established. If we were to lose the services of Mr. Whang 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 we use in our products.

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 semiconductor industry continues to shrink the size of semiconductor devices. These and other evolving customer needs require us to respond with continued development programs.

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, win market acceptance of these new products or uses and manufacture any 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 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 and Kingstone, 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;
- 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; and
- acquired assets becoming impaired as a result of technological advancements or worse-than-expected performance of the acquired company.

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 and functionality 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. In addition, 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. If we are unable to sell our products at favorable prices, or if our products are not accepted by the markets in which we operate, it could have a material adverse effect on our business.

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. Recently, 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.

While patent, copyright and trademark protection for our intellectual property is important, we believe our future success in highly dynamic markets is most dependent upon the technical competence and creative skills of our personnel. 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 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 you 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.

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, as well as the ability of these customers to sell products that require our equipment in their manufacture. Yingli accounted for 15%, 28% and 4% of our net revenues in fiscal 2011, 2010 and 2009, respectively. Yingli accounts for 33% and 25% of our accounts receivable balance as of September 30, 2011 and 2010, respectively. 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, 2011 one customer represented 33% of accounts receivable. As of September 30, 2010 three customers individually represented 25%, 11% and 11% of accounts receivable. Yingli accounts for 33% and 25% of our accounts receivable balance as of September 30, 2011 and 2010, respectively. A concentration of our receivables from one or a small number of customers places us at risk. 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. In addition, if any one or more of our major customers does not pay us it could adversely affect our financial position and results of operations. 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 of certain customers depending on the size of the order, type of customer or its creditworthiness and its country of domicile.

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 included 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. We have experienced cancellations in the past. 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. Our backlog does not provide any assurance that we will realize revenue or profit from those orders or indicate in which period net revenue will be recognized, if ever.

Our business might be adversely affected by a decline in our sales to foreign customers, significant exchange rate fluctuations and foreign laws.

During fiscal 2010, 93% of our net revenue came from customers outside of North America. During fiscal 2011, 94% of our net revenue came from customers outside of North America as follows:

- Asia – 88% (includes 69% to China and 16% to Taiwan); and
- Europe – 6%.

Because of our significant dependence on revenue from international customers, our operating results could be negatively affected by a decline in the economies of any of the countries or regions in which we do business. Each region in the global solar and semiconductor equipment market exhibits unique characteristics that can cause capital equipment investment patterns to vary significantly from period to period. Periodic local or international economic downturns, trade balance issues, political instability and fluctuations in interest and currency exchange rates could negatively affect our business and results of operations. 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 and regulatory costs, proximity to customers and favorable tariffs.

We incurred net foreign currency transaction losses of $0.2 million and $0.4 million in fiscal 2011 and fiscal 2010, respectively. 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, and from possible social and military instability in the case of China, India, South Korea, Taiwan and possibly elsewhere. 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 February 2011, we completed our acquisition of Kingstone. 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, international monetary fluctuations, and other political, economic and legal policies of their respective country and the countries in which they do business. 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.

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 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, we must avoid accumulating excess inventory. 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 effect our business, financial condition and results of operations. We cannot assure that we can accurately predict market demand and events and 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 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 used in the production of the semiconductor polishing templates and a pad supplier that produces a unique material used in the manufacture of the polishing template. 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.

Although we make what we believe are reasonable efforts to ensure that parts are available from multiple suppliers, this is not always practical or possible. Accordingly, some key parts are being procured from a single supplier or a limited group of suppliers. 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. There can be no assurance that our financial position and results of operations will not be materially and adversely affected 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. 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.

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.

We believe that current cash balances, cash flows generated from our operations and additional available financing will provide adequate working capital for at least the next twelve months. However, cash flows may be insufficient for such purposes 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.

We are exposed to risks from legislation requiring companies to evaluate their internal control over financial reporting.

Section 404 of the Sarbanes-Oxley Act of 2002 requires our management to report on the effectiveness of our internal control over financial reporting. Our independent registered public accounting firm is required to attest to the effectiveness of our internal control over financial reporting. We have an ongoing program to perform the system and process evaluation and testing necessary to comply with these requirements. We have incurred increased expense and have devoted additional management resources to Section 404 compliance and we expect that increased expense and use of management resources will continue in the future. 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. If, in the future, our CEO, chief financial officer or independent registered public accounting firm determines that our internal control over financial reporting is not effective as defined under Section 404, investor perceptions of our company may be adversely affected and could cause a decline in the market price of our stock.

Terrorist attacks and threats or actual war may negatively impact all aspects of our operations, revenue, costs and stock price.

The 2001 terrorist attacks in the United States, as well as events occurring in response or connection to them, including future terrorist attacks against the United States, rumors or threats of war, actual conflicts involving the United States or its allies or military or trade disruptions impacting our domestic or foreign customers or suppliers of parts, components and subassemblies, may impact our operations, including, among other things, by causing 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 United States and worldwide financial markets and economy. They could also result in economic recession in the United States or abroad. Any of these occurrences could have a significant adverse impact on our financial position and results of operations.

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

The manufacture and sale of our products, which in operation 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.

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 effect 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.
- Tax rates may increase and, therefore, have a material adverse effect on our earnings and cash flows.

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 would 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 material equipment were to experience any significant damage or downtime, we would be unable to meet our production targets and our business would suffer.

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	Monthly Rent	Lease Expiration
Tempe, AZ	Corporate	15,000 sf	Owned	N/A
Billerica, MA	Office, Mfg. & Warehouse	17,000 sf	$9,200	8/31/2012
Heerde, The Netherlands	Office & Mfg.	10,000 sf	Owned	N/A
Vaassen, The Netherlands	Office, Warehouse & Mfg.	54,000 sf	Owned	N/A
Vaassen, The Netherlands	Warehouse	23,000 sf	$11,000	3/31/2013
Vaassen, The Netherlands	Production	38,000 sf	$18,000	2/28/2012
Vaassen, The Netherlands	Warehouse	23,000 sf	$11,000	3/31/2013
Clapiers, France	Office, Mfg. & Warehouse	12,000 sf	$8,000	9/30/2016 (1)
Clapiers, France	Manufacturing	3,000 sf	$3,000	3/30/2016
Le Cres, France	Warehouse	3,000 sf	$1,500	(2)
Shanghai, China	Office, Warehouse & Mfg.	13,000 sf	$12,000	4/8/2013
Shanghai, China	Office, Warehouse & Mfg.	4,000 sf	$4,000	10/31/2013
Carlisle, PA	Office & Mfg.	22,000 sf	$11,000	6/30/2019

(1) This lease can be canceled by the company with six months notice.

(2) We are currently leasing this property on a month to month basis. We are required to give six months notice of cancellation.

ITEM 3. LEGAL PROCEEDINGS

None.

ITEM 4. REMOVED AND RESERVED

PART II

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

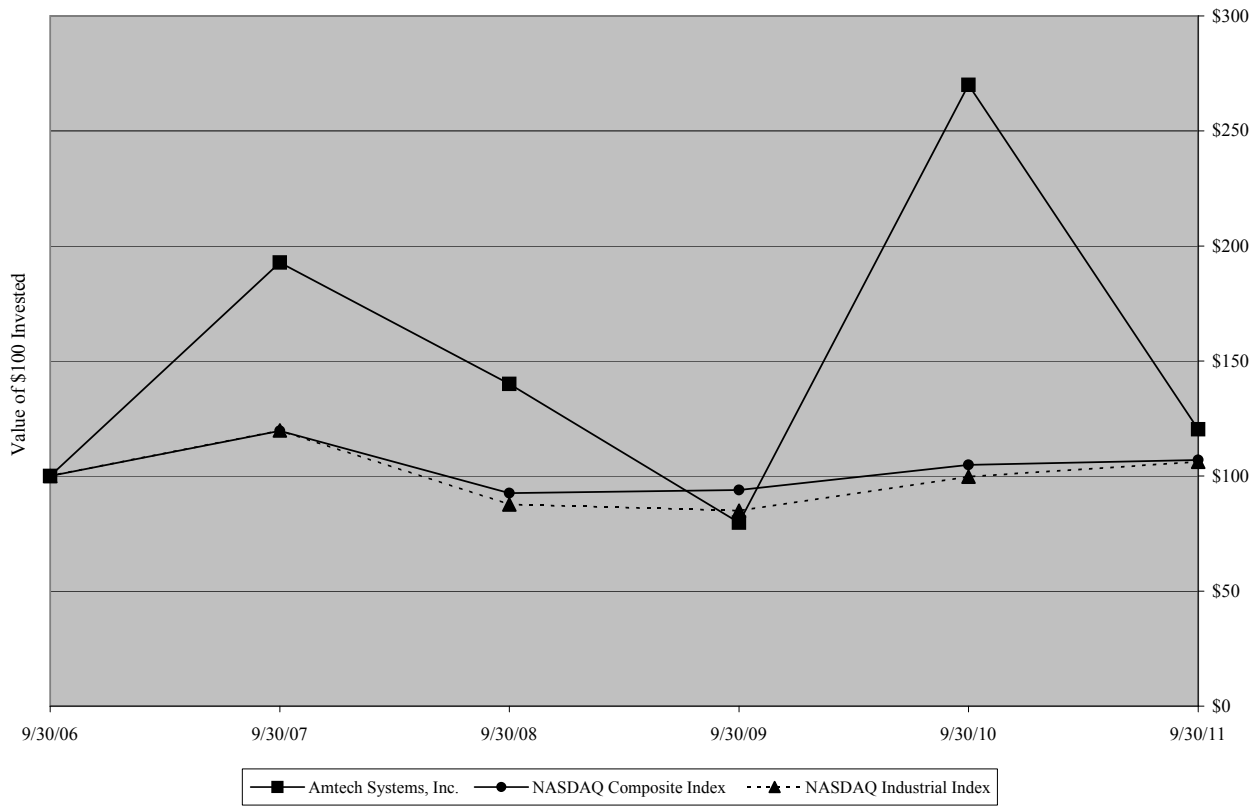
MARKET INFORMATION

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 4, 2011, the closing price of our Common Stock as reported on the NASDAQ Global Market was $11.27 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 2011 and 2010, as reported by the NASDAQ Global Market.

	Fiscal 2011		Fiscal 2010	
	High	Low	High	Low
First quarter	$ 27.19	$ 15.55	$ 11.44	$ 4.90
Second quarter	$ 30.80	$ 19.56	13.09	8.01
Third quarter	$ 26.03	$ 17.08	10.32	8.25
Fourth quarter	$ 21.65	$ 7.86	18.57	8.14

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, 2005.



HOLDERS

As of November 4, 2011, there were 558 shareholders of record of our Common Stock. Based upon a recent survey of brokers, we estimate there were approximately an additional 8,291 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, 2011, 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)	611,384	10.02	782,587
Equity compensation plans not approved by security holders	—		—
Total	611,384		782,587

(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 thereto.

COMPANY PURCHASES OF EQUITY SECURITIES

As of September 30, 2011, $5.0 million was authorized and available for the repurchase of shares by the Company. As of that date no shares had been acquired pursuant to that authorization. During the three months ended September 30, 2011, the Company repurchased 153,090 shares of our common stock issued in connection with the Kingstone acquisition at a purchase price of $26.65 per share for a total purchase price of $4.1 million pursuant to an amendment to the Stock Purchase Agreement.

Period	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced plans or programs	Maximum dollar value of shares that may yet be purchased under the plans or programs
July 2011	—	—	—	
August 2011	—	—	—	
September 2011	153,090	$ 26.65	—	—
Total	153,090		—	$ 5,000,000

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,				
	2011	2010	2009	2008 (3)	2007
Operating Data:					
Net revenue	$246,705	$120,019	$ 52,973	$ 80,296	$ 45,984
Gross profit	$ 90,657	$ 42,712	$ 15,019	$ 22,961	$ 12,810
Gross profit %	37%	36%	28%	29%	28%
Operating income (loss) [1]	$ 38,279	$ 15,909	$ (1,938)	$ 3,802	$ 1,741
Net income (loss) attributable to Amtech Systems, Inc. [2]	$ 22,882	$ 9,563	$ (1,589)	$ 2,857	$ 2,417
Earnings (loss) per share attributable to Amtech Systems, Inc.:					
Basic earnings (loss) per share	$ 2.41	$ 1.06	$ (0.18)	$ 0.33	$ 0.45
Diluted earnings (loss) per share	$ 2.34	$ 1.04	$ (0.18)	$ 0.32	$ 0.44
Order backlog[4]	$ 85,892	$ 94,427	$ 32,357	$ 46,719	$ 22,866
Balance Sheet Data:					
Cash and cash equivalents	$ 67,382	$ 56,764	$ 42,298	$ 37,501	$ 18,370
Working capital	$ 94,057	$ 65,638	$ 55,868	$ 58,275	$ 30,492
Current ratio	2.2:1	2.3:1	4.1:1	3.2:1	3.6:1
Total assets	$205,865	$136,101	$ 92,526	$102,355	$ 50,666
Total current liabilities	$ 80,794	$ 50,816	$ 18,077	$ 26,159	$ 11,718
Long-term obligations	$ 2,740	$ 1,042	$ 644	$ 1,663	$ 744
Total stockholders' equity	$122,331	$ 84,243	$ 73,805	$ 74,533	$ 38,204

(1) Includes $2.9 million of expense related to reacquired shares in fiscal 2011.

(2) Includes $1.0 million of losses in fiscal 2011 resulting from the 55% controlling interest in Kingstone acquired February 18, 2011.

(3) Effective October 1, 2007, the Company acquired 100% of the equity of R2D Automation.

(4) The backlog as of September 30, 2009, 2008 and 2007 includes $1.2 million, $1.3 million and $0.9 million, respectively, of deferred revenue on which we realized no gross margin.

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 are a leading supplier of thermal processing systems, including related automation, parts and services, to the solar/photovoltaic, semiconductor, silicon wafer and MEMS industries and also offer PECVD (plasma-enhanced chemical vapor deposition) and PSG (phosphosilicate glass) equipment. We also manufacture polishing templates, steel carriers and double-sided polishing and lapping machines to fabricators of LED's, optics, quartz, ceramics and metal parts, and for manufacturers of medical equipment components. Effective February 18, 2011, the Company acquired a 55% ownership interest in Kingstone, a Hong Kong-based holding company that owns 100% of Kingstone Semiconductor Company Ltd, a Shanghai-based technology company specializing in ion implant solutions for the solar and semiconductor industries. With that acquisition, we began developing an ion implanter to provide our customers with a more complete solution for their next-generation high-efficiency solar cell production.

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.

In October 2007, we acquired 100% of the equity of R2D Automation (R2D), a solar cell and semiconductor automation equipment manufacturing company. The purpose of the acquisition was to expand our automation products which are used in solar diffusion and semiconductor manufacturing processes. The acquisition of the technology and business of R2D enhances our growth strategy by allowing us to increase revenue by offering to the solar industry an integrated system under the Tempress® brand.

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,		
	2011	2010	2009
Net revenue	100.0%	100.0 %	100.0 %
Cost of sales	63.3%	64.4 %	71.6 %
Gross margin	36.7%	35.6 %	28.4 %
Selling, general and administrative	17.6%	20.0 %	27.9 %
Impairment and restructuring charges	—%	0.5 %	3.2 %
Research and development	2.3%	1.8 %	1.0 %
Expense related to reacquired shares	1.2%	— %	— %
Operating income (loss)	15.6%	13.3 %	(3.7)%
Interest and other income (expense), net	—%	(0.2)%	(0.1)%
Income (loss) before income taxes	15.6%	13.1 %	(3.8)%
Income tax provision (benefit)	6.6%	5.1 %	(0.8)%
Net income (loss)	9.0%	8.0 %	(3.0)%
Add: net loss attributable to noncontrolling interest	0.3%	— %	— %
Net income (loss) attributable to Amtech Systems, Inc.	9.3%	8.0 %	(3.0)%

Fiscal 2011 compared to Fiscal 2010

Net Revenue

Net revenue consists of revenue recognized upon shipment or installation of products using proven technology and upon acceptance of products using new technology. In addition, spare parts sales are recognized upon shipment. 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 furnace systems sales, revenue and operating income can be significantly impacted by the timing of system shipments, the net impact of revenue deferral on those shipments, and recognition of revenue based on customer acceptances. See Critical Accounting Policies – Revenue Recognition.

Net revenue for the years ended September 30, 2011 and 2010 was $246.7 million and $120.0 million, respectively; an increase of $126.7 million or 106%. Revenue increased primarily due to significantly higher demand in the solar industry, partially offset by an increase in the amount of revenue deferred. Net revenue from the solar market was $211.9 million and $99.0 million in fiscal 2011 and 2010, respectively; a 114% increase. Net revenue from all other markets served was $34.8 million in fiscal 2011 compared to $21.0 million in fiscal 2010, an increase of 66%, due primarily to increased demand from the semiconductor and LED market.

The current supply / demand imbalance and global economic conditions have negatively impacted growth in the solar equipment market and have caused our customers to significantly slow or push out their capacity expansion plans. The volume of new orders in the second half of fiscal 2011 was approximately 85% lower than in the first half. While the duration of this down cycle is difficult to predict, the Company continues to have a long-term positive outlook.

Backlog

Our backlog as of September 30, 2011 and 2010 was $85.9 million and $94.4 million, respectively, a 9% decrease. Our backlog as of September 30, 2011 included approximately $71.2 million of orders from our solar industry customers compared to $85.3 million of orders from solar industry customers as of September 30, 2010. New orders booked in fiscal 2011 were $239.8 million, compared to $187.6 million in fiscal 2010, including $199.4 million and $161.5 million of solar orders in fiscal 2011 and 2010, respectively. The increase in orders was due to the strong demand in the solar industry in the first half of fiscal 2011. 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 succeeding 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. At the end of fiscal 2011, two customers, individually accounted for 22% and 10% of our total backlog, respectively. At the end of fiscal 2010, three customers, individually accounted for 17%, 15% and 14% of our total backlog, respectively.

Gross Profit

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 percentage of net revenue.

The timing of revenue recognition can have a particularly significant effect on gross margin when the equipment revenue of an order is recognized in one period and the remainder of the revenue attributed to holdbacks is recognized in a later period. The portion of revenue attributed to the holdbacks generally comprises 10-20% of an order and has a significantly higher gross margin percentage.

Gross profit for the years ended September 30, 2011 and 2010 was $90.7 million and $42.7 million respectively; an increase of $47.9 million or 112%. Gross margin for fiscal 2011 and 2010 was 37% and 36%, respectively. Increased gross profit and gross margins were driven by higher volumes which resulted in more efficient capacity utilization, offset by higher deferred profit. In fiscal 2011, we had a net profit deferral of $16.6 million compared to a net profit deferral of $6.8 million in fiscal 2010.

Selling, General and Administrative Expenses

Selling, general and administrative expenses consist of the cost of employees, consultants and contractors, as well as facility costs, sales commissions, legal and accounting fees and promotional marketing expenses.

Total selling, general and administrative (SG&A) expenses for the year ended September 30, 2011 were $43.7 million or 18% of net revenue. For the year ended September 30, 2010, SG&A expenses were $24.1 million or 20% of net revenue. SG&A expenses include $1.5 million and $1.0 million of stock-based compensation expense for fiscal 2011 and 2010, respectively. The increase in SG&A expenses was primarily due to increased commissions and shipping costs related to higher revenues and higher compensation expense related to increased headcount.

Impairment and Restructuring Charges

There were no impairment or restructuring charges in fiscal 2011. See fiscal 2010 compared to fiscal 2009 below for a discussion of the impairment charges in fiscal 2010.

Research and Development

Research and development expenses consist of the cost of employees, consultants and contractors who design, engineer and develop new products and processes; materials and supplies used in those activities; and product prototyping.

	Years Ended September 30,		
	2011	**2010**	**2009**
	(dollars in thousands)		
Research and development	$ 7,362	$ 2,986	$ 1,169
Grants earned	(1,578)	(868)	(660)
Net research and development	$ 5,784	$ 2,118	$ 509

Research and development expenses increased primarily due to increased research on new solar (photovoltaic) cell manufacturing technologies to increase cell efficiency. We receive reimbursements through governmental research and development grants which are netted against these expenses. Since our acquisition of Kingstone in the second quarter of fiscal 2011, we have invested $1.5 million in research and development activity related to a solar ion implanter. Due to the steep ramp in investments in research and development on a solar ion implanter tool, we expect this expense to increase significantly in fiscal 2012.

Expense Related to Reacquired Shares

In fiscal 2011, an expense of $2.9 million was recorded in connection with the repurchase of Amtech shares for cash, such shares being those issued in the acquisition of Kingstone. The original purchase consideration for the 55% interest in Kingstone included 153,090 shares of Amtech common stock, which contained resale restrictions that precluded the selling shareholders of Kingstone from selling the Amtech shares prior to certain dates. According to the Stock Purchase Agreement, the value of the shares at the time of the acquisition was $4.1 million. During the restriction period, the value of the Amtech shares decreased by 70%. In September, the Company agreed to amend the original stock purchase agreement. In the amendment, we agreed to repurchase the shares for cash in the amount of $4.1 million, the intended value of the Amtech common stock as stated in the Stock Purchase Agreement. The market value of the shares at the date of the Amendment, September 30, 2011, was $8.00 per share, or a total value of approximately $1.2 million. In accordance with the amendment, we agreed to pay $2.9 million in excess of market value of those shares in order to protect Amtech's reputation as an acquirer of new technologies and businesses, which amount is recorded as a current expense on a separate line in the Statement of Operations, "Expense Related to Reacquired Shares".

Income Tax Provision

Our effective tax rate was approximately 42% in fiscal 2011 and 39% in 2010. The effective tax rate is the ratio of total income tax expense to pre-tax income. The increase in pre-tax income put us into a one percent (1%) higher U.S. tax bracket and effective tax rate, which was further significantly and negatively impacted by the valuation allowance on net operating losses related to the ion implant research and development and the increased effect of the provision for uncertain tax positions in connection with the higher income in some foreign jurisdictions.

Our future effective income tax rate depends on various factors, such as the geographic composition of worldwide earnings, 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 new technologies, as we intend to permanently reinvest future Dutch earnings in our foreign operations. The amount of benefit derived from that tax planning will depend on the amount of income earned in the Netherlands, as well as the portion of such income that can be shown to be derived from new technologies, as well as the factors mentioned above.

However, we expect our overall worldwide average effective tax to be higher in 2012. This is principally due to valuation allowances associated with incurring new solar ion implanter development costs and related net operating losses at Kingstone for twelve versus six months in 2011. Also, those valuation allowances are expected to represent a higher percentage of pre-tax income due to the anticipated decline in revenues. Our effective tax rate is expected to decline when; (1) we enter the next upturn in the solar industry; (2) upon realizing expected earnings from our investments in the ion implant technology; and (3) as we resolve our uncertain tax positions.

Fiscal 2010 compared to Fiscal 2009

Net Revenue

Net revenue consists of revenue recognized upon shipment or installation of products using proven technology and upon acceptance of products using new technology. In addition, spare parts sales are recognized upon shipment. Service revenue is recognized upon completion of the service activity or ratably over the term of the service contract. The majority of our revenue is generated from large furnace systems sales which, depending on the timing of shipment and installation, can have a significant impact on our revenue, gross margins and earnings in any given period. See Critical Accounting Policies – Revenue Recognition.

Net revenue for the years ended September 30, 2010 and 2009 was $120.0 million and $53.0 million, respectively; an increase of $67.0 million or 127%. Revenue increased primarily due to significantly higher demand in the solar industry,

partially offset by an increase in the amount of revenue deferred. Net revenue from the solar market was $99.0 million and $34.8 million in fiscal 2010 and 2009, respectively; a 184% increase. Net revenue from all other markets served was $21.0 million in fiscal 2010 compared to $18.2 million in fiscal 2009, an increase of 15%, due primarily to increased demand from the semiconductor market.

Backlog

Our backlog as of September 30, 2010 and 2009 was $94.4 million and $32.4 million, respectively, a 191% increase. Our backlog as of September 30, 2010 included approximately $85.3 million of orders from our solar industry customers compared to $27.9 million of orders from solar industry customers as of September 30, 2009. 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 succeeding 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. At the end of fiscal 2010, three customers, individually accounted for 17%, 15% and 14% of our total backlog, respectively.

Gross Profit

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 percentage of net revenue.

The timing of revenue recognition can have a particularly significant effect on gross margin when the equipment revenue of an order is recognized in one period and the remainder of the revenue attributed to holdbacks is recognized in a later period. The portion of revenue attributed to the holdbacks generally comprises 10-20% of an order and has a significantly higher gross margin percentage.

Gross profit for the years ended September 30, 2010 and 2009 was $42.7 million and $15.0 million respectively; an increase of $27.7 million or 184%. Gross margin for fiscal 2010 and 2009 was 36% and 28% respectively. Increased gross profit and gross margins were driven by higher volumes which resulted in significantly more efficient capacity utilization, offset by higher deferred profit. In fiscal 2010, we had a net profit deferral of $6.8 million compared to a net recognition of $0.6 million of previously deferred profit in fiscal 2009.

Selling, General and Administrative Expenses

Selling, general and administrative expenses consist of the cost of employees, consultants and contractors, as well as facility costs, sales commissions, legal and accounting fees and promotional marketing expenses.

Total selling, general and administrative (SG&A) expenses for the year ended September 30, 2010 were $24.1 million or 20% of net revenue. For the year ended September 30, 2009, SG&A expenses were $14.8 million or 28% of net revenue. SG&A expenses include $1.0 million and $0.7 million of stock-based compensation expense for fiscal 2010 and 2009, respectively. The increase in SG&A expenses was primarily due to increased commissions related to higher revenues, higher compensation expense and increased shipping costs related to higher shipping volumes.

Impairment and Restructuring Charges

Impairment charges for the year ended September 30, 2010 were $0.6 million. Impairment and restructuring charges for the year ended September 30, 2009 were $1.7 million.

In April 2007, the Company entered into a license agreement with one of the Company's technology partners to market, sell, install, service and manufacture machinery and equipment for the manufacturing of photovoltaic cells that employs PECVD Technology (Licensed Product) developed by the technology partner. Under the terms of this agreement the Company paid $1.0 million to the technology partner. The license agreement expires in January 2019. These payments are being amortized over the life of the agreement. Recently, several new competitors have entered the market and management has determined that the market opportunity for the licensed product has decreased. This recent development and the extended amount of time to develop the licensed product caused management to review the licensed product for impairment and recoverability.

It was determined that the carrying value of the license subject to amortization was not fully recoverable; therefore, an impairment charge of $0.6 million was recorded for the excess of carrying value over the fair value of the license. The fair value of the license was determined through estimates of the present value of future cash flows based upon the anticipated future use of the license.

The Bruce operations were restructured in the second quarter of fiscal 2009, resulting in a charge of $620,000 in the second quarter of fiscal 2009. We conducted an assessment of the ability to recover the carrying amount of long-lived assets of the Bruce operations. It was determined that the carrying value of the net assets was not fully recoverable; therefore, an impairment charge of $373,000 was recorded in the second quarter of fiscal 2009 for the excess of carrying value over the fair value of the customer list and non-compete agreement. The carrying values of goodwill ($89,000) and the Bruce trademark ($592,000) were also recorded as an impairment charge in the second quarter of fiscal 2009.

Research and Development

Research and development expenses consist of the cost of employees, consultants and contractors who design, engineer and develop new products and processes; materials and supplies used in those activities; and product prototyping.

	Years Ended September 30,		
	2010	2009	2008
	(dollars in thousands)		
Research and development	$ 2,986	$ 1,169	$ 1,114
Grants earned	(868)	(660)	(20)
Net research and development	$ 2,118	$ 509	$ 1,094

Research and development expenses increased primarily due to increases in research in the technology of solar (photovoltaic) cell manufacturing to increase cell efficiency. We receive reimbursements through governmental research and development grants which are netted against these expenses. As we have increased our research and development activity, we have also increased our efforts to receive grants to fund this research. As a result, the amount of grants earned in fiscal 2010 increased approximately 30%.

Income Tax Provision

Our effective tax rate was approximately 39% in fiscal 2010 and 21% in 2009. In fiscal 2009, we incurred operating losses which resulted in the recording of a tax benefit equal to 20.9% of our pretax loss. The effective tax rate was negatively impacted by higher permanent book-to-tax differences as a percentage of our pretax loss, the recording of tax on uncertain tax items and recording of additional valuation allowance on certain state deferred tax assets, including state net operating losses.

Our future effective income tax rate depends on various factors, such as the geographic composition of worldwide earnings, tax regulations governing each region, non-tax deductible expenses incurred and the effectiveness of our tax planning strategies.

Liquidity and Capital Resources

As of September 30, 2011 and 2010, cash and cash equivalents were $67.4 million and $56.8 million, respectively. As of September 30, 2011 and 2010, restricted cash was $6.6 million and $6.2 million, respectively. Restricted cash increased $0.4 million due to funds deposited in escrow for the ion implant development project, offset by a decrease of approximately the same amount in customer deposits requiring bank guarantees collateralized by cash. Our working capital was $94.1 million as of September 30, 2011 and $65.6 million as of September 30, 2010. The increase in cash was primarily provided by cash from operating activities of $15.4 million, discussed below, and $1.3 million received from the exercise of stock options, partially offset by $6.2 million of cash used in investing activities discussed below. Our ratio of current assets to current liabilities was 2.2:1 as of September 30, 2011 compared to 2.3:1 as of September 30, 2010. 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 continue to have minimal long-term obligations to service.

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,		
	2011	2010	2009
	(dollars in thousands)		
Net cash provided by operating activities	$ 15,426	$ 15,800	$ 7,571
Net cash used in investing activities	$ (6,238)	$ (2,929)	$ (1,948)
Net cash provided by (used in) financing activities	$ 2,058	$ 1,413	$ (590)

Cash Flows from Operating Activities

Cash provided by our operating activities was $15.4 million, $15.8 million and $7.6 million in fiscal 2011, 2010 and 2009 respectively. During fiscal 2011 cash was generated by earnings from operations, adjusted for non-cash charges. Additional cash was generated by increases in current liabilities, such as deferred profit, accrued income taxes and accrued compensation. These increases in fiscal 2011 were partially offset by increases in inventory and accounts receivable due to the record volume of shipments. During fiscal 2010 cash was primarily generated by earnings from operations, adjusted for non-cash charges. Additional cash was generated in fiscal 2010 by increases in current liabilities, such as customer deposits received with sales orders, accounts payable, accrued compensation and deferred profit. These increases in fiscal 2010 were offset by an increase in restricted cash due to customers requiring bank guarantees for their deposits, an increase in inventory necessary to fulfill our backlog of orders, an increase in accounts receivable due to the record volumes of shipments, as well as an increase in prepayments to vendors to take advantage of available discounts. During fiscal 2009, cash was generated primarily from collection of accounts receivable and reductions in inventory. This generation of cash in fiscal 2009 was partially offset by decreases in accrued liabilities and customer deposits, accounts payable and deferred profit.

Cash Flows from Investing Activities

Our investing activities for fiscal 2011, 2010 and 2009 used cash of $6.2 million, $2.9 million and $1.9 million, respectively. During fiscal 2011, investing activities include the $1.1 million cash portion of the acquisition of a 55 percent interest in Kingstone. We also invested $5.2 million in capital expenditures in fiscal 2011, including the purchase of the existing corporate office building for $1.0 million. Additional capital investments in The Netherlands and France were made in fiscal 2011 to support our growth and expansion. During fiscal 2010, the company made capital expenditures of $2.9 million, including land in the Netherlands adjacent to our current manufacturing facilities for $1.0 million. We also invested in machinery and equipment and infrastructure in fiscal 2010 due to our capacity expansion, primarily at our Netherlands location. During fiscal 2009, we invested $1.1 million, primarily in manufacturing equipment, research and development equipment and building improvements. In addition, we invested $0.5 million in fiscal 2010 for a license to certain solar etching technology for the removal of PSG or phosphorus silica glass and $0.3 million, the remaining installment for the license of certain solar PECVD technology.

Cash Flows from Financing Activities

Cash provided by financing activities in fiscal 2011 was $2.1 million, consisting primarily of $1.3 million of proceeds from employee exercises of stock options and $0.9 million of tax benefits related to stock options. Cash provided by financing activities in fiscal 2010 was $1.4 million, which primarily consists of $1.3 million cash received from employee exercises of stock options. Cash used in financing activities was $0.6 million in fiscal 2009, which primarily consists of $0.5 million to purchase our common stock under the fiscal 2009 repurchase program and $0.1 million in payments on long-term debt.

During fiscal 2012, we expect to make approximately $16 million of income tax payments and use additional cash to pay down accrued compensation and related taxes, and other accrued liabilities, including the $4.1 million payment we agreed to make in connection with the reacquisition of shares issued in connection with the Kingstone acquisition. We currently anticipate that our existing cash balances will be sufficient to meet our anticipated cash needs for current operations for at least the next 12 months.

Off-Balance Sheet Arrangements

As of September 30, 2011, 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, 2011:

Contractual obligations	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
		(dollars in thousands)			
Debt obligations	$ 32	$ 32	$ —	$ —	$ —
Operating lease obligations:					
Buildings	2,976	971	839	618	548
Office equipment	64	60	4	—	—
Vehicles	615	229	314	72	—
Total operating lease obligations	3,655	1,260	1,157	690	548
Purchase obligations	47,198	47,198	—	—	—
Total	$ 50,885	$ 48,490	$ 1,157	$ 690	$ 548
Other commercial obligations:					
Bank guarantees	$ 2,280	$ 2,280	$ —	—	—

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

A critical accounting policy is one that is both important to the presentation of our financial position and results of operations, and requires management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. These uncertainties are discussed in "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 in the arrangements. Where separate units of accounting exist, revenue is allocated to delivered items equal to the total sales price less the greater of (1) the relative fair value of the undelivered items, and (2) all contingent portions of the sales arrangement.

We recognize revenue when persuasive evidence of an arrangement exists; the product has been delivered and title has transferred, or services have been rendered; 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. However, a portion of the revenue associated with certain installation-related tasks, equal to the greater of the relative fair value of those tasks or the portion of the contract price contingent upon their completion, generally 10%-20% of the system's selling price (the "holdback"), and directly related costs, if any, are deferred and recognized into income when the tasks are completed. 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 fair market value 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 polishing supplies generally do not include process guarantees, acceptance criteria or holdbacks; therefore, the related revenue is generally recorded upon transfer of title which is generally at time of shipment.

(4) Sales of spare parts and consumables are recognized upon shipment, as there are no post shipment obligations other than standard warranties.

(5) 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 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. 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 quarter of such change. Prior to adoption, our policy was to establish reserves that reflected the probable outcome of known tax contingencies.

In fiscal 2011, we also had to apply judgment in determining the appropriate accounting for income taxes in connection with the reorganization of our Netherlands operations and estimating the appreciated value of certain intangibles that we transferred between taxing jurisdictions and the related tax on those transfers.

Inventory Valuation. We value our inventory at the lower of cost or net realizable value. Costs for approximately 90% 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 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. However, 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.

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, 2010, 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 intangibles are also tested for impairment at least annually. When factors indicate that an 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 used in establishing the carrying value of long-lived or intangible assets. Those judgments and estimates could be modified if adverse changes occurred in the future resulting in an inability to recover the carrying value of these assets. Below is a more detailed explanation of the procedures we perform.

We first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. 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 the carrying value of the reporting unit. 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. One benefit of this approach is it is the closest 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 that 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 denominator, while the market values tend to be forward looking; and 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 what a third-party would pay 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 two of our three 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 increase in payroll and other expense. Quantitatively, the discount rate is the assumption that has the most pervasive 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.

In Fiscal 2009, we performed a mid-year test of the impairment of the goodwill and other intangibles due to changing circumstances regarding the Bruce Technologies reporting unit. This test required us to use judgments and estimates that could be materially different than actual results. Bruce Technologies continued to incur losses after a restructuring and cost reductions put into place during the prior fiscal year and expectations that semiconductor customers served by this reporting unit would not in the future achieve the kinds of growth rates they had in the past due to increased maturity of that industry. We used the same discount rate as used in the prior annual impairment test of this reporting unit, but the other assumptions became more conservative due to the changing circumstances. It was primarily the lowered projections of future revenue that resulted in a lower estimate of fair value and the impairment loss. The payroll and certain expense assumptions, however, were lowered to take into account a second restructuring of the reporting unit, which involved a significant reduction in the number of employees. The material cost assumption was also lowered to take into account a change in product mix.

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

Foreign Currency 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 conducted in their functional currency, the U.S. dollar. Our operations in Europe and China, conduct business primarily in their functional currencies, the euro and renminbi, but occasionally enter into transactions in the U.S. dollar. 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 2011 and 2010, we did not hold any stand-alone or separate derivative instruments. We incurred net foreign currency transaction losses of $0.2 million and $0.4 million in fiscal 2011 and fiscal 2010, respectively. As of September 30, 2011, our foreign subsidiaries had $4.9 million of assets (cash and receivables) denominated in U.S. dollars, rather than their functional currency. A 10% change in the value of the functional currency relative to the non-functional currency would result in a gain or loss of $0.5 million. As of the end of fiscal 2011, we had $2.9 million of accounts payable, consisting primarily of amounts owed by European subsidiaries to our U.S. companies, denominated in U.S. dollars. Even though the intercompany accounts are eliminated in consolidation, a 10% change in the value of

the Euro relative to the U.S. dollar would result in a gain or loss of $0.3 million. Our net investment in and long-term advances to our foreign operations totaled $89.5 million as of September 30, 2011. A 10% change in the value of the Euro relative to the U.S. dollar would cause an approximately a $9.0 million foreign currency translation adjustment, a type of other comprehensive income (loss), which would be a direct adjustment to our stockholders' equity. In fiscal 2011, we recognized a net other comprehensive loss of $1.1 million from translation adjustments.

During fiscal 2011 and 2010, U.S. dollar denominated sales of our European operations were $2.9 million and $1.7 million, respectively. As of September 30, 2011, sales commitments denominated in a currency other than the functional currency of our transacting operation were $0.7 million.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders of

AMTECH SYSTEMS, INC.

We have audited the accompanying consolidated balance sheets of Amtech Systems, Inc. and subsidiaries (the "Company") as of September 30, 2011 and 2010, and the related consolidated statements of operations, stockholders' equity and comprehensive income (loss), and cash flows for each of the years in the three-year period ended September 30, 2011. 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 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 the Company as of September 30, 2011 and 2010, and the results of their operations and their cash flows for each of the years in the three-year period ended September 30, 2011 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 Company's internal control over financial reporting as of September 30, 2011, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated November 17, 2011 expressed an unqualified opinion.

/s/ MAYER HOFFMAN MCCANN P.C.

Phoenix, Arizona
November 17, 2011

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, 2011	September 30, 2010
Current Assets		
Cash and cash equivalents	$ 67,382	$ 56,764
Restricted cash	6,571	6,192
Accounts receivable		
Trade (less allowance for doubtful accounts of $246 and $181 at September 30, 2011 and September 30, 2010, respectively)	14,447	9,252
Unbilled and other	30,822	15,231
Inventories	37,162	24,317
Deferred income taxes	9,560	2,130
Prepaid income taxes	4,260	—
Other	4,647	2,568
Total current assets	174,851	116,454
Property, Plant and Equipment - Net	12,680	9,577
Deferred Income Taxes - Long Term	—	2,660
Intangible Assets - Net	5,021	2,571
Goodwill	13,313	4,839
Total Assets	$ 205,865	$ 136,101
Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts payable	$ 8,928	$ 12,446
Accrued compensation and related taxes	10,686	8,305
Accrued warranty expense	2,265	1,843
Deferred profit	27,608	11,439
Customer deposits	7,862	8,858
Other accrued liabilities	6,775	1,605
Income taxes payable	16,670	6,320
Total current liabilities	80,794	50,816
Income Taxes Payable Long-term	2,630	1,010
Deferred Income Taxes - Long Term	110	—
Other Long-Term Obligations	—	32
Total liabilities	83,534	51,858
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: 9,431,393 and 9,209,213 at September 30, 2011 and September 30, 2010, respectively	94	92
Additional paid-in capital	83,207	72,919
Accumulated other comprehensive income	(2,078)	(982)
Retained earnings	35,096	12,214
Total Amtech Systems Inc. stockholders' equity	116,319	84,243
Noncontrolling interest	6,012	—
Total Equity	122,331	84,243
Total Liabilities and Stockholders' Equity	$ 205,865	$ 136,101

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,		
	2011	**2010**	**2009**
Revenues, net of returns and allowances	$ 246,705	$ 120,019	$ 52,973
Cost of sales	156,048	77,307	37,954
Gross profit	90,657	42,712	15,019
Selling, general and administrative	43,739	24,075	14,766
Research and development	5,784	2,118	509
Impairment and restructuring charges	—	610	1,682
Expense related to reacquired shares	2,855	—	—
Operating income (loss)	38,279	15,909	(1,938)
Interest and other income (expense), net	30	(196)	(71)
Income (loss) before income taxes	38,309	15,713	(2,009)
Income tax provision (benefit)	16,190	6,150	(420)
Net income (loss)	22,119	9,563	(1,589)
Add: net loss attributable to noncontrolling interest	763	—	—
Net income (loss) attributable to Amtech Systems, Inc.	$ 22,882	$ 9,563	$ (1,589)
Income (Loss) Per Share:			
Basic income (loss) per share attributable to Amtech shareholders	$ 2.41	$ 1.06	$ (0.18)
Weighted average shares outstanding	9,480	9,022	9,019
Diluted income (loss) per share attributable to Amtech shareholders	$ 2.34	$ 1.04	$ (0.18)
Weighted average shares outstanding	9,764	9,237	9,019

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

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Consolidated Statements Of Stockholders' Equity
And Comprehensive Income (Loss)

	Common Stock							
	Number of Shares	Amount	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Amtech Systems Inc. Stockholders' Equity	Non-controlling Interest	Total Stockholders' Equity
Balance at September 30, 2008	9,096	$ 91	$ 70,135	$ 67	$ 4,240	$ 74,533	$ —	$ 74,533
Net loss					(1,589)	(1,589)		(1,589)
Translation adjustment				594		594		594
Comprehensive loss						(995)		(995)
Share repurchase	(144)	(1)	(446)			(447)		(447)
Stock compensation expense			711			711		711
Restricted shares released	8	—				—		—
Stock options exercised	2	—	3			3		3
Balance at September 30, 2009	8,962	$ 90	$ 70,403	$ 661	$ 2,651	$ 73,805	$ —	$ 73,805
Net income					9,563	9,563		9,563
Translation adjustment				(1,643)		(1,643)		(1,643)
Comprehensive income						7,920		7,920
Tax benefit of stock options			202			202		202
Stock compensation expense			987			987		987
Restricted shares released	34	—				—		—
Stock options exercised	214	2	1,327			1,329		1,329
Balance at September 30, 2010	9,210	$ 92	$ 72,919	$ (982)	$ 12,214	$ 84,243	$ —	$ 84,243
Net income					22,882	22,882	(763)	22,119
Translation adjustment				(1,096)		(1,096)	(40)	(1,136)
Comprehensive income						21,786	(803)	20,983
Deferred tax asset recorded due to legal reorganization			4,025			4,025		4,025
Acquired interest in Kingstone	153	2	3,833			3,835	6,815	10,650
Share repurchase	(153)	(2)	(1,223)			(1,225)		(1,225)
Tax benefit of stock options			855			855		855
Stock compensation expense			1,470			1,470		1,470
Restricted shares released	43	—				—		—
Stock options exercised	178	2	1,328			1,330		1,330
Balance at September 30, 2011	9,431	$ 94	$ 83,207	$ (2,078)	$ 35,096	$ 116,319	$ 6,012	$ 122,331

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,		
	2011	**2010**	**2009**
Operating Activities			
Net income (loss)	$ 22,119	$ 9,563	$ (1,589)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	2,814	1,763	1,559
Write-down of inventory	1,167	582	327
Provision for (reversal of) allowance for doubtful accounts	139	(56)	(57)
Deferred income taxes	(635)	(1,402)	25
Impairment of long-lived assets	—	610	1,062
Non-cash share based compensation expense	1,470	987	711
Changes in operating assets and liabilities:			
Change in restricted cash	(274)	(4,763)	1,421
Accounts receivable	(21,399)	(11,621)	9,118
Inventories	(14,194)	(12,128)	2,145
Accrued income taxes	7,834	6,549	(760)
Prepaid expenses and other assets	(1,740)	(1,752)	641
Accounts payable	(3,644)	8,436	(2,271)
Accrued liabilities and customer deposits	5,137	12,057	(4,128)
Deferred profit	16,632	6,975	(633)
Net cash provided by operating activities	15,426	15,800	7,571
Investing Activities			
Purchases of property, plant and equipment	(5,183)	(2,929)	(1,148)
Increase in restricted cash - non-current	—	—	645
Investment in acquisitions, net of cash	(1,055)	—	(645)
Investment in note receivable	—	(1,000)	—
Proceeds from note receivable	—	1,000	—
Payment for licensing agreement	—	—	(800)
Net cash used in investing activities	(6,238)	(2,929)	(1,948)
Financing Activities			
Proceeds from issuance of common stock, net	1,330	1,328	3
Purchase of common stock under repurchase program	—	—	(448)
Payments on long-term obligations	(127)	(117)	(145)
Excess tax benefit of stock options	855	202	—
Net cash provided by (used in) financing activities	2,058	1,413	(590)
Effect of Exchange Rate Changes on Cash	(628)	182	(236)
Net Increase in Cash and Cash Equivalents	10,618	14,466	4,797
Cash and Cash Equivalents, Beginning of Year	56,764	42,298	37,501
Cash and Cash Equivalents, End of Year	$ 67,382	$ 56,764	$ 42,298
Supplemental Cash Flow Information:			
Income tax refunds	$ 282	$ 665	$ 1,450
Income tax payments	8,451	1,508	1,738
Supplemental Non-cash Financing Activities:			
Transfer inventory to capital equipment	—	—	116
Issuance of common stock for acquisition of interest in Kingstone	3,835	—	—
Repurchase of common stock financed with current liabilities	1,225	—	—

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

1. Summary of Significant Accounting Policies

Nature of Operations and Basis of Presentation – Amtech Systems, Inc. (the "Company") designs, assembles, sells and installs capital equipment and related consumables used in the manufacture of wafers, primarily for the solar and semiconductor industries. The Company sells these products to manufacturers of solar cells, silicon wafers, and semiconductors 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 Amtech 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. All material intercompany accounts and transactions have been eliminated in consolidation.

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

Revenue Recognition – We review product and service sales contracts with multiple deliverables to determine if separate units of accounting are present in the arrangements. Where separate units of accounting exist, revenue is allocated to delivered items equal to the total sales price less the greater of (1) the relative fair value of the undelivered items, and (2) all contingent portions of the sales arrangement.

We recognize revenue when persuasive evidence of an arrangement exists; the product has been delivered and title has transferred, or services have been rendered; 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. However, a portion of the revenue associated with certain installation-related tasks, equal to the greater of the relative fair value of those tasks or the portion of the contract price contingent upon their completion, generally 10%-20% of the system's selling price (the "holdback"), and directly related costs, if any, are deferred and recognized into income when the tasks are completed. 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 fair market value 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 polishing supplies generally do not include process guarantees, acceptance criteria or holdbacks; therefore, the related revenue is generally recorded upon transfer of title which is generally at the time of shipment.

(4) Sales of spare parts and consumables are recognized upon shipment, as there are no post shipment obligations other than standard warranties.

(5) 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,		
	2011	2010	2009
	(dollars in thousands)		
Deferred revenues	$ 29,666	$ 12,577	$ 6,904
Deferred costs	2,058	1,138	2,177
Deferred profit	$ 27,608	$ 11,439	$ 4,727

Cash Equivalents – Cash equivalents in the United States consist of money market mutual funds invested in securities issued by the U.S. Government and its agencies and time deposits. In Europe cash equivalents consist of money market mutual funds and time deposits.

Restricted Cash – Restricted cash of $6.6 million and $6.2 million as of September 30, 2011 and 2010, 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, 2011, also includes $4.3 million in an escrow account related to the acquisition of Kingstone Technology Hong Kong Limited (Kingstone). See Note 10 "Acquisition," for additional information regarding the Kingstone acquisition.

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,		
	2011	2010	2009
	(dollars in thousands)		
Balance at beginning of year	$ 181	$ 465	$ 588
Provision / (adjustment)	115	(56)	(57)
Write offs	(50)	(228)	(66)
Balance at end of year	$ 246	$ 181	$ 465

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. The majority of these amounts are offset by balances included in deferred profit. As of September 30, 2011, the unbilled and other includes $1.9 million of Value Added Tax (VAT) receivables at our European operations. These are taxes that we have paid to our vendors that will be refunded to the Company by the government.

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 manufacturers of solar cells, semiconductors, semiconductor wafers, and MEMS located throughout the world. 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 its 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 (approximately 30% 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 in banks in The Netherlands, France and China that are uninsured.

As of September 30, 2011 one customer represented 33% of accounts receivable. As of September 30, 2010 three customers individually represented 25%, 11% and 11% of accounts receivable. Accounts receivable from Yingli Green Energy (Yingli) were 33% and 25% in fiscal 2011 and 2010, respectively.

Refer to Note 7, 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 approximately 90% 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, 2011	September 30, 2010
	(dollars in thousands)	
Purchased parts and raw materials	$ 24,925	$ 12,894
Work-in-process	8,257	9,497
Finished goods	3,980	1,926
	$ 37,162	$ 24,317

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 $2.1 million, $1.3 million and $1.1 million in fiscal 2011, 2010 and 2009, 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 twenty years.

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

	September 30, 2011	September 30, 2010
	(dollars in thousands)	
Land, building and leasehold improvements	$ 10,636	$ 8,099
Equipment and machinery	6,003	4,918
Furniture and fixtures	5,434	3,991
	22,073	17,008
Accumulated depreciation and amortization	(9,393)	(7,431)
	$ 12,680	$ 9,577

Goodwill - Goodwill and intangible assets with indefinite lives are not subject to amortization, but are tested for impairment when it is determined that is it 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. Circumstances in the quarter ended March 31, 2009 required the Company to test long-lived assets for recoverability and impairment. See Note 9, "Impairment and Restructuring Charge" for a description of the facts and circumstances leading to the interim impairment test and the amount and method of calculating the impairment charge.

	Years Ended September 30,	
	2011	2010
	(dollars in thousands)	
Balance at beginning of year	$ 4,839	$ 5,136
Goodwill recognized due to acquisition	8,479	—
Net exchange differences	(5)	(297)
Balance at end of year	$ 13,313	$ 4,839

Intangibles - Intangible assets are capitalized and amortized 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 $0.8 million, $0.4 million and $0.5 million in fiscal 2011, 2010 and 2009, respectively. The aggregate amortization expense for the intangible assets for each of the five succeeding fiscal years is estimated to be $0.7 million, $0.7 million, $0.7 million, $0.6 million and $0.4 million in 2012, 2013, 2014, 2015 and 2016 and $0.3 million, thereafter.

Long-lived assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Circumstances in the quarter ended June 30, 2010 and March 31, 2009 required the Company to test long-lived assets for recoverability and impairment. See Note 9, "Impairment and Restructuring Charge" for a description of the facts and circumstances leading to the interim impairment test and the amount and method of calculating the impairment charge.

In the second quarter of fiscal 2011, the Company acquired a 55% ownership of Kingstone, a Hong Kong-based holding company that owns 100% of Kingstone Semiconductor Company Ltd, a Shanghai-based technology company specializing in ion implant solutions for the solar and semiconductor industries. The intangible assets of Kingstone consist of in-process research and development, non-compete agreements, technology and the trade name totaling $3.2 million. The fair value of the intangible assets was determined by a valuation approach that estimates the future economic benefit stream of the asset determined with the assistance of an independent third-party consultant. The benefit stream was then discounted to present value with an appropriate risk-adjusted discount rate. See Note 10, "Acquisition," for detail of the intangible assets acquired.

The following is a summary of intangibles:

	Useful Life	September 30, 2011	September 30, 2010
		(dollars in thousands)	
Non-compete agreements	4-8 years	$ 1,066	$ 166
Customer lists	10 years	876	876
Technology	5-10 years	2,436	1,737
Licenses	10 years	500	890
In-process research and development	(1)	1,600	—
Other	2-10 years	97	90
		6,575	3,759
Accumulated amortization		(1,554)	(1,188)
		$ 5,021	$ 2,571

(1) The in-process research and development will be amortized over its useful life when it has reached technological feasibility.

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,		
	2011	2010	2009
	(dollars in thousands)		
Beginning balance	$ 1,843	$ 1,429	$ 1,155
Warranty expenditures	(1,199)	(622)	(942)
Reserve provision	1,621	1,036	1,216
Ending balance	$ 2,265	$ 1,843	$ 1,429

Research and Development Expenses - Research and development expenses consist of the cost of employees, consultants and contractors who design, engineer and develop new products and processes; materials and supplies used in those activities; and product prototyping. The Company receives reimbursements through governmental research and development grants which are netted against these expenses. The table below shows gross research and development expenses and grants earned:

	Years Ended September 30,		
	2011	2010	2009
	(dollars in thousands)		
Research and development	$ 7,362	$ 2,986	$ 1,169
Grants earned	(1,578)	(868)	(660)
Net research and development	$ 5,784	$ 2,118	$ 509

Shipping expense – Shipping expenses of $5.9 million, $2.5 million and $0.7million for fiscal 2011, 2010 and 2009 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 losses from foreign currency transactions of $0.2 million, $0.4 million and $0.1 million in fiscal 2011, 2010 and 2009, respectively. 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 France, Hong Kong and China, where separate returns are filed. The Netherlands operations also file separate returns in that country and will be excluded from the United States consolidated return beginning in fiscal 2012. 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 some 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 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.

Stock-based compensation expense for the fiscal years ended September 30, 2011, 2010 and 2009 reduced the Company's results of operations as follows:

	Years Ended September 30,		
	2011	2010	2009
	(dollars in thousands, except per share amounts)		
Effect on income before income taxes (1)	$ (1,470)	$ (987)	$ (711)
Effect on income taxes	$ 495	$ 429	$ 164
Effect on net income	$ (975)	$ (558)	$ (547)

(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 a two 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 2021. Options vest over 1 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,		
	2011	2010	2009
Risk free interest rate	2%	2%	2%
Expected life	6 years	6 years	6 years
Dividend rate	—%	—%	—%
Volatility	70%	69%	66%
Forfeiture rate	4%	4%	6%

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 – *Cash, Cash Equivalents and Restricted Cash* - The carrying amount of these assets on the Company's Consolidated Balance Sheets approximates their fair value because of the short maturities of these instruments.

Receivables, Payables and Accruals—The recorded amounts of financial instruments, including Accounts Receivable, Accounts Payable, and Accrued Liabilities, approximate their fair value because of the short maturities of these instruments.

Pensions—The Company has retirement plans covering substantially all employees. The principal plans are defined contribution plans, except for the plans of the Company's operations in the Netherlands and France and the plan for hourly union employees in Pennsylvania. The Company's employees in the Netherlands, France and hourly union

employees in Pennsylvania participate in multi-employer plans. Payments to the plans are recognized as an expense in the Consolidated Statement of Operations as they become due.

Impact of Recently Issued Accounting Pronouncements

In September 2011, the FASB issued ASU No. 2011-09, *"Compensation-Retirement Benefits-Multiemployer Plans (Subtopic 715-80): Disclosures about an Employer's Participation in a Multiemployer Plan (September 2011)"* The amendments in this Update require that employers provide additional separate disclosures for multiemployer pension plans and multiemployer other postretirement benefit plans. The amendment is effective for fiscal years and interim periods within those years, beginning after December 15, 2011. Upon adoption, the Company will provide the additional disclosures required by this amendment.

In September 2011, the FASB issued ASU No. 2011-08, *"Intangibles - Goodwill and Other (Topic 350): Testing Goodwill for Impairment (September 2011)"* Under the amendments in this Update, an entity has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. The amendment is effective for fiscal years and interim periods within those years, beginning after December 15, 2011. The Company early adopted this amendment for the fiscal year ended 2011.

In June 2011, the FASB issued ASU No. 2011-05, *"Comprehensive Income (Topic 220): Presentation of Comprehensive Income (June 2011). "*The amendments require that all non-owner changes in stockholders' equity be presented either in a single continuous statement of comprehensive income or in two separate but consecutive statements. In the two-statement approach, the first statement should present total net income and its components followed consecutively by a second statement that should present total other comprehensive income, the components of other comprehensive income, and the total of comprehensive income. The amendment is effective for fiscal years and interim periods within those years, beginning after December 15, 2011. The Company will adopt the two-statement approach.

In May 2011, the FASB issued ASU No. 2011-04, *"Fair Value Measurement (Topic 820): Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IRFSs (May 2011). "*The amendments in this Update explain how to measure fair value. They do not require additional fair value measurements and are not intended to establish valuation standards or affect valuation practices outside of financial reporting. The amendment is effective during interim and annual periods beginning after December 15, 2011. The Company is evaluating the impact of this amendment.

In December 2010, the FASB issued ASU No. 2010-29, *"Business Combinations: Disclosure for Supplementary Pro Forma Information for Business Combinations."* If a public entity presents financial statements, the entity should disclose revenue and earnings of the combined entity as though the business combinations that occurred during the current year had occurred as of the beginning of the comparable prior annual reporting period only. It requires expanded supplemental pro forma disclosures to include a description of the nature and amount of material, nonrecurring pro forma adjustments directly attributable to the business combination included in the reported pro forma revenue and earnings. The Update is effective prospectively for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2010. The Company will evaluate the impact of this update on future acquisitions as they occur.

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 1998 Employee Stock Option Plan (the "1998 Plan"), under which 50,000 shares could be granted, was adopted by the Board of Directors in January 1998, and approved by shareholders in March 1998. The number of shares available for options under the 1998 Plan has since been increased to 500,000 shares through authorization by the Board of Directors and approval of shareholders. The 1998 Plan expired in January 2008. 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. In July 2005, the Board of Directors authorized, and shareholders approved, an increase in the number of shares available for options under the Non-Employee Directors Stock Option Plan to 200,000 shares. In the second quarter of fiscal 2009, the Company's shareholders approved an amendment to our 2007 Employee Stock Incentive Plan and our Non-Employee Directors Stock Option Plan to authorize an additional 900,000 and 150,000 shares, respectively.

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 2021. Options issued by the Company vest over one to five years. The Company may also grant restricted stock awards under the 2007 Plan.

As of September 30, 2011 and 2010, the unamortized expense related to restricted shares was $0.8 million and $0.6 million and it is expected to be recognized over two and three years, respectively.

Restricted stock transactions and outstanding are summarized as follows:

	Years Ended September 30,			
	2011		2010	
	Awards	Weighted Average Grant Date Fair Value	Awards	Weighted Average Grant Date Fair Value
Beginning Outstanding	128,751	$ 6.34	122,875	$ 5.85
Awarded	35,517	17.28	40,751	8.00
Released	(43,298)	6.78	(33,625)	6.46
Forfeited	—	—	(1,250)	8.20
Ending Outstanding	120,970	$ 9.42	128,751	$ 6.34

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	1,400,000	661,987	438,509	Apr. 2017
1998 Employee Stock Option Plan	500,000	—	80,022	Jan. 2008
Non-Employee Directors Stock Option Plan	350,000	120,600	92,853	Jul. 2015
		782,587	611,384	

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,					
	2011		2010		2009	
	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price
Outstanding at beginning of period	636,283	$ 7.59	691,403	$ 7.03	487,053	$ 8.39
Granted	155,233	16.89	165,499	8.05	219,000	3.98
Exercised	(178,882)	7.35	(214,094)	6.19	(1,500)	2.00
Forfeited/canceled	(1,250)	6.94	(6,525)	5.70	(13,150)	7.34
Outstanding at end of period	611,384	10.02	636,283	$ 7.59	691,403	$ 7.03
Exercisable at end of period	232,018	$ 8.31	259,595	$ 7.97	317,877	$ 7.30
Weighted average grant-date fair value of options granted during the period	$ 10.57		$ 4.98		$ 2.33	

The following tables summarize information for stock options outstanding and exercisable as of September 30, 2011:

Range of Exercise Prices	Options Outstanding			
	Number Outstanding	Remaining Contractual Life	Average Exercise Price	Aggregate Intrinsic Value
		(in years)		(in thousands)
3.01 - 4.00	137,048	7.2	$ 3.75	$ 582
4.01 - 6.00	5,010	7.8	5.05	15
6.01 - 7.00	132,040	7.1	6.43	207
7.01 - 8.00	16,000	5.4	7.30	11
8.01 - 10.00	15,000	4.9	8.41	—
10.01 - 15.00	161,053	7.6	12.29	—
15.01 - 23.00	145,233	9.1	17.33	—
	611,384	7.6	$ 10.02	$ 815
Vested and expected to vest as of September 30, 2011	597,909	7.6	$ 9.97	$ 805

Range of Exercise Prices	Options Exercisable		
	Number Exercisable	Weighted Average Exercise Price	Aggregate Intrinsic Value
			(in thousands)
3.01 - 4.00	51,500	$ 3.72	$ 220
4.01 - 6.00	3,010	5.07	9
6.01 - 7.00	65,610	6.71	85
7.01 - 8.00	16,000	7.30	11
8.01 - 10.00	15,000	8.41	—
10.01 - 15.00	80,898	12.83	—
	232,018	$ 8.31	$ 325

The aggregate intrinsic value in the tables above represents the total pretax intrinsic value, based on the Company's closing stock price of $8.00 per share as of September 30, 2011, 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, 2011, 2010 and 2009 was $1.3 million, $1.8 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 (net income less accrued preferred stock dividends) 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 145,000, 229,000 and 721,500 shares are excluded from the fiscal 2011, 2010 and 2009 earnings per share calculations as they are anti-dilutive.

	2011	2010	2009
	(dollars in thousands, except per share amounts)		
Basic Earnings Per Share Computation			
Net income attributable to Amtech Systems, Inc.	$ 22,882	$ 9,563	$ (1,589)
Weighted Average Shares Outstanding:			
Common stock	9,480	9,022	9,019
Basic earnings per share attributable to Amtech shareholders	$ 2.41	$ 1.06	$ (0.18)
Diluted Earnings Per Share Computation			
Net income attributable to Amtech Systems, Inc.	$ 22,882	$ 9,563	$ (1,589)
Weighted Average Shares Outstanding:			
Common stock	9,480	9,022	9,019
Common stock equivalents (1)	284	215	—
Diluted shares	9,764	9,237	9,019
Diluted earnings per share attributable to Amtech shareholders	$ 2.34	$ 1.04	$ (0.18)

(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

Stock Repurchase Program – On August 17, 2011, the Board of Directors of Amtech Systems, Inc. approved a stock repurchase program, pursuant to which the Company may repurchase up to $5,000,000 of its common stock over a one-year period commencing on August 18, 2011. Under the program, shares may be repurchased from time to time in open market transactions at prevailing market prices or in privately negotiated purchases. The timing and actual number of shares purchased will depend on a variety of factors, such as price, corporate and regulatory requirements, alternative investment opportunities, and other market and economic conditions. Repurchases under the program will be funded from available working capital. The program may be commenced, suspended or terminated at any time within the one-year period, or from time-to-time at management's discretion without prior notice. There were no repurchases in fiscal 2011.

In December 2008, the Board of Directors approved a stock repurchase program authorizing the repurchase of up to $4 million of its common stock. This repurchase program expired in January 2010. During fiscal 2009, the Company repurchased 144,000 shares for $0.4 million in cash at an average cost of $3.09 per share. The repurchased shares were retired immediately after the repurchases were complete. Retirement of the repurchased shares is recorded as a reduction of common stock and additional paid-in-capital.

Reacquisition of Shares Issued - In fiscal 2011, the Company recorded the reacquisition of 153,090 shares of common stock which had been issued as part of the original purchase consideration for the 55% interest in Kingstone. These shares have been reacquired pursuant to an amendment to the original stock purchase agreement entered into in September 2011. We recorded the reacquisition of the shares at their $1.2 million fair market value on the date of the amendment.

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 amends and restates 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 Company one one-thousandth of a share of Series A Preferred at an exercise price of $51.60 (the "Exercise Price"), subject to adjustment. The Final Expiration Date (as defined in the Restated Rights Agreement) is December 14, 2018.

Other than extending the Final Expiration Date (as defined in the Restated Rights Agreement) of the Rights to December 14, 2018 and adjusting the Exercise Price, there were no material changes to the principal terms of the Rights. The Restated Rights Agreement also contains certain other changes in order to address current law and practice with respect to shareholder rights plans.

5. Commitments and Contingencies

Purchase Obligations – As of September 30, 2011, we had unrecorded purchase obligations in the amount of $47.2 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.

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

License agreement – The Company entered into amendments with one of our technology partners to both the PSG license and the PECVD license to expand the licenses to include one future model of the PSG dry etch systems and three future models of the PECVD system. These amendments to the licenses require the Company to pay additional license fees upon successful achievement of the agreed upon specifications of each of the four new models. The four payments range from three hundred million South Korean Won (KRW), approximately $230,000, to one billion KRW, approximately $780,000, for maximum total payments of approximately $1,420,000. Such payments, if any, will be recorded as additional intangibles, the cost of which will be amortized over the life of the license. Due to the extended amount of time to reach the agreed upon specifications it is uncertain whether these commitments will materialize.

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, $0.9 million in fiscal 2011, 2010 and 2009, respectively. As of September 30, 2011, future minimum rental commitments under non-cancelable operating leases with initial or remaining terms of one year or more totaled $3.7 million, of which $1.3 million, $0.7 million, $0.5 million, $0.4 million and $0.3 million is payable in fiscal 2012, 2013, 2014, 2015 and 2016, respectively, and $0.5 million, thereafter.

6. Major Customers and Foreign Sales

In fiscal 2011, two customers individually accounted for 15% and 14% of net revenue. In fiscal 2010, one customer accounted for 28% of net revenue . In fiscal 2009, one customer accounted for 16% of net revenue. Yingli accounted for 15%, 28% and 4% of our net revenue in fiscal 2011, 2010 and 2009, respectively.

Our net revenues for fiscal 2011, 2010 and 2009 were to customers in the following geographic regions:

	Years Ended September 30,		
	2011	2010	2009
United States	6%	7%	18%
Taiwan	16%	17%	22%
China	69%	64%	39%
Other	3%	3%	7%
Total Asia	**88%**	**84%**	**68%**
Germany	3%	3%	5%
Other	3%	6%	9%
Total Europe	**6%**	**9%**	**14%**
	100%	**100%**	**100%**

7. 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,		
	2011	2010	2009
	(dollars in thousands)		
Net revenue:			
The Netherlands	$ 195,404	$ 88,467	$ 35,868
United States	24,079	15,020	9,877
France	26,347	16,532	7,228
China	875	—	—
	$ 246,705	$ 120,019	$ 52,973
Operating income (loss):			
The Netherlands	$ 28,724	$ 12,165	$ 2,255
United States	(1,742)	(1,955)	(4,131)
France	12,992	5,699	(62)
China	(1,695)	—	—
	$ 38,279	$ 15,909	$ (1,938)

	As of September 30,	
	2011	2010
Net Long-lived Assets (excluding intangibles and goodwill)		
The Netherlands	$ 9,960	$ 8,273
United States	1,642	3,507
France	874	457
China	204	—
	$ 12,680	$ 12,237

8. Income Taxes

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

	Year Ended September 30,		
	2011	2010	2009
	(dollars in thousands)		
Current:			
Domestic Federal	$ 800	200	$ (330)
Foreign	15,910	7,200	640
Domestic state	110	110	10
Total current	16,820	7,510	320
Deferred:			
Domestic Federal	(100)	(1,540)	(710)
Foreign	(520)	180	(110)
Domestic state	(10)	—	80
Total deferred	(630)	(1,360)	(740)
Total provision	$ 16,190	$ 6,150	$ (420)

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

	Year Ended September 30,		
	2011	2010	2009
	(dollars in thousands)		
Tax provision (benefit) at the statutory federal rate	$ 13,410	$ 5,340	$ (680)
Effect of permanent book-tax differences	510	240	130
State tax provision	100	20	20
Valuation allowance for net deferred tax assets	470	90	80
Uncertain tax items	1,620	530	
Expiration of foreign net operating loss	170	—	—
Other items	(90)	(70)	30
	$ 16,190	$ 6,150	$ (420)

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,		
	2011	2010	2009
	(dollars in thousands)		
Deferred tax assets - current:			
Capitalized inventory costs	$ 150	$ 470	310
Inventory write-downs	590	820	870
Accrued Warranty	(580)	370	520
Deferred profits	6,820	(180)	(10)
Accruals and reserves not currently deductible	2,580	650	600
Deferred tax assets - current net of valuation allowance	$ 9,560	$ 2,130	$ 2,290
Deferred tax assets (liabilities)- non-current:			
Stock option expense	270	430	310
Book vs. tax basis of acquired assets	(760)	(670)	(830)
Foreign and state net operating losses	850	380	300
Book vs. tax depreciation and amortization	300	350	150
Foreign tax credits	—	2,540	1,490
Other deferred tax assets	90	20	20
Total deferred tax assets - net	750	3,050	1,440
Valuation allowance	(860)	(390)	(300)
Deferred tax assets (liabilities)- non-current, net of valuation allowance	$ (110)	$ 2,660	$ 1,140

Changes in the deferred tax valuation allowance are as follows:

	Year Ended September 30,		
	2011	2010	2009
	(dollars in thousands)		
Balance at the beginning of the year	$ 390	$ 300	$ 220
Additions (subtractions) to valuation allowance	470	90	80
Balance at the end of the year	$ 860	$ 390	$ 300

The Company has net operating losses in some states, China and Hong Kong at September 30, 2011 which expire in varying amounts between 2012 and 2015. We have established a valuation allowance on all deferred tax assets related to foreign and state net operating losses, as based on the weight of available evidence, it is more likely than not that they will not be realized. The Company has foreign tax credits which expire in varying amounts between 2018 and 2020.

Proper accounting for income taxes requires that a valuation allowance is recognized if, based on the weight of available evidence, it is more likely than not that some portion or all of the deferred tax asset will not be realized. Each quarter the valuation allowance is re-evaluated. Tax payments of $8.5 million were made and tax refunds of $0.3 million were received during fiscal 2011.

We adopted, as of the beginning of fiscal 2008, the standards required for accounting for uncertainty in income taxes. Prior to the adoption of these standards, our policy was to establish reserves that reflected the probable outcome of known tax contingencies. The effects of final resolution, if any, were recognized as changes to the effective income tax rate in the period of resolution. The standards adopted at the beginning of fiscal 2008 require application of a "more likely than not" threshold to the recognition and de-recognition of uncertain tax positions. We currently recognize the amount of tax benefit that has a greater than 50 percent likelihood of being ultimately realized upon settlement. The

standards further require that a change in judgment related to the expected ultimate resolution of uncertain tax positions be recognized in earnings in the quarter of such change.

The following table sets forth changes in our total gross unrecognized tax benefit liabilities for fiscal 2011. Approximately $2.0 million of this total represents the amount that, if recognized would favorably affect our effective income tax rate in future periods.

	Year Ended September 30,		
	2011	2010	2009
	(dollars in thousands)		
Balances at beginning of the year	$ 1,010	$ 480	$ 440
Additions related to current year tax positions	1,210	490	70
Additions related to tax positions taken in prior years	450	70	—
Reductions related to settlements with tax authorities	—	—	—
Reductions due to lapse of statute of limitations	(40)	(30)	(30)
Balance at the end of the year	$ 2,630	$ 1,010	$ 480

We have classified all of our liabilities for uncertain tax positions as income taxes payable long-term.

We report accrued interest and penalties related to unrecognized tax benefits in income tax expense. For fiscal 2011, we recognized a net expense for interest and penalties of $0.2 million resulting in a cumulative accrual of $0.4 million for potential interest and penalties as of September 30, 2011. During the current fiscal year, we recorded a benefit of less than $0.1 million, resulting from the reversal of liabilities in taxing jurisdictions where the statute of limitations had expired.

We do not expect that the amount of our tax reserves 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 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. The Company is currently under IRS examination for fiscal year ending September 30, 2009.

9. Impairment and Restructuring Charge

Long-lived assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The methods used to estimate fair value include the market approach (Level 2) and discounted cash flows (Level 3). The Company gives the greatest weight to the discounted cash flow method. The material estimates and assumptions used in the discounted cash flows method of determining fair valued include: the appropriate discount rate, given the risk-free rate of return and various risk premiums; projected revenues; projected material costs as a percentage of revenue; and the rate of increase in payroll and other expense.

In April 2007, the Company entered into a license agreement with one of the Company's technology partners to market, sell, install, service and manufacture machinery and equipment for the manufacturing of photovoltaic cells that employs PECVD Technology (Licensed Product) developed by the technology partner. Under the terms of this agreement the Company paid $1.0 million to the technology partner. The license agreement expires in January 2019. These payments are being amortized over the life of the agreement. Several new competitors have entered the market and management has determined that the market opportunity for the licensed product has decreased. This development and the extended

amount of time to develop the licensed product caused management to review the licensed product for impairment and recoverability. In Fiscal 2010, it was determined that the carrying value of the license subject to amortization was not fully recoverable; therefore, an impairment charge of $0.6 million was recorded for the excess of carrying value over the fair value of the license. The fair value of the license was determined through estimates of the present value of future cash flows based upon the anticipated future use of the license.

The Bruce operations were restructured in the second quarter of fiscal 2009 to focus primarily on a parts supply business versus furnace systems sales. The restructuring resulted in a charge of $620,000 in the second quarter of fiscal 2009. We conducted an assessment of the ability to recover the carrying amount of long-lived assets of the Bruce operations. It was determined that the carrying value of the net assets was not fully recoverable; therefore, an impairment charge of $373,000 was recorded in the second quarter of fiscal 2009 for the excess of carrying value over the fair value of the customer list and non-compete agreement. The carrying values of goodwill ($89,000) and the Bruce trademark ($592,000) were also recorded as an impairment charge in the second quarter of fiscal 2009.

10. Acquisition

The Company entered into a Stock Purchase and Sale Agreement (the "Purchase Agreement"), effective as of January 27, 2011, among the Company, Kingstone Technology Hong Kong Limited ("Kingstone"), Silicon Jade Limited ("Silicon Jade"), the sole shareholder of Kingstone, and certain shareholders of Silicone Jade. Pursuant to the Purchase Agreement, the Company acquired a 55% ownership interest in Kingstone, which is a Hong Kong-based holding company that owns 100% of Kingstone Semiconductor Company Ltd ("Kingstone Semiconductor"), a Shanghai-based technology company specializing in ion implant solutions for the solar and semiconductor industries. The acquisition pursuant to the Purchase Agreement was consummated on February 18, 2011.

The Company paid $5.3 million to Silicon Jade, comprised of a cash payment in the amount of $1.4 million and 153,090 shares of the Company's common stock with a value of $4.1 million as determined in accordance with the Purchase Agreement and approximately $3.8 million based upon the market price on the closing date. The Company paid $4 million to Kingstone comprised of a promissory note in the amount of $3.7 million (the "Stock Purchase Note"), and a cash payment of $0.3 million already paid by the Company pursuant to a prior agreement in exchange for newly issued Kingstone shares. In exchange for the purchase price of $9.3 million, the Company received fifty-five percent of the outstanding stock of Kingstone. The amount of $3.7 million was deposited into escrow by the Company to be released in accordance with the terms of the Purchase Agreement and applied to the principal balance of the Stock Purchase Note. If certain termination events occur, relating to the achievement of specified milestones in the development of the Solar Tool, the Company will be relieved of its obligation to make further payments on the Stock Purchase Note, but the Company will retain its ownership of fifty-five percent of Kingstone.

In addition to the purchase price described above, the Company has agreed to provide Kingstone with a loan in the amount of $4.0 million (the "Solar Tool Loan"), to be used for the development and manufacture of two beta versions of the Solar Tool. The Solar Tool Loan will be funded periodically after the Stock Purchase Note has been paid in full. The Company deposited $4 million into escrow for the purpose of funding the Solar Tool Loan in accordance with the terms of the Purchase Agreement. Upon the occurrence of a termination event relating to the achievement of specified milestones in the development of the Solar Tool, the Company will be relieved of its obligation to further fund the Solar Tool Loan.

The fair value of intangible assets was determined by a valuation approach that estimates the future economic benefit stream of the asset. This benefit stream was discounted to present value with an appropriate risk-adjusted discount rate.

As a result of the acquisition, the Company recorded goodwill of $8.5 million. The Kingstone acquisition was strategic providing access to a highly qualified team for development of a new solar ion implant tool to address higher efficiency solar cell concepts. Synergies are expected to be realized through the combination of Kingstone's development capabilities with Amtech's distribution and marketing capabilities. The amount of goodwill deductible for tax purposes is zero.

The Company recorded intangible assets totaling $3.2 million. The intangible assets are comprised of in-process research and development of $1.6 million, non-compete agreements of $0.9 million, and technology of $0.7 million. The in-process research and development will be amortized over its useful life when it has reached technological feasibility.

The useful lives of the technology and non-competition agreements are five years and four years, respectively.

As a result of the acquisition, the Company recorded a noncontrolling interest of $6.8 million. The fair value of the noncontrolling interest in Kingstone was determined from our purchase price for a 55% ownership interest discounted 10% due to disadvantages associated with the acquiree's inability to control various aspects of the enterprise.

The Company incurred acquisition related costs of $0.9 million. These costs are included in the selling, general and administrative expenses for the year ended September 30, 2011.

The results of operations of this acquisition have been included in the consolidated financial statements from the date of the acquisition. The revenues and earnings of Kingstone prior to the date of the acquisition are immaterial to the consolidated financial statements.

On September 30, 2011, the Company entered into an agreement to amend the Purchase Agreement. In the amendment, we agreed to repurchase the 153,090 Amtech shares issued pursuant to the Purchase Agreement for cash in the amount of $4.1 million (the original value of Amtech shares calculated in the Purchase Agreement). At the date of the agreement to repurchase the shares their market value was $8.00 per share, or approximately $1.2 million. In accordance with the amendment, we agreed to pay $2.9 million in excess of market value of those shares in order to protect Amtech's reputation as an acquirer of new technologies and businesses, which amount is recorded as a current expense on a separate line in the Statement of Operations, "Expense Related to Reacquired Shares".

11. Selected Quarterly Data (Unaudited)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Fiscal Year 2011:	(in thousands, except per share amounts)			
Revenue	$ 53,712	$ 61,253	$ 71,871	$ 59,868
Gross margin	$ 19,597	$ 24,703	$ 26,116	$ 20,242
Provision for income taxes	$ 3,330	$ 5,100	$ 5,160	$ 2,600
Net income attributable to Amtech Systems, Inc.	$ 4,992	$ 7,517	$ 7,298	$ 3,075
Comprehensive income attributable to Amtech Systems, Inc.	$ 3,539	$ 11,430	$ 8,744	$ (1,927)
Net income per share attributable to Amtech Systems, Inc.:				
Basic	$ 0.54	$ 0.79	$ 0.76	$ 0.32
Shares used in calculation	9,278	9,487	9,576	9,581
Diluted	$ 0.52	$ 0.77	$ 0.74	$ 0.31
Shares used in calculation	9,609	9,781	9,852	9,778
Fiscal Year 2010:	(in thousands, except per share amounts)			
Revenue	$ 15,457	$ 16,077	$ 43,072	$ 45,413
Gross margin	$ 4,600	$ 4,708	$ 15,752	$ 17,652
Provision for income taxes	$ 50	$ 140	$ 2,330	$ 3,630
Net income	$ 80	$ 206	$ 3,876	$ 5,401
Comprehensive income attributable to Amtech Systems, Inc.	$ (568)	$ (1,967)	$ 257	$ 10,198
Net income per share:				
Basic	$ 0.01	$ 0.02	$ 0.43	$ 0.6
Shares used in calculation	8,972	9,018	9,021	9,077
Diluted	$ 0.01	$ 0.02	$ 0.42	$ 0.58
Shares used in calculation	9,059	9,239	9,231	9,376

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, 2011.

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, 2011.

There were no changes in our internal controls over financial reporting that occurred during the year ended September 30, 2011, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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. The report on the audit of internal control over financial reporting is set forth below.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders of

AMTECH SYSTEMS, INC.

We have audited Amtech Systems, Inc. and subsidiaries' (the "Company") internal control over financial reporting as of September 30, 2011 based on criteria established in Internal Control-Integrated Framework 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 effectiveness of 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 consolidated 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, the Company maintained, in all material respects, effective internal control over financial reporting as of September 30, 2011, based on criteria established in Internal Control-Integrated Framework 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, stockholders' equity and comprehensive income (loss), and cash flows of Amtech Systems, Inc., and our report dated November 17, 2011 expressed an unqualified opinion.

/s/ MAYER HOFFMAN MCCANN P.C.

Phoenix, Arizona
November 17, 2011

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 are incorporated by reference to Amtech's Definitive Proxy Statement to be filed with the Securities and Exchange Commission in connection with its 2011 Annual Meeting of Stockholders (the "Proxy Statement").

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND GOVERNANCE

The information required by this item is incorporated herein by reference to the Proxy Statement, which will be filed with the Securities and Exchange Commission within 120 days of the end of our fiscal year.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated herein by reference to the Proxy Statement, which will be filed with the Securities and Exchange Commission within 120 days of the end of our fiscal year.

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

The information required by this item is incorporated herein by reference to the Proxy Statement, which will be filed with the Securities and Exchange Commission within 120 days of the end of our fiscal year.

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

The information required by this item is incorporated herein by reference to the Proxy Statement, which will be filed with the Securities and Exchange Commission within 120 days of the end of our fiscal year.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated herein by reference to the Proxy Statement, which will be filed with the Securities and Exchange Commission within 120 days of the end of our fiscal year.

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 Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AMTECH SYSTEMS, INC.

November 17, 2011

By: /s/ Bradley C. Anderson
Bradley C. Anderson, Executive Vice President – Finance and Chief Financial Officer

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
*	Chairman of the Board, President	November 17, 2011
Jong S. Whang	and Chief Executive Officer	
	(Principal Executive Officer)	
/s/ Bradley C. Anderson	Executive Vice President – Finance and Chief Financial Officer	November 17, 2011
Bradley C. Anderson	(Principal Financial Officer)	
*	Vice President and Chief Accounting Officer	November 17, 2011
Robert T. Hass	(Principal Accounting Officer)	
*	Director	November 17, 2011
Michael Garnreiter		
*	Director	November 17, 2011
Alfred W. Giese		
*	Director	November 17, 2011
Egbert J.G. Goudena		
*	Director	November 17, 2011
Robert F. King		
*	Director	November 17, 2011
Dr. SooKap Hahn		
*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
3.1	Articles of Incorporation	A
3.2	Articles of Amendment to Articles of Incorporation, dated April 27, 1983	A
3.3	Articles of Amendment to Articles of Incorporation, dated May 19, 1987	B
3.4	Articles of Amendment to Articles of Incorporation, dated May 2, 1988	C
3.5	Articles of Amendment to Articles of Incorporation, dated May 28, 1993	D
3.6	Articles of Amendment to Articles of Incorporation, dated March 14, 1999	E
3.7	Certificate of Designations, Preferences and Privileges of the Series A Convertible Preferred Stock, dated April 21, 2005	K
3.8	Amended and Restated Bylaws	F
4.1	Amended and Restated Rights Agreement as of December 15, 2008, by between Amtech systems, Inc. and Computershare Trust Company, N.A., including the form of Certificate of Designation, the form of Rights Certificate and the Summary of Rights attached thereto as Exhibits A, B and C, respectively.	G
4.2	Form of Subscription Agreement for the Series A Convertible Preferred Stock	K
10.1	Amended and Restated 1995 Stock Option Plan	H
10.2	Non-Employee Directors Stock Option Plan, as amended through March 11, 2010.	I
10.3	Employment Agreement with Robert T. Hass, dated May 19, 1992	J
10.4	Warrant to Purchase Common Stock, dated April 22, 2005	L
10.5	Loan and Security Agreement (Domestic), dated April 7, 2006, between Silicon Valley Bank and the Company.	M
10.6	Loan and Security Agreement (EXIM), dated April 7, 2006, between Silicon Valley Bank and the Company.	M
10.7	Export-Import Bank of the United States Working Capital Guarantee Program Borrower Agreement, dated April 7, 2006.	M
10.8	Third Amendment to Lease, dated as of August 11, 2006, between Wakefield Investments, Inc. and Bruce Technologies, Inc.	N
10.9	2007 Employee Stock Incentive Plan, as amended through March 11, 2010.	O
10.10	Sale Agreement, dated March 15, 2007, for purchase of manufacturing facility Located in Vassen, The Netherlands by Tempress Holdings B.V. from Mr. F. H. Van Berlo.	P
10.11	Amended and Restated Employment Agreement between Amtech and Jong S. Whang	P
10.12	Stock Purchase and Sale Agreement, by and among Tempress Holdings, B.V., R2D Ingenierie SAS and the Shareholders of R2D Ingenierie SAS, dated as of October 8, 2007.	O
10.13	Change of Control Severance Agreement, dated as of March 10, 2008 between Amtech and Bradley Anderson.	R
10.14	Amended and Restated Change of Control and Severance Agreement between Amtech and Robert T. Hass	I
10.15	Stock Purchase and Sale Agreement by and among Amtech Systems, Inc., Silicon Jade Limited, Kingstone Technology Hong Kong Limited and the shareholders of Silicon Jade Limited.	S
10.16	Amendment to the Kingstone Stock Purchase and Sale Agreement dated September 30, 2011.	*
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	*
101.INS	XBRL Instance Document	**
101.SCH	XBRL Taxonomy Extension Schema Document	**
101.PRE	Taxonomy Presentation Linkbase Document	**
101.CAL	XBRL Taxonomy Calculation Linkbase Document	**
101.LAB	XBRL Taxonomy Label Linkbase Document	**
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	**

* Filed herewith.

** 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.

\+ Indicates management contract or compensatory plan or arrangement.

A Incorporated by reference to Amtech's Form S-1 Registration Statement No. 2-83934-LA.

B Incorporated by reference to Amtech's Annual Report on Form 10-K for the year ended September 30, 1987.

C Incorporated by reference to Amtech's Annual Report on Form 10-K for the year ended September 30, 1988.

D Incorporated by reference to Amtech's Form S-1 Registration Statement (File No. 33-77368).

E Incorporated by reference to Amtech's Annual Report on Form 10-K for the year ended September 30, 1999.

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

G Incorporated by reference to Amtech's Current Report on Form 8-K, filed with the Securities and Exchange Commission on December 15, 2008.

H Incorporated by reference to Amtech's Form S-8 Registration Statement (related to the Amended and Restated 1995 Stock Option Plan), filed with the Securities and Exchange Commission on August 9, 1996.

I Incorporated by reference to Amtech's Current Report on Form 8-K, filed with the Securities and Exchange Commission on March 17, 2010.

J Incorporated by reference to Amtech's Annual Report on Form 10-K for the year ended September 30, 1993.

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

L Incorporated by reference to Amtech's Annual Report on Form 10-K for the year ended September 30, 2005.

M Incorporated by reference to Amtech's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 12, 2006.

N Incorporated by reference to Amtech's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2006.

O Incorporated by reference to Amtech's Proxy Statement for its 2007 Annual Shareholders' Meeting, filed with the Securities and Exchange Commission on April 24, 2007.

P Incorporated by reference to Amtech's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2007.

Q Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on October 11, 2007.

R Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on March 11, 2008.

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

This page intentionally left blank.

Executive Officers

J.S. Whang
Executive Chairman and Chairman of the Board

Fokko Pentinga
Chief Executive Officer and President

Bradley C. Anderson
Executive Vice President - Finance/Chief Financial Officer, Secretary and Treasurer

Robert T. Hass
Vice President, Chief Accounting Officer, Assistant Secretary and Treasurer

Dr. Jeong Mo Hwang, Ph.D.
Vice President and Chief Technology Officer

Corporate Information

Corporate Offices
131 South Clark Drive
Tempe, Arizona 85281
Tel: (480) 967-5146
E-mail: corporate@AmtechSystems.com
Website: amtechsystems.com

Transfer Agent & Registrar
Computershare Trust Company, N.A.
P.O. Box 43070
Providence, RI 02940-3070
Tel: (800) 962-4284
Website: www.computershare.com

Legal Counsel
Squire, Sanders & Dempsey L.L.P.
1 E. Washington St. Suite 2700
40 North Central Ave., Suite 2700
Phoenix, Arizona 85004

Independent Auditors
Mayer Hoffman McCann P.C.
3101 North Central Avenue, Suite 300
Phoenix, Arizona 85012
Tel: (602) 264-6835
Fax: (602) 265-7631

Stock Market Information
Listed on NASDAQ Global Market
Common Stock Symbol: ASYS
Website: www.nasdaq.com

Independent Directors

Michael Garnreiter, CPA
Managing Director
Fenix Financial Forensics LLC
Scottsdale, Arizona

Alfred W. Giese
Senior Partner
International Business Consultants
La Quinta, California

Egbert J.G. Goudena
Operations Manager - Research Labs
Delft University of Technology
The Netherlands

Dr. SooKap Hahn, Ph.D.
President
SKW Associates, Inc.
Santa Clara, California

Robert F. King
President of King Associates
Surprise, Arizona

AMTECH
SYSTEMS

Subsidiaries

Tempress Systems, Inc. & Subsidiaries
Vaassen, The Netherlands

Bruce Technologies, Inc.
Billerica, Massachusetts

R2D Automation SAS
Clapiers, France

P.R. Hoffman Machine Products, Inc.
Carlisle, Pennsylvania

Kingstone Semiconductor Ltd.
Shanghai, China

AMTECH
SYSTEMS

P: 480.967.5146
F: 480.968.3763

www.amtechsystems.com

131 South Clark Drive
Tempe, Arizona 85281 U.S.A.