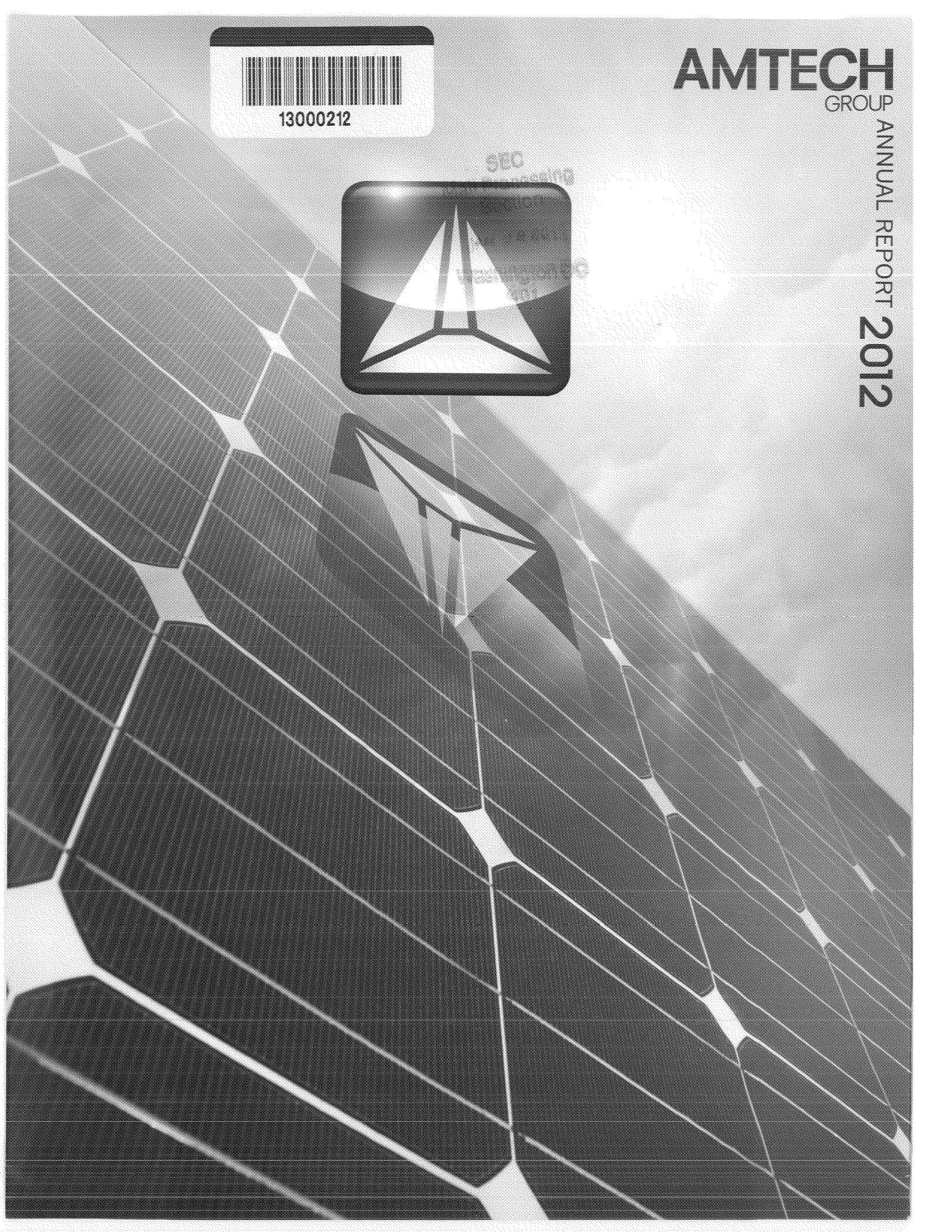
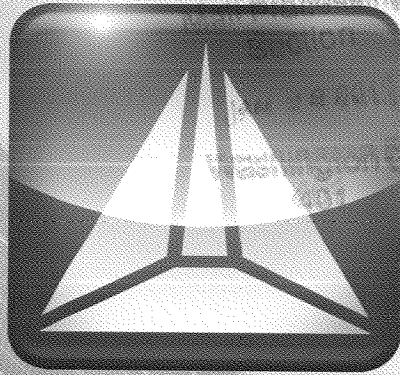




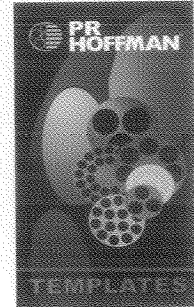
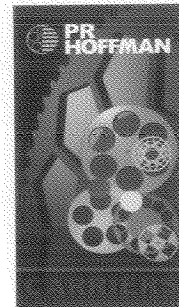
**AMTECH**  
GROUP

ANNUAL REPORT  
**2012**



**PR Hoffman Machine Products** serves the semiconductor, sapphire (including LEDs), optics, ceramics, electronics, metalworking, quartz and medical industries. 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 products. Since 1938, PR Hoffman has brought leading-edge technologies to the world's high-tech industries. Our broad line of machines, carriers, templates, plates and gears exceed quality standards, worldwide.

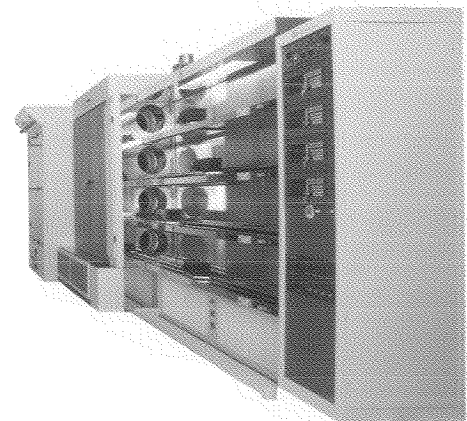
- Double Sided Lapping & Polishing Machines
- Lapping Carriers
- Polishing Templates
- Lapping Plates and Gears



**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 2012, BTI expanded their portfolio to include diffusion furnaces capable of processing 300mm wafers.

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.





**Tempress** develops and manufactures thermal equipment and process solutions for the solar and semiconductor industries.

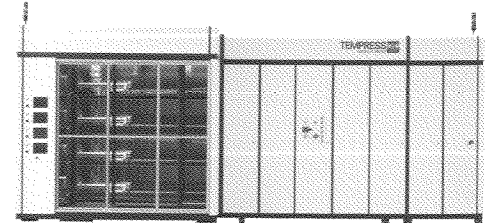
High-end equipment and advanced processing;

**Diffusion**

POCl<sub>3</sub>, BBr<sub>3</sub>, oxidation, annealing and CVD furnace systems with automated wafer handling for production of N-type & P-type mono & multi crystalline cells, with low cost of ownership, high efficiencies and high uptime

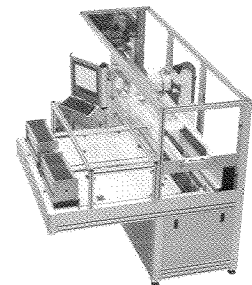
**Batch PECVD**

PECVD system for high volume solar cell manufacturing, combining; State-of-the-art SiN<sub>x</sub> ARC and passivation through direct plasma, with expertise in high volume manufacturing for the PV industry.



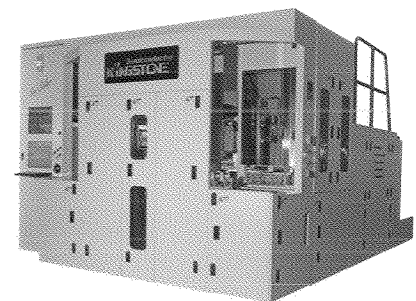
**R2D Automation** develops and manufactures automation solutions for the solar and semiconductor industries. In addition to fully integrated automation solutions, R2D Automation supplies the STANDALONE CTS which is used to transfer cells from plastic cassettes to quartz boats. The Standalone CTS, located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

- Wafer thickness range 160 to 240 um
- Actual throughput over 3000 wafers/hour
- Process type: back to back proximity half pitch or same slot
- 125/156mm transfer possible on the same tool
- Wafer breakage rate: 0.1%



**Kingstone** has designed a new ion implanter specifically tailored to the PV industry. **IonSolar™** features;

- Higher efficiency cell processes for both p-type and n-type
- High productivity - matching the pace of existing production lines
- Small footprint - 16m<sup>2</sup>, fitting into existing production lines
- Low CoO - 40% reduction compared to similar systems
- World class manufacturing in China
- Combination of Kingstone implanter and Tempress anneal furnace for high efficiency solar manufacturing

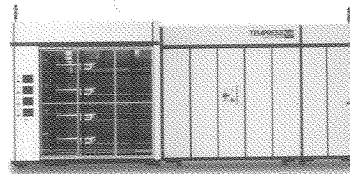
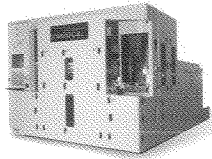


Amtech Systems, (NASDAQ: ASYS) is a leading manufacturer and supplier of horizontal diffusion furnace systems, related automation and polishing supplies that enable key steps of the front end manufacturing process for both solar cells and semiconductor chips. Amtech's products are recognized under the leading brand names Tempress Systems™, Bruce Technologies™, PR 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
- PECVD
- SOLAR ION IMPLANT

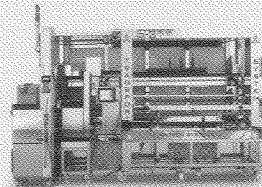
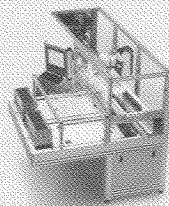


**TEMPRESS**  
AMTECH GROUP

**Semiconductor**  
**KINGSTONE**

**BRUCE**  
TECHNOLOGIES  
AMTECH GROUP

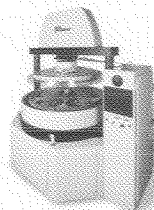
- FURNACE AUTOMATION
- WAFER HANDLING SYSTEMS



**R2D**  
AUTOMATION

### SILICON/LED WAFERS

- POLISHING & LAPPING MACHINES
- WAFER CARRIERS



**PR HOFFMAN**  
AMTECH GROUP



AMTECH SYSTEMS, INC.  
131 SOUTH CLARK DRIVE  
TEMPE, ARIZONA 85281

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NOTICE OF ANNUAL MEETING OF SHAREHOLDERS  
TO BE HELD ON MARCH 7, 2013

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To Our Shareholders:

The 2013 Annual Meeting of Shareholders of AMTECH SYSTEMS, INC., an Arizona corporation (the "Company"), will be held at the Phoenix Airport Marriott Hotel, 1101 North 44<sup>th</sup> Street, Phoenix, Arizona, USA, on Thursday, March 7, 2013, at 9:00 a.m., Arizona time, for the following purposes:

1. To elect six (6) directors to serve for one-year terms or until their successors are elected and qualified;
2. To ratify the appointment of Mayer Hoffman McCann P.C. ("Mayer Hoffman") as the Company's independent registered public accountants for the fiscal year ending September 30, 2013;
3. To hold an advisory vote approving the compensation of the Company's named executive officers;
4. To transact such other business as may properly come before the meeting or its adjournment.

The foregoing items of business are more fully described in the Proxy Statement accompanying this notice. The Company is presently aware of no other business to come before the Annual Meeting.

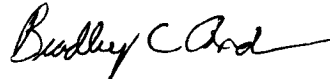
**Important Notice Regarding the Availability of  
Proxy Materials for the Meeting**

The proxy statement and annual report to security holders are also available at <http://www.amtechsystems.com/proxy.htm>. The materials available on this website include this notice, the proxy statement, the proxy card and our annual report on Form 10-K.

The Board of Directors has fixed the close of business on January 10, 2013 as the record date (the "Record Date") for the determination of shareholders who hold the Company's common stock who are entitled to notice of, and to vote at, the Annual Meeting or any postponement or adjournment thereof. Shareholders are reminded that their shares of the Company's common stock can be voted at the annual meeting only if they are present at the Annual Meeting in person or by valid proxy. A copy of the Company's 2012 Annual Report, which includes our audited financial statements, was mailed with this Notice and Proxy Statement to all shareholders of record on the Record Date.

Management of the Company cordially invites you to attend the Annual Meeting. Your attention is directed to the attached Proxy Statement for a discussion of the foregoing proposals and the reasons why the Board of Directors encourages you to vote FOR approval of such proposals.

By Order of the Board of Directors:



Bradley C. Anderson, Secretary

Tempe, Arizona  
January 23, 2013

**IMPORTANT: IT IS IMPORTANT THAT YOUR SHARES BE REPRESENTED AT THIS MEETING. PLEASE COMPLETE, DATE, SIGN AND PROMPTLY MAIL THE ENCLOSED PROXY CARD IN THE ACCOMPANYING ENVELOPE, WHICH REQUIRES NO POSTAGE IF MAILED IN THE UNITED STATES.**

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**AMTECH SYSTEMS, INC.  
131 SOUTH CLARK DRIVE  
TEMPE, ARIZONA 85281**

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**PROXY STATEMENT**

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The Board of Directors of Amtech Systems, Inc., an Arizona corporation (the "Company"), is soliciting proxies to be used at the 2013 Annual Meeting of Shareholders of the Company to be held on Thursday, March 7, 2013, at 9:00 a.m., Arizona time, and any adjournment or postponement thereof (the "Annual Meeting"). A copy of the Notice of the Meeting accompanies this Proxy Statement. This Proxy Statement and the accompanying form of proxy will be mailed to all shareholders entitled to vote at the Annual Meeting beginning January 25, 2013.

**Who Can Vote**

Shareholders of record as of the close of business on January 10, 2013 (the "Record Date"), may vote at the Annual Meeting and at any and all adjournments or postponements of the meeting. On the Record Date, 9,539,234 shares of the Company's common stock, \$.01 par value ("Common Stock") were issued and outstanding.

**What Constitutes a Quorum**

The presence, in person or by proxy, of the holders of a majority of the voting power of the outstanding shares of Common Stock entitled to vote is necessary to constitute a quorum at the Annual Meeting. Abstentions and broker non-votes are included in the number of shares present at the meeting for purposes of determining a quorum. A broker "non-vote" occurs when a nominee holding shares for a beneficial owner does not vote on a particular proposal because the nominee does not have discretionary voting power for that particular item and has not received instructions from the beneficial owner.

**How to Attend the Meeting**

If you are a shareholder of record, which means you hold your shares in your name, you may attend the meeting. If you own shares in the name of a bank, broker or other holder of record ("street name"), you will need to ask your broker or bank for a copy of the proxy they received from us. You will need to bring the proxy with you to the Annual Meeting.

**How to Vote**

If you are a shareholder of record, you may vote by mail or in person. To vote by mail, sign, date and return your proxy card in the enclosed postage-paid envelope. All valid proxies received before the Annual Meeting, and not properly revoked, will be exercised. If you sign and return your proxy card, but do not give voting instructions, and authority to vote is not specifically withheld, the shares represented by that proxy will be voted as recommended by our Board of Directors. If you have specified a choice with respect to any matter to be acted upon, the shares will be voted in accordance with the specifications so made. The accompanying form of proxy solicited by the Board of Directors confers discretionary authority to cumulate votes with respect to the election of directors. Unless you have specified on the proxy card how you want your shares voted with respect to the election of directors, the proxy agents intend to cumulatively vote all of the shares covered by the proxies solicited by this Proxy Statement in favor of the number of nominees named in this Proxy Statement as they may, in their discretion, determine is required to elect the maximum number of nominees named in this Proxy Statement.

All shareholders may vote in person at the Annual Meeting (unless they are street name holders without a legal proxy). If your shares are held in street name, you will receive instructions from the holder of record that you must follow in order for your shares to be validly voted.

We are not aware of any other matters to be presented at the Annual Meeting, except those described in this Proxy Statement. However, if any other matters not described in this Proxy Statement are properly presented at the Annual Meeting, the proxies will use their own judgment to determine how to vote your shares. If the Annual Meeting is adjourned, your Common Stock may be voted by the proxies on the new meeting date as well, unless you have revoked your proxy prior to that time.

### **What are the Voting Rights of Holders of Common Stock**

Except as set forth below with respect to the ability to cumulate votes for directors, the holders of Common Stock will be entitled to one vote per share of Common Stock.

### **What Vote is Required to Approve Each Item**

If a quorum is present, the six nominees who receive a plurality of the votes cast at the Annual Meeting will be elected. Broker non-votes and votes that are withheld will have no effect on the results of the vote for the election of directors. If a quorum is present, a majority of votes cast by holders of Common Stock represented and entitled to vote at the Annual Meeting will constitute a ratification of the appointment of Mayer Hoffman McCann P.C. as the Company's independent registered public accountants.

Approval of the advisory vote on the compensation of our named executive officers requires the affirmative vote of a majority of the shares of common stock present or represented at the Annual Meeting and entitled to vote. Because the vote on compensation is advisory, it will not be binding upon the Board of Directors. However, the Compensation and Stock Option Committee will take into account the outcome of the vote when considering future executive compensation arrangements.

### **Changing Your Vote**

You may revoke your proxy at any time before it is exercised in one of three ways:

- By delivering to our offices, to the attention of our Corporate Secretary prior to the vote at the Annual Meeting, a written instrument of revocation bearing a date later than that of the proxy;
- By duly executing and delivering to our offices, to the attention of our Corporate Secretary prior to the vote at the Annual Meeting, a proxy for the same shares bearing a later date.; or
- By voting by ballot at the Annual Meeting, provided that the shareholder notifies our Corporate Secretary at the Annual Meeting of his or her intention to vote in person at any time prior to the voting of the proxy.

### **How Votes are Counted**

Inspectors of election will be appointed for the Annual Meeting. The inspectors of election will determine whether or not a quorum is present and will tabulate votes cast by proxy or in person at the Annual Meeting. If you have returned valid proxy instructions or attend the Annual Meeting in person, your Common Stock will be counted for the purpose of determining whether there is a quorum. Abstentions and broker non-votes will be included in the determination of the number of shares represented for a quorum. Generally, broker non-votes occur when a beneficial owner does not provide instructions to their broker with respect to a matter on which the broker is not permitted to vote without instructions from the beneficial owner. In tabulating the voting result for any particular proposal, shares that constitute broker non-votes are not considered entitled to vote or votes cast on that proposal. Accordingly, broker non-votes will not affect the outcome of any matter being voted on at the meeting, assuming that a quorum is obtained.

### **Costs of this Proxy Solicitation**

We will pay the costs of preparing and mailing the Notice and Proxy Statement, including the charges and expenses of brokerage firms, banks and others who forward solicitation material to beneficial owners of the Common Stock. We



will solicit proxies by mail. Officers and directors of the Company may also solicit proxies personally, or by telephone or facsimile, without additional compensation. We have not retained any outside party to assist in the solicitation of proxies; however, we have retained Computershare Trust Company, N.A. and Broadridge Financial Solutions, Inc. to provide certain administrative services in connection with the proposals in this Proxy Statement, including coordinating the distribution of proxy materials to beneficial owners of Common Stock, contacting stockholders to ensure they have received this Proxy Statement and overseeing the return of proxy cards.

### **Annual Report**

The Company's Annual Report to Shareholders for the fiscal year ended September 30, 2012 (the "Annual Report") has been mailed concurrently with the mailing of the Notice of Annual Meeting and Proxy Statement to all shareholders entitled to notice of, and to vote at, the Annual Meeting. The Annual Report is not incorporated into this Proxy Statement, and is not considered proxy-soliciting material.

The information contained in the "Report of Compensation and Stock Option Committee" and "Audit Committee Report" shall not be deemed "filed" with the Securities and Exchange Commission or subject to Regulations 14A or 14C or to the liabilities of Section 18 of the Securities Exchange Act of 1934, and shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

## PROPOSAL NO. 1 – ELECTION OF DIRECTORS

### Number of Directors to be Elected

Our Board of Directors will consist of six members. Each director elected will hold office for one year or until his successor is elected and qualified. If any director resigns, or otherwise is unable to complete his term in office, our Board may elect another director for the remainder of the resigning director's term.

### Vote Required

The six nominees receiving the highest number of votes cast at the Annual Meeting will be elected. There is cumulative voting in the election of directors. This means that each holder of Common Stock present at the Annual Meeting, either in person or by proxy, will have an aggregate number of votes in the election of directors equal to six (the number of persons nominated for election as directors) multiplied by the number of shares of Common Stock held by such shareholder on the Record Date. The resulting aggregate number of votes may be cast by the shareholder for the election of any single nominee, or the shareholder may distribute such votes among any number or all of the nominees. In order to exercise cumulative voting, the voting shareholder must complete the proxy card and indicate cumulative voting in accordance with the instructions included on the proxy card.

### Nominees of the Board

Our Board of Directors is responsible for supervision of the overall affairs of the Company. Our Board has nominated the following individuals to serve on our Board of Directors for the following year:

Michael Garnreiter  
Alfred W. Giese  
Egbert J. G. Goudena  
Robert F. King  
Fokko Pentinga  
Jong S. Whang

Each of these nominees currently serves on our Board of Directors, and has agreed to be named in this Proxy Statement and to serve if elected. See below for information regarding each of the nominees.

There are no family relationships among any of the Company's directors or executive officers.

Our Board of Directors recommends a vote FOR the election of the six nominees under Proposal No. 1. Our Board of Directors intends to vote its proxies for the election of the nominees, for a term to expire at the next Annual Meeting. In that regard, our Board of Directors solicits authority to cumulate such votes.

If any nominee should become unavailable for any reason, which our Board of Directors does not anticipate, the proxy will be voted "for" any substitute nominee, or nominees, who may be selected by our Board of Directors prior to, or at, the Annual Meeting, or, if no substitute is selected by the Board prior to or at the Annual Meeting, for a motion to reduce the present membership of the Board to the number of nominees available. The information concerning the nominees and their share holdings in the Company has been furnished by them to the Company.



## Information Concerning Directors and Executive Officers

The following table sets forth information regarding the executive officers and directors of Amtech. The subsequent paragraphs contain biographical data for each executive officer and director.

<u>Name</u>	<u>Age</u>	<u>Position with the Company</u>
Jong S. Whang	67	Executive Chairman and Director
Fokko Pentinga	57	President, Chief Executive Officer and Director
Bradley C. Anderson	51	Executive Vice President – Finance, Chief Financial Officer, Treasurer and Secretary
Robert T. Hass	62	Vice President and Chief Accounting Officer
Jeong Mo Hwang	59	Vice President and Chief Technology Officer
Michael Garnreiter	60	Director
Alfred W. Giese	74	Director
Egbert J. G. Goudena	63	Director
Robert F. King	79	Director

**Jong S. Whang** has been a Director since our inception in 1981, and Mr. Whang was one of our founders. Mr. Whang served as our Chief Executive Officer since our inception until January 1, 2012 when Mr. Pentinga was promoted to that position. Effective January 1, 2012, Mr. Whang serves as our Executive Chairman and Chairman of the Board. Also, Mr. Whang had served as our President until March 2010 when Mr. Pentinga was promoted to that position. Mr. Whang's responsibilities include the sales and marketing effort for our solar and semiconductor equipment business and the development of new products and business opportunities in those industries. He has 37 years of experience in the solar and semiconductor industries, including time spent in both processing and manufacturing of equipment components and systems. From 1973 until 1979, he was employed by Siltronics, Inc., initially as a technician working with chemical vapor deposition, and later as manager of the quartz fabrication plant with responsibility of providing technical marketing support. From 1979 until 1981, he was employed by U.S. Quartz, Inc. as manufacturing manager. In 1981, he left U.S. Quartz to form Amtech. Mr. Whang brings extensive senior management experience and knowledge of our Company and the markets we serve to the Board of Directors. Mr. Whang is also uniquely positioned to provide the Board of Directors with in-depth and timely information about Company operations and with insight as to his strategic vision for the Company.

**Fokko Pentinga** has been our Chief Executive Officer since January 1, 2012 and our President since March 2010. From December of 2008 until his promotion to President in March 2010, Mr. Pentinga served as Managing Director of Amtech Europe, which is comprised of the Company's two European subsidiaries, Tempres Systems ("Tempres") in Vaassen, the Netherlands, and R2D Automation ("R2D") near Montpellier, France. During that time Mr. Pentinga also served as General Manager of Tempres (a position he held for 15 years) and President of R2D (a position he held for two years). Mr. Pentinga has over 30 years of experience in the semiconductor and solar industries. The Board of Directors expects to benefit significantly from Mr. Pentinga's participation due to his extensive experience in the company and in the markets we serve.

**Bradley C. Anderson** joined us as Vice President-Finance, Chief Financial Officer, Treasurer and Secretary in April 2006. Prior to that, Mr. Anderson spent several years in a consulting role implementing the internal control requirements of the Sarbanes-Oxley Act for a broad range of publicly held companies. From 1996 to 2002, Mr. Anderson served as Vice President-Finance and then as Chief Financial Officer of Zila, Inc., an international provider of healthcare technology and products. Mr. Anderson began his career with Deloitte (formerly Deloitte & Touche) where he worked for over 11 years. He graduated from Brigham Young University with a Bachelor of Science in Accounting. Mr. Anderson is a Certified Public Accountant.

**Robert T. Hass** has been our Vice President - Chief Accounting Officer, Assistant Treasurer and Assistant Secretary since April 2006. Prior to that, he served as our Vice President - Finance, Chief Financial Officer, Treasurer and Secretary from June 1992 to April 2006, and as Director from February 1996 to March 2006. From 1991 until May 1992, he operated a financial consulting practice. From 1985 to 1991, Mr. Hass was Director of Accounting Services and then Controller for Lifeshares Group, Inc., and from 1988 to 1991, was Controller and Chief Accounting Officer of some of Lifeshares' subsidiaries. From 1984 to 1985, he was Vice President - Finance and Treasurer of The Victorio Company. From 1977 to 1984, he served in various capacities including Vice President, Chief Financial Officer and Treasurer of Altamil Corporation, then a public diversified manufacturing company. From 1972 to 1977, he was an auditor with Ernst & Ernst, now known as Ernst & Young. He has a Bachelor of Science degree in Accounting from Indiana University. Mr. Hass is a Certified Public Accountant.

**Jeong Mo Hwang, Ph.D.** has been the Vice President and Chief Technology Officer of the Company since April 2011. Dr. Hwang was a Director from June 2009 until he resigned in April 2011. From 2009 to 2010, Dr. Hwang served as Director of Process Engineering in charge of magnetic memory process technology development for Magsil Corp. He received a Ph.D. in electrical engineering from Arizona State University where his graduate research related to modeling high-level light illumination effects on solar cell efficiency. He has over 20 years of solar and semiconductor technology experience. From 2008 to 2009, Dr. Hwang was a senior manager in charge of NOR flash periphery device development for Spansion Inc. He was Director of Process Engineering for Simtek Corp. from 2005 to 2008, managing the development of non-volatile SRAM products. From 2000 to 2004, he was VP of Research and Development for Dongbu-Anam Semiconductor Inc. and led the development teams for standard CMOS logic processes as well as other specialty technologies. Prior to 2000, Dr. Hwang held engineering, and technology leadership positions with leading semiconductor companies, LG Semicon Co., Texas Instruments and Westinghouse. Dr. Hwang also has a Masters of Science degree in Electrical Engineering from Korea Advanced Institute of Science and Technology and a Bachelors degree in Electronics Engineering from Pusan National University in Korea.

**Michael Garnreiter** has been a Director since February 2007. He is currently Vice President of Finance and Treasurer of Shamrock Foods, a privately-held manufacturer and distributor of foods and food-related products. From January 2010 until August 2012, Mr. Garnreiter was a managing director of Fenix Financial Forensics, a Phoenix-based litigation and financial consulting firm. From August 2006 until January 2010, he was a managing member of Rising Sun Restaurant Group LLC and from December 2008 until December 2009, he was president of New Era Restaurants, LLC, both of which are privately-held restaurant operating companies. From 2002 to 2006, Mr. Garnreiter was CFO of Main Street Restaurant Group, a publicly traded restaurant operating company, and from 1976 to 2002, he was a senior audit partner of Arthur Andersen LLP. Mr. Garnreiter serves on the boards of directors of Taser International (as chairman), a manufacturer of non-lethal protection devices, Knight Transportation Company, a nationwide truckload transportation company, and IA Global, Inc., an Asian business processes outsourcing company. In addition, Mr. Garnreiter serves as a member of the board of directors for Banner Health, a multi-state health care delivery system. He graduated from California State University Long Beach with a Bachelor of Science in Accounting and Business Administration. Mr. Garnreiter is a Certified Public Accountant and Certified Fraud Examiner. Mr. Garnreiter's financial background and expertise allows him to provide valuable advice to the Board of Directors and is chairman of the Company's Audit and Nominating and Governance Committees, and serves as a member of the Company's Compensation and Stock Option, and Technology Strategy Committees. Mr. Garnreiter is the Company's designated financial expert of the board.

**Alfred W. Giese** has been a Director since April 2007. Since 2001, Mr. Giese has been the Senior Partner of IBC, International Business Consultants where, between 2001 and 2006, he focused on sales and marketing for Aviza Technology Corporation, a semiconductor equipment manufacturer. He also assembled and managed a sales and marketing team for Epion Corporation, a high-technology equipment company which was acquired by TEL (Tokyo Electron Ltd.). From 1998 to 2001, he was the Vice President, Sales for Silicon Valley Group, or SVG, with responsibility for both Asia and Europe. From 1988 to 1998, Mr. Giese held positions of Vice President of Sales with Thermco Systems, Corp. and SVG, both semiconductor equipment companies. Prior to 1988, he held various sales positions for Thermco. For several years during that time, he served on the Board of Directors of Thermco's joint venture company in Japan. Mr. Giese has a degree in International Business from the Industriehochschule in Essen, Germany. Due to Mr. Giese's extensive sales and marketing experience, specifically in the areas of technology relevant to the Company,

Mr. Giese is able to provide the Board of Directors with valuable advice in those areas. Mr. Giese also provides the Board of Directors with financial advice as a member of the Company's Audit Committee.

**Egbert J.G. Goudena** has been a Director since December 2009. Since 1987, Mr. Goudena has been the operations manager of the research labs of the Delft Institute of Microsystems and Nanoelectronics (DIMES) of the Delft University of Technology in The Netherlands. His responsibilities include managing the logistics and infrastructure of the research labs including prototyping and small-scale production. DIMES was established in 1987 and is a strong international center of excellence providing experimental research in many technology areas, including solar cells. In 2008, Mr. Goudena co-founded ISZGRO Diodes, a company that was formed to deliver logistics services to technology companies and to produce extreme ultraviolet (EUV) detectors. Mr. Goudena received a Bachelor of Engineering degree in Chemical Technology from the H.T.S. Wegestraat in The Hague. Mr. Goudena's experience in research and technology allows him to advise the Board of Directors with respect to the Company's research and development activities, which are key components of the Company's business strategies.

**Robert F. King** has been a Director since May 2003. Since 1989, Mr. King has been President of King Associates, which provides consulting services to equipment companies serving the solar, semiconductor and flat panel display industries. From 1968 to 1988, Mr. King was employed at Varian Associates, where he served in various marketing positions, including Vice President of Marketing for the Semiconductor Equipment Division. Mr. King also served on the Board of Directors of Varian's joint venture semiconductor equipment companies located in Korea and Japan. Mr. King has significant experience in advising companies in the solar and semiconductor industries, which allows him to advise the Board of Directors with respect to the Company's overall business. Mr. King also provides the Board of Directors with technical and financial advice as a member of the Company's Audit and Technology Strategy Committees.

#### **Information About Board and Committee Meetings**

Information concerning our Board of Directors and the four committees maintained by our Board is set forth below. A majority of the Board of Directors, as well as the Company's Board committees, consist of Directors who are not employees of the Company and who are "independent" within the meaning of the listing standards of the NASDAQ Stock Market. Currently, the Company's independent directors are Michael Garnreiter, Alfred W. Giese, Egbert J.G. Goudena and Robert F. King.

Our Board of Directors held five (5) meetings during fiscal year 2012. No director attended less than 75% of the aggregate of all Board meetings held while he served as such director and all committee meetings on which he served as a committee member. Our Board has the authority under the Company's Bylaws to increase or decrease the size of our Board and to fill vacancies, and the directors chosen to fill such vacancies will hold office until the Company's next annual meeting or until their successors are elected and qualified. The Company does not have a formal policy with respect to members of the Board of Directors attending the annual meeting. Six of the members of the Company's Board of Directors attended the 2012 annual meeting.

The Audit Committee, the Compensation and Stock Option Committee, the Nominating and Governance Committee and the Technology Strategy Committee are the standing committees of our Board of Directors. The members of the committees as of January 23, 2013 are as follows:

**Audit** – Michael Garnreiter (Chairman), Alfred W. Giese and Robert F. King

**Compensation and Stock Option** – Robert F. King (Chairman), Michael Garnreiter, Alfred W. Giese and Egbert J.G. Goudena.

**Nominating and Governance** – Michael Garnreiter (Chairman), Egbert J.G. Goudena and Robert F. King

**Technology Strategy** – Alfred W. Giese (Chairman), Michael Garnreiter, Egbert J.G. Goudena, Robert F. King, Fokko Pentinga and Jong S. Whang

The Audit Committee held four (4) meetings during fiscal year 2012. The Audit Committee is responsible for maintaining communication between the Board of Directors, the independent auditors and members of financial management with respect to the Company's financial affairs, including financial statements and audits, the adequacy and effectiveness of the internal accounting controls and systems and the retention and termination of the independent registered public accounting firm. The Audit Committee has a written charter, a copy of which is available on the Company's website at [www.amtechsystems.com](http://www.amtechsystems.com).

The Audit Committee is composed of outside directors who are not officers or employees of the Company or its subsidiaries. In the opinion of our Board, and as "independent" is defined under the listing rules of the NASDAQ Stock Market, these directors are independent of management and free of any relationship that would interfere with their exercise of independent judgment as members of this committee. Additionally, each member of the Audit Committee is financially literate, and one of the Audit Committee members, Michael Garnreiter, has financial management expertise as required by NASDAQ's rules and meets the SEC's definition of an "audit committee financial expert."

The Compensation and Stock Option Committee held three (3) meetings during fiscal year 2012. The Compensation and Stock Option Committee makes recommendations concerning officer compensation, benefit programs and retirement plans. The Compensation and Stock Option Committee has a written charter, a copy of which is available on the Company's website at [www.amtechsystems.com](http://www.amtechsystems.com).

The Nominating and Governance Committee held one (1) meeting during fiscal year 2012. The Nominating and Governance Committee identifies and approves individuals qualified to serve as members of our Board and also evaluates the Board's performance. In evaluating a prospective nominee, the Nominating and Governance Committee takes several factors into consideration, including such individual's integrity, business skills, experience and judgment. The evaluation of director nominees by the Nominating and Governance Committee also takes into account the diversity of board members' background. The Nominating and Governance Committee also reviews whether a prospective nominee will meet the Company's independence standards and any other director or committee membership requirements imposed by law, regulation or stock exchange rules. The Nominating and Governance Committee approved the nomination of the candidates reflected in Proposal 1. The Nominating and Governance Committee will consider, but is not required to approve, director nominations made by shareholders for any annual meeting of the Company, provided a written recommendation is received by the Company no later than the date shareholder proposals must be submitted for consideration prior to such annual meeting and all other applicable requirements have been satisfied. The Nominating and Governance Committee also develops and recommends corporate governance guidelines to the Board and provides oversight with respect to ethical conduct. The Nominating and Governance Committee is comprised of independent members of the Board. The Nominating and Governance Committee has a written charter, a copy of which is available on the Company's website at [www.amtechsystems.com](http://www.amtechsystems.com).

The Technology Strategy Committee held three (3) meetings during fiscal year 2012. The Technology Strategy Committee assists the Board of Directors in understanding and evaluating the Company's technology strategy and evaluating potential acquisitions of new technology.

### **Board Leadership Structure**

Mr. Whang, serves as the Company's Executive Chairman of the Board of Directors, while Mr. Pentinga serves as the Company's Chief Executive Officer (CEO). The Company does not have a policy regarding the combination or separation of the Chairman and CEO roles. The Company's Nominating and Governance Committee retains flexibility for the Board to determine whether those roles should be combined or separated in light of prevailing circumstances. We believe that separating the roles of Chairman and Chief Executive Officer allows Mr. Whang to focus on strategic direction and external growth opportunities while Mr. Pentinga, in the role of Chief Executive Officer, focuses on the Company's operations to transform and sustain innovation within the Company. We believe this enhances the ability of each to discharge his duties effectively. For these reasons, we believe our Board leadership structure is appropriate and is in the best interest of the Company and its shareholders.

The Board of Directors has not designated a lead independent director at this time. We believe that our committee chairmen have the opportunity to call and plan executive sessions collaboratively and, between meetings of the full

Board of Directors, communicate with management and one another directly. Accordingly, we do not believe there is a need to designate a lead director at this time.

### Board's Role in Risk Oversight

The Company's Board of Directors is actively engaged in the oversight of risks that could affect the Company, with key aspects of such oversight being conducted through the committees of the Board of Directors. The Audit Committee focuses on financial risks, primarily those that could arise from our accounting and financial reporting processes, and also oversees compliance-related legal and regulatory exposure. The Nominating and Governance Committee focuses on the management of risks associated with corporate governance matters, including board organization, membership and structure; management development; and appropriate approval and oversight mechanisms. The Compensation and Stock Option Committee focuses on the management of risks arising from our compensation policies and programs and, in particular, our executive compensation programs and policies.

While the committees of our Board of Directors are focused on the above specific areas of risk, the full Board of Directors retains responsibility for the general oversight of risk. Committee chairs are expected to provide periodic reports to the full Board of Directors regarding the risk considerations within each committee's area of expertise. In addition, periodic reports are provided to the Board of Directors or the appropriate committee by the executive management team on areas of material risk to the Company, including operational, financial, legal, regulatory and strategic risks. In addition, at the annual management and Board planning meeting (normally near the end of the fiscal year), the general management and operating leadership of the Company's divisions and subsidiaries review, with the full Board, their individual assessment of business risks and their approach to manage those risks. The Board of Directors relies upon these reports, and its discussions relating to such reports, to enable it to understand the Company's strategies for the identification, management and mitigation of risks. This enables the Board of Directors and its committees to coordinate its risk oversight role. The Board of Directors' approach to risk oversight does not directly affect the leadership structure of our Board of Directors, as described above.

### DIRECTOR COMPENSATION

Name	Fees Earned or Paid in Cash (\$)	Option Awards (\$ (1))	All other Comp. (\$)	Total (\$)
Jong S. Whang (2)	—	—	—	—
Fokko Pentinga (2)	—	—	—	—
Michael Garreiter	60,825	29,696	—	90,521
Alfred W. Giese	72,125	29,696	—	101,821
Egbert J.G. Goudena	31,500	29,696	—	61,196
SooKap Hahn (3)	38,200	29,696	—	67,896
Robert F. King	78,425	29,696	—	108,121

(1) Amounts represent the aggregate grant date fair value computed in accordance with FASB ASC Topic 718. For a description of the assumptions made by the Company when calculating such grant date fair value, refer to Note 1 to the Company's consolidated financial statements as set forth in the Company's Form 10-K filed December 7, 2012.

(2) Directors who are full-time employees of our Company receive no additional compensation for serving as directors.



- (3) Dr. Hahn resigned from the Board of Directors effective November 2, 2012 and was granted option awards in the December 11, 2012 directors' option grant. Option awards granted under the Non-Employee Directors Stock Option Plan will continue to vest under the normal vesting schedule per the provisions of the plan.

Directors who are full-time employees of our Company receive no additional compensation for serving as directors. Prior to August 7, 2012, non-employee directors received an annual retainer of \$16,000, fees of \$2,000 per Board meeting attended in person, \$750 per board meeting attended telephonically, \$1,250 per Audit Committee meeting attended in person, \$750 per Audit Committee meeting attended telephonically, \$750 per Compensation and Stock Option Committee or Nominating and Governance Committee or Technology Strategy Committee meeting attended in person, and \$500 per Compensation and Stock Option Committee or Nominating and Governance Committee or Technology Strategy Committee meeting attended telephonically. Effective August 7, 2012, all meeting fees were reduced by 10%. In addition to meeting fees, members of board committees receive compensation for time spent on work assigned by the committee. The rate of compensation for the work assignments is \$100 per hour. In addition, under our Non-Employee Directors Stock Option Plan, each non-employee director currently receives a grant of options to purchase 6,000 shares of common stock, or such other number of shares as may be determined by the Board, when first elected or appointed to the Board, and 6,000 shares of common stock, or such other number of shares as may be determined by the Board, upon each re-election to the Board at our annual meeting of shareholders or at such other time as may be determined by the Board. The exercise price of the options is set at the fair market value of common stock on the date of grant. Each option has a term of ten years and becomes exercisable in three equal installments commencing on the first anniversary of the date of grant and continuing for the two successive anniversaries thereafter. In the event of disability (as defined in the plan) or death of an outside director, all options remain exercisable for a period of 30 days following the date such person ceased to be a director, or such other date as may be determined by the Board, but only to the extent such options were exercisable on the date the director ceased to be a director. Furthermore, the director serving as the Chairman of the Audit Committee receives an annual retainer of \$15,000. The director serving as the Chairman of the Technology Strategy Committee, the director serving as the Chairman of the Compensation and Stock Option Committee as well as the director serving as the Chairman of the Nominating and Governance Committee each receive an annual retainer of \$6,000.

#### **Compensation Committee Interlocks and Insider Participation**

The Compensation and Stock Option Committee is presently comprised of Messrs. Michael Garnreiter, Alfred W. Giese, Egbert J.G. Goudena and Robert F. King, who are not officers or employees of the Company. No interlocking relationship exists, or in the past fiscal year has existed, between any member of the Compensation and Stock Option Committee and any member of any other company's board of directors or compensation committee.

## EXECUTIVE COMPENSATION

### COMPENSATION DISCUSSION AND ANALYSIS

This section discusses the principles underlying our executive compensation policies and decisions. It provides qualitative information regarding the manner in which compensation is earned by the five executive officers whose compensation is disclosed in the compensation tables following this discussion. We refer to these executive officers as “named executive officers” or “NEOs”. Our named executive officers for fiscal year 2012 were:

- Jong S. Whang Executive Chairman
- Fokko Pentinga President and Chief Executive Officer
- Bradley C. Anderson Executive Vice President and Chief Financial Officer
- Robert T. Hass Vice President and Chief Accounting Officer
- Jeong Mo Hwang Vice President and Chief Technology Officer

The following discussion and analysis of compensation arrangements should be read together with the compensation tables and related disclosures set forth below. This discussion contains forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs that we adopt may differ materially from currently planned programs as summarized in this discussion. In addition, we address the compensation paid or awarded during fiscal year 2012 to our named executive officers.

#### **Executive Summary**

##### *Recap of Fiscal Year 2012 Company Performance*

We believe that the compensation of our executive officers should facilitate the achievement of annual corporate goals as well as the performance of long-term business objectives. The 2012 fiscal year was challenging primarily because the solar industry is experiencing a structural imbalance between supply and demand. This imbalance negatively impacted our results of operations. For fiscal 2012, we believe our executive compensation programs delivered payouts commensurate with the results of operations. The company reported a net loss for fiscal 2012 and no incentive bonuses were awarded to our NEOs. Additionally, effective July 1, 2012, our NEOs voluntarily reduced their base salaries by 10 to 20 percent.

It is the responsibility of the Compensation and Stock Option Committee (“Compensation and Stock Option Committee” or “Compensation Committee”) of our Board of Directors to administer our compensation practices to ensure that they are competitive and include incentives which are designed to appropriately drive corporate performance. Our Compensation Committee reviews and approves all of our compensation policies, relating to our named executive officers’ salaries, bonuses and equity incentive compensation.

At the Company’s 2012 annual meeting of shareholders, we held, for the first time, a non-binding advisory shareholder vote on the compensation of our NEOs, commonly known as a say-on-pay vote. Our shareholders approved the say-on-pay resolution by a favorable vote of approximately 92% of the votes cast, including abstentions. Based upon our review of our compensation policies and based upon the results of the say-on-pay vote, we decided to retain our current approach to executive compensation.

Based upon a separate advisory vote on the frequency of the say-on-pay vote, shareholders indicated their preference for an annual advisory vote on the compensation of our NEOs. Taking into account the shareholders’ vote, the Board of Directors determined that the Company will conduct a non-binding advisory vote to approve the compensation of

the Company's NEOs on an annual basis. Therefore, a shareholder advisory vote on executive compensation will be held at the 2013 Annual Meeting.

### **Objectives of Our Executive Compensation Programs**

Our compensation programs for our named executive officers are designed to achieve the following objectives:

- attract and retain talented and experienced executives in our industry;
- motivate and reward executives whose knowledge, skills and performance are critical to our success;
- align the interests of our executives and shareholders by rewarding executives when shareholder value increases; and
- motivate our executives to manage our business to meet our short-term and long-term corporate goals and business objectives, and reward them for meeting these objectives.

We use a mix of short-term compensation in the form of base salaries and cash incentive bonuses and long-term compensation in the form of equity incentive compensation to provide a total compensation structure that is designed to encourage our executives to achieve these objectives.

### **Determining Executive Compensation**

Our Compensation and Stock Option Committee establishes our general compensation policies and specific compensation for each of our executive officers, and administers our stock option program. Our Compensation and Stock Option Committee is responsible for developing, administering and interpreting the compensation program for executive officers and other key employees. Our Compensation and Stock Option Committee was appointed by our Board of Directors, and consists entirely of independent, outside directors who are "non-employee directors" for purposes of Rule 16b-3 under the Exchange Act.

Our Compensation and Stock Option Committee may delegate some or all of its responsibilities to one or more subcommittees whenever necessary to comply with any statutory or regulatory requirements or otherwise deemed appropriate by our Compensation and Stock Option Committee. Our Compensation and Stock Option Committee has the authority to retain consultants and other advisors to assist with its duties and has sole authority to approve the fees and other retention terms of such consultants and advisors.

Our Compensation and Stock Option Committee's objective is to make the compensation packages of our executive officers sufficient to attract and retain persons of exceptional quality and to provide effective incentives to motivate and reward our executives for achieving our financial and strategic goals, which are essential to our long-term success and growth in shareholder value.

### **Elements of Our Executive Compensation Programs**

Our executive compensation package for the fiscal year ended September 30, 2012 consisted of three main components: base salary, incentive cash bonuses and equity incentives. We believe it is important that the interests of our named executive officers are aligned with those of our shareholders; therefore, equity incentive compensation, in the form of stock options and restricted stock grants, constitutes a significant portion of our total executive compensation.

Within the context of the overall objectives of our compensation programs, the Compensation Committee determined the specific amounts of compensation to be paid to each of our executives in fiscal year 2012 based on a number of factors including:

- the roles and responsibilities of our named executive officers;
- the individual experience and skills of our named executive officers;

- the amounts of compensation being paid to our other executives;
- our named executive officers' historical compensation at our company;
- the overall benefits package provided to our named executive officers; and
- our understanding of the amount of compensation generally paid by similarly situated companies to their executives with similar roles and responsibilities.

## **Annual Cash Compensation**

### *Base Compensation*

Our Compensation and Stock Option Committee's approach is to offer our executives salaries competitive with those of other executives in the industry in which we operate. To that end, our Compensation and Stock Option Committee periodically evaluates the competitiveness of base salaries based on information drawn from a variety of sources, including published and proprietary survey data and our own experience recruiting and retaining executives, although complete information is not easily obtainable. Our base salary levels are intended to be consistent with competitive practice and level of responsibility, with salary increases reflecting competitive trends, our overall financial performance and the performance of the individual executive. Salaries are adjusted to reflect individual roles and performance and may be adjusted at other times if a change in the scope of the officer's responsibilities justifies such consideration or in order to maintain salary equity among executive officers. We believe that a competitive base salary is a necessary element of any compensation program designed to attract and retain talented and experienced executives. We also believe that attractive base salaries can serve as an effective reward for the executives' overall performance.

### *Cash bonuses*

In addition to base salary, our executives are eligible to receive annual cash incentive bonuses comprised of (i) discretionary cash bonuses determined by the Compensation and Stock Option Committee and (ii) bonuses earned under the Company's non-equity incentive bonus plan.

The primary objectives of our discretionary bonuses and incentive bonus plan are to provide an incentive for superior work, to motivate our executives toward even higher achievement and business results, to tie our executives' goals and interests to ours and our shareholders' and to enable us to attract and retain highly qualified individuals. After the close of each fiscal year, our Compensation and Stock Option Committee reviews our actual financial performance against the incentive bonus plan performance criteria for each executive in determining year-end incentive bonuses, if any. In addition, our Compensation and Stock Option Committee may recommend discretionary bonuses for particular contribution to the goals of the Company or where incentive bonuses do not adequately reflect the executive's contributions during the year due to circumstances beyond the executive's control.

Under our non-equity incentive bonus plan, participants can earn a target bonus equal to a specified percentage of their base salary by achieving 100% of pre-defined performance objectives. The participant's bonus calculation is based upon achieving performance objectives established in each of the following categories: (i) bookings; (ii) revenue; (iii) gross margin; and (iv) operating profit. Objectives established for participants in these categories may be either at the corporate level, the operating division level or both. In addition, individual performance objectives may be established for certain participants. In order to be eligible for a bonus with respect to any of the above performance categories, the participant must achieve not less than 80% (90% in the case of gross margin) of the applicable performance objective. At these minimum levels, 20% of the bonus for the category is eligible for payment. The bonus calculation percentage with respect to any performance category increases by 4% (8% with respect to gross margin) for each 1% improvement in performance over the minimum level up to 100%, and by 1% (10% with respect to gross margin) for each 1% improvement in performance over 100%, up to a maximum of 150% (200% with respect to gross margin) of the participant's target bonus.

Mr. Whang's target bonus for fiscal 2012 was 80% of his base salary, or \$256,000; Mr. Pentina's target bonus for fiscal 2012 was 75% of his base salary, or \$235,875; Mr. Anderson's target bonus was 55% of base salary, or \$123,888;

Mr. Hass' target bonus was 30% of base salary, or \$45,900. Dr. Hwang's target bonus for fiscal 2012, was 30% of base salary, or \$45,900. The bonus of the five named executive officers was calculated solely upon the basis of performance objectives at the corporate level. If fiscal 2012 performance was equivalent to 80% (90% with respect to gross margin) of performance objectives in all corporate performance categories, Mr. Whang's bonus calculation would be \$51,200, Mr. Pentinga's bonus calculation would be \$47,175, Mr. Anderson's bonus calculation would be \$24,778, Mr. Hass' bonus calculation would be \$9,180 and Dr. Hwang's bonus calculation would be \$9,180. If fiscal 2012 performance was 150% (110% with respect to gross margin) of performance objectives in all corporate performance categories, Mr. Whang's bonus calculation would be \$384,000, Mr. Pentinga's bonus calculation would be \$353,813, Mr. Anderson's bonus calculation would be \$185,831, Mr. Hass' bonus calculation would be \$68,850 and Dr. Hwang's bonus calculation would be \$68,850.

Notwithstanding the calculation of any bonus amount under the fiscal 2012 bonus plan, (i) no bonuses would have been payable based on achievement of corporate level objectives if consolidated operating profit was less than 3%; (ii) no bonuses would have been payable based on achievement of divisional level objectives if division operating profit (before corporate expense allocation) was less than 5%; and (iii) all bonus payments were subject to the discretionary approval of our Compensation and Stock Option Committee.

For fiscal 2012, the Compensation and Stock Option Committee awarded no discretionary cash bonuses and no bonuses pursuant to the non-equity incentive bonus plan.

#### *Equity incentive compensation*

From time to time, we grant stock options and shares of restricted stock in order to provide certain of our executives with a competitive total compensation package, and to reward contributions to the Company's long-term success and to the commitment of such executives to the interests of the Company's shareholders. These equity incentive awards are in the form of stock options and restricted stock grants to align the interests of our executives with our shareholders by providing our executives with strong incentives to increase shareholder value. Our Board of Directors does not apply a rigid formula in allocating stock options or restricted stock to our named executive officers as a group or to any particular executive. Instead, our Board of Directors exercises its judgment and discretion and considers, among other things, the executive's past performance and contributions, and the executive's anticipated future contributions and responsibilities, competitive factors, the non-equity compensation received by the executive and the total number of options and shares of restricted stock to be granted to all participants during the year.

Our Compensation and Stock Option Committee has discretion to determine the vesting schedule of the stock options and restricted period of the restricted stock granted under our 2007 Employee Stock Incentive Plan. The vesting period and restricted period provide added incentive for the executive to continue his or her employment with us.

In fiscal 2012, we granted options to purchase a total of 285,400 shares of common stock, of which options to purchase a total of 148,334 shares were granted to our named executive officers, representing 52% of all options granted in fiscal 2012. In fiscal 2012, we granted 60,600 shares of restricted stock, of which 46,666 shares of restricted stock were granted to our named executive officers. The grants issued in fiscal 2012 were related to fiscal 2011 financial performance. The number of stock options and shares of restricted stock granted to each executive is set forth in the "Grants of Plan-Based Awards" table below. The aggregate grant date fair value (calculated in accordance with FASB ASC Topic 718) with respect to such grants for each individual named executive officer is set forth in the column "Option Awards" and "Stock Awards" in the "Summary Compensation Table." The exercise price of each stock option granted under our plan is based on the fair market value of our common stock on the grant date.

#### *Benefits*

All of our named executive officers receive an automobile allowance and are eligible for the benefits offered to employees generally, including life, health, disability and dental insurance and our 401(k) plan. Our Executive Chairman, Chief Executive Officer and our Vice President - Finance are eligible to participate in the Mayo Executive Health Plan. Our Chief Executive Officer participates in Pensioenfonds Metaal en Techniek, a multi-employer plan that generally covers all our employees in the Netherlands. Consistent with our compensation philosophy is our intent to maintain



our current benefits for our executive officers. Our Compensation and Stock Option Committee, in its discretion, may revise the named executive officers' benefits if it deems it advisable.

#### *Severance and change in control arrangements*

Our executive chairman and chief executive officer have employment agreements that provide various benefits triggered by such employment-related actions as termination without cause, resignation with good reason and/or termination without cause following a change in control. See "Employment Agreement with Executive Chairman" and "Employment Agreement with Chief Executive Officer" below for a description of such provisions. Additionally, our chief financial officer, chief accounting officer and chief technology officer have agreements that provide for severance payments and change of control payments. See "Change of Control Agreement with Chief Financial Officer", "Change of Control and Severance Agreement with Chief Accounting Officer" and "Change of Control and Severance Agreement with Chief Technology Officer" below for a description of such provisions. Each of the employment agreements and change in control agreements has been amended to ensure compliance with Section 409A of the Internal Revenue Code.

In setting the terms of and determining whether to approve these severance and change in control arrangements, our Compensation Committee or Board of Directors, as applicable, recognized that executives often face challenges securing new employment following a termination of their existing employment and that distractions created by uncertain job security may have a detrimental impact on their performance. None of these benefits are triggered by a change in control if our named executive officer's employment is terminated for cause.

#### *Effect of accounting treatment on compensation decisions*

In the review and establishment of our compensation programs, we consider the anticipated accounting and tax implications to us and our executives. For example, we may utilize restricted stock as forms of equity compensation incentives in response to changes in the accounting treatment of equity awards. While we consider the applicable accounting and tax treatment, these factors alone are not determinative, and we also consider the cash and non-cash impact of the programs and whether a program is consistent with our overall compensation philosophy and objectives.

### **Compensation Committee Report**

#### **REPORT OF COMPENSATION AND STOCK OPTION COMMITTEE**

The Compensation and Stock Option Committee, which is composed entirely of independent, outside directors, establishes the general compensation policies of the Company, and specific compensation for each executive officer of the Company, and administers the Company's stock option program.

The Compensation and Stock Option Committee has reviewed and discussed the Compensation Discussion and Analysis included above with management and based on such review and discussions the Compensation and Stock Option Committee has recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this Proxy Statement.

RESPECTFULLY SUBMITTED,

Robert F. King, Chairman  
Michael Garnreiter  
Alfred W. Giese  
Egbert J.G. Goudena

## SUMMARY COMPENSATION TABLE

The following table sets forth information regarding compensation for services rendered to Amtech during the fiscal years ended September 30, 2012, 2011 and 2010 by our named executive officers who received annual compensation exceeding \$100,000 during such period.

### SUMMARY COMPENSATION TABLE

Name and Principal Position	Year	Salary (\$)	Bonus (\$ (1))	Stock Awards (\$ (2))	Option Awards (\$ (2))	Non-Equity Incentive Plan Compensation (\$ (3))	All Other Compensation (\$)	Total (\$)
<b>Jong S. Whang</b>	<b>2012</b>	<b>383,077</b>	<b>—</b>	<b>146,297</b>	<b>181,480</b>	<b>—</b>	<b>36,159</b>	<b>(5) 747,013</b>
<b>Executive Chairman</b>	<b>2011</b>	<b>386,539</b>	<b>—</b>	<b>230,394</b>	<b>287,118</b>	<b>409,600</b>	<b>36,159</b>	<b>(5) 1,349,810</b>
<b>and Director</b>	<b>2010</b>	<b>339,231</b>	<b>105,000</b>	<b>114,700</b>	<b>142,875</b>	<b>315,000</b>	<b>33,196</b>	<b>(6) 1,050,002</b>
Fokko Pentinga	2012	340,613	—	119,700	420,699	—	80,240	(9) 961,252
Chief Executive	2011	309,951	100,000	201,606	251,222	257,920	75,895	(9) 1,196,594
Officer and Director	2010	247,509	170,523	66,213	82,442	211,568	47,272	(9) 825,527
<b>Bradley C. Anderson</b>	<b>2012</b>	<b>257,291</b>	<b>—</b>	<b>66,497</b>	<b>82,492</b>	<b>—</b>	<b>18,050</b>	<b>(7) 424,330</b>
<b>Chief Financial</b>	<b>2011</b>	<b>260,315</b>	<b>—</b>	<b>100,794</b>	<b>125,616</b>	<b>186,560</b>	<b>17,350</b>	<b>(7) 690,635</b>
<b>Officer</b>	<b>2010</b>	<b>237,462</b>	<b>56,250</b>	<b>57,350</b>	<b>71,438</b>	<b>183,750</b>	<b>18,327</b>	<b>(7) 624,577</b>
Robert T. Hass	2012	166,404	—	19,950	24,747	—	14,310	(8) 225,411
Chief Accounting	2011	165,477	—	11,526	14,352	65,280	13,853	(8) 270,488
Officer	2010	131,663	18,500	15,295	19,049	55,500	10,828	(8) 250,835
<b>Jeong Mo Hwang</b>	<b>2012</b>	<b>166,404</b>	<b>—</b>	<b>19,950</b>	<b>24,747</b>	<b>—</b>	<b>18,911</b>	<b>(10) 230,012</b>
<b>Chief Technology</b>	<b>2011</b>	<b>69,354</b>	<b>—</b>	<b>—</b>	<b>53,834</b>	<b>29,898</b>	<b>2,692</b>	<b>(10) 155,778</b>
<b>Officer (4)</b>								

(1) Represents discretionary cash bonuses awarded on November 11, 2011 for fiscal year 2011 and November 12, 2010, for fiscal year 2010. No discretionary cash bonuses were awarded for fiscal year 2012 performance.

(2) Amounts represent the aggregate grant date fair value calculated in accordance with FASB ASC Topic 718. For a description of the assumptions made by the Company when calculating such grant date fair value, refer to Note 1 to the Company's consolidated financial statements as set forth in the Company's Form 10-K filed December 7, 2012. The number of stock awards and option awards is based upon performance in the prior fiscal year. The 2012 option awards for Mr. Pentinga include a grant of 55,000 options in recognition of his appointment to the position of Chief Executive Officer.

(3) On November 11, 2011 and on November 12, 2010 the Board of Directors, based upon the recommendation of the Compensation and Stock Option Committee, awarded non-equity incentive plan compensation to executives for their fiscal 2011 and 2010 performance, respectively, in the amounts indicated. There was no discretionary cash bonus and no non-equity incentive plan compensation awarded for fiscal 2012 performance.

(4) Jeong Mo Hwang was hired on April 20, 2011. All figures represent compensation from that date.

(5) Amount represents car allowance of \$18,000, \$10,809 of life insurance premiums paid by the Company for which Mr. Whang's spouse is the beneficiary and Company match under the 401(k) plan of \$7,350.

- (6) Amount represents car allowance of \$12,000, \$12,869 of life insurance premiums paid by our company for which Mr. Whang's spouse is the beneficiary and Company match under the 401(k) plan of \$8,327.
- (7) Represents Company match under the 2010, 2011 and 2012 401(k) plan of \$8,327, \$7,350 and \$7,350, respectively, and car allowance of \$10,000 per year.
- (8) Represents Company match under the 2010, 2011 and 2012 401(k) plan of \$4,501, \$6,853 and \$7,310, respectively, and car allowance of \$6,327, \$7,000 and \$7,000 in fiscal year 2010, 2011 and 2012, respectively.
- (9) Represents Company contribution under the 2010, 2011 and 2012 Netherlands pension plan of \$23,232, \$33,090 and \$39,679, respectively, and other (primarily car allowance) of \$24,040, \$42,804 and \$40,561 in fiscal year 2010, 2011 and 2012, respectively.
- (10) Represents Company match under the 401(k) plan in fiscal 2012 of \$4,561, car allowance of \$2,692 and \$7,000 for fiscal 2011 and 2012, respectively, and travel incentive payments of \$7,350 in fiscal 2012.

### GRANTS OF PLAN-BASED AWARDS

The following table sets forth grants of plan-based awards made to our named executive officers in fiscal 2012 and related fair value compensation for fiscal 2012:

Name	Grant Date (1)	Date Grant Approved by Board (1)	Estimated Future Payouts Under Non- Equity Incentive Plan Awards			All Other Stock Awards: Number of Shares of Stock or Units (#) (1)	All Other Option Awards: Number of Securities Underlying Options (#) (1)	Exercise or Base Price of Options Awards (\$/ Sh) (2)	Grant Date Fair Value of Stock and Option Awards (\$) (3)
			Threshold (\$)	Target(\$)	Maximum (\$)				
Jong S. Whang	12/15/2011	12/15/2011	\$51,200	\$256,000	\$384,000	18,333	36,667	\$7.98	\$327,777
Fokko Pentinga	12/15/2011	12/15/2011	\$47,175	\$235,875	\$353,813	15,000	85,000	\$7.98	\$540,399
Bradley C. Anderson	12/15/2011	12/15/2011	\$24,778	\$123,888	\$185,831	8,333	16,667	\$7.98	\$148,989
Robert T. Hass	12/15/2011	12/15/2011	\$9,180	\$45,900	\$68,850	2,500	5,000	\$7.98	\$44,697
Jeong Mo Hwang	12/15/2011	12/15/2011	\$9,180	\$45,900	\$68,850	2,500	5,000	\$7.98	\$44,697

- (1) The stock and option awards listed above vest in four (4) equal annual installments commencing on the first anniversary of the date of grant.
- (2) The exercise price is equal to the closing price of the Company's Common Stock on the day before the grant.
- (3) See Stock-Based Compensation under Note 1 to the consolidated financial statements included in our Form 10-K filed December 7, 2012 for the assumptions used to value equity based compensation.

### EQUITY COMPENSATION PLAN INFORMATION

The following table sets forth information regarding grants of plan-based option awards held by our named executive officers as of September 30, 2012:

#### OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

Name	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Options Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock that have Not Vested (\$)
<b>Jong S. Whang</b>	30,000	—	\$6.90	12/8/2016		
	30,000	—	\$14.79	12/6/2017		
	45,000	15,000	\$3.80	12/9/2018		
	10,000	10,000	\$6.15	11/20/2019		
	5,000	5,000	\$10.64	8/6/2020		
	6,667	20,000	\$17.12	11/12/2020		
		36,667	\$7.98	12/15/2021		
					48,333	\$159,982
Fokko Pentinga	3,125	—	\$14.79	12/6/2017		
	12,500	6,250	\$3.80	12/9/2018		
	5,000	5,000	\$6.15	11/20/2019		
	3,334	3,333	\$10.64	8/6/2020		
	5,833	17,500	\$17.12	11/12/2020		
	—	85,000	\$7.98	12/15/2021		
					29,792	\$98,612
<b>Bradley C. Anderson</b>	10,000	—	\$8.51	4/24/2016		
	5,000	—	\$6.90	12/8/2016		
	15,000	—	\$7.30	2/19/2017		
	15,000	—	\$14.79	12/6/2017		
	7,500	7,500	\$3.80	12/9/2018		
	2,500	5,000	\$6.15	11/20/2019		
	2,500	2,500	\$10.64	8/6/2020		
	2,917	8,750	\$17.12	11/12/2020		
—	16,667	\$7.98	12/15/2021			
					18,958	\$62,751
Robert T. Hass	5,000	—	\$6.90	12/8/2016		
	5,000	—	\$14.79	12/6/2017		
	6,750	2,250	\$3.80	12/9/2018		
	1,334	1,333	\$6.15	11/20/2019		
	667	666	\$10.64	8/6/2020		
	333	1,000	\$17.12	11/12/2020		
	—	5,000	\$7.98	12/15/2021		
					6,000	\$19,860
<b>Jeong Mo Hwang</b>	4,020	—	\$5.01	6/25/2019		
	3,333	1,667	\$6.15	11/20/2019		
	1,667	3,333	\$17.12	11/12/2020		
	—	5,000	\$7.98	12/15/2021		
					2,500	\$8,275

## Option Exercises and Stock Vested

The following table shows all stock options exercised and the value realized upon exercise, and all stock awards vested and the value realized upon vesting, by the named executive officers during fiscal 2012, which ended on September 30, 2012.

### OPTION EXERCISES AND STOCK VESTED FOR FISCAL 2012

Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise \$(1)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting \$(2)
Jong S. Whang	—	—	22,084	191,424
Fokko Pentinga	—	—	7,500	66,335
Bradley C. Anderson	—	—	7,084	60,967
Robert T. Hass	—	—	3,042	25,889
Jeong Mo Hwang	—	—	—	—

- (1) The value realized equals the difference between the option exercise price and the fair market value of Amtech common stock on the date of exercise, multiplied by the number of shares for which the option was exercised.
- (2) The value realized equals the fair market value of Amtech common stock on the vesting date, multiplied by the number of shares that vested.

## Pension Benefits

Our Chief Executive Officer is a participant in Pensioenfonds Metaal en Techniek, a multi-employer pension plan that covers our employees in the Netherlands. None of our other named executive officers receive pension benefits.

## Nonqualified Deferred Compensation

None of our named executive officers receive nonqualified deferred compensation benefits.

## EMPLOYMENT AND CHANGE IN CONTROL ARRANGEMENTS

### Employment Agreement with Executive Chairman

On February 2, 2012, we entered into a Second Amended and Restated Employment Agreement with Jong S. Whang, our executive chairman. Below is a summary of the terms and conditions of Mr. Whang's employment agreement.

#### *Term*

Mr. Whang's employment agreement provides for an employment period commencing on the date of the employment agreement and continuing for an initial term of three years. Thereafter, the employment period will continue for successive one-year terms unless either we or Mr. Whang provides written notice of termination of the employment period at least 120 days prior to the end of any given term. If Mr. Whang remains in the full-time employ of our company beyond the employment period without any written agreement, his employment agreement will be deemed to continue



on a month to month basis and either party will have the right to terminate the employment agreement at the end of any ensuing calendar month with written notice of at least 30 days.

#### *Base Salary*

Pursuant to his employment agreement, Mr. Whang receives a base salary of \$400,000 per annum, which base salary shall be reviewed on an annual basis by our Compensation and Stock Option Committee and can be increased, but not decreased below \$350,000, at the discretion of our Compensation and Stock Option Committee. Effective July 1, 2012, Mr. Whang voluntarily reduced his annual salary to \$320,000.

#### *Incentive Compensation*

Mr. Whang is also entitled to an annual cash bonus for each fiscal year that will be determined in accordance with an annual bonus plan adopted by our Compensation and Stock Option Committee. The annual bonus plan may not be any less favorable to Mr. Whang than the bonus plan for fiscal 2010 that was adopted by our Compensation and Stock Option Committee on December 21, 2009. The terms of Mr. Whang's 2010 bonus plan are described above in more detail in the section "Annual Cash Compensation" under the caption "Cash Bonuses".

#### *Stock Options*

Pursuant to Mr. Whang's employment agreement, any currently outstanding options held by Mr. Whang will remain in full force and effect in accordance with our stock option plans and applicable stock option agreements. Mr. Whang will also be issued an annual grant of stock options by our Compensation and Stock Option Committee within 90 days after the end of each fiscal year during his employment period. All of the options granted to Mr. Whang will be incentive stock options within the meaning of the Internal Revenue Code of 1986, or if they do not qualify as incentive stock options, they will be non-qualified stock options. The amount and terms of the grants will be determined by our Compensation and Stock Option Committee, but may not be any less favorable to Mr. Whang than the terms of the options previously granted to Mr. Whang on November 20, 2009.

#### *Benefits*

Mr. Whang will be entitled to receive from our Company such employee benefits as are provided to other executive officers of the Company, including family medical, dental, vision, disability and life insurance, and participation in pension and retirement plans, incentive compensation plans, stock option plans, Company-sponsored welfare benefit plans for disability and life insurance and other benefit plans. We will provide Mr. Whang with an annual automobile allowance of not less than \$14,000 (annual allowance is currently \$18,000), a life insurance policy in the face amount of \$500,000 and such other benefits as we may deem appropriate from time to time.

#### *Termination*

Mr. Whang's employment is "at will" and either we or Mr. Whang can terminate his employment agreement at any time, with or without "cause" or "good reason" (as those terms are defined in Mr. Whang's employment agreement), upon 30 days written notice. Mr. Whang's employment agreement can also be terminated by us due to the disability of Mr. Whang after at least 30 days' written notice by us of our intention to terminate his employment.

#### *Severance*

If we terminate the employment of Mr. Whang against his will and without cause (including by giving notice of termination of his employment agreement as described above), or if Mr. Whang terminates his employment for good reason, Mr. Whang is entitled to receive salary, incentive compensation and vacation accrued through the date of termination, plus (i) an amount equal to Mr. Whang's base salary in effect on the date of termination for the remainder of the initial three-year term or two years, whichever is greater (which, based upon his salary as of September 30, 2012, would have been up to \$960,000, if terminated during the first year of the term, or \$640,000 if terminated after the first year of the term); (ii) an amount equal to the maximum amount of incentive compensation he could earn for the fiscal

year in which the termination occurs; and (iii) full vesting of all outstanding stock options and restricted stock held by Mr. Whang. The value of Mr. Whang's unvested stock options and unvested restricted stock at September 30, 2012 was approximately \$160,000. If Mr. Whang voluntarily terminates his employment other than for good reason, if we terminate Mr. Whang's employment for cause, or if Mr. Whang's employment is terminated due to his death or disability, Mr. Whang will be entitled to receive salary and accrued vacation through the date of termination only. However, in the event Mr. Whang's employment is terminated due to his death or disability, he will also be entitled to receive (i) a pro-rata portion of the amount of incentive compensation he would earn for the fiscal year in which the termination occurs if the results of operations of Amtech for such fiscal year were annualized, and (ii) full vesting of all outstanding stock options and restricted stock held by him.

#### *Post-Employment Consulting*

Mr. Whang's employment agreement provides that upon termination of Mr. Whang against his will and without cause (including by giving notice of termination of his employment agreement as described above), or by Mr. Whang for good reason, for a period of two (2) years following the date of such termination, (i) Mr. Whang will make himself available for an average of 20 hours per week in order to consult with the Company in such manner and on such matters as the Company shall reasonably request, (ii) Mr. Whang will make himself available to serve on the Board of Directors of the Company, and (iii) in consideration for Mr. Whang's agreement to perform such services, the Company will (A) pay Mr. Whang an annual amount equal to 40% of his base salary in effect on the date he was terminated and (B) include Mr. Whang in the Company's family medical, dental and vision insurance plans, or, if Mr. Whang's inclusion in such plans is not permitted, provide substantially the same benefits to the Mr. Whang at the Company's expense.

#### *Noncompetition*

Mr. Whang agreed that during the term of his employment agreement he would not engage in certain activities in which he would be competing with us or our subsidiaries. He also agreed that for a period of two years after the end of the term of his employment agreement he would not engage in certain activities in which he would be competing with us or our subsidiaries and he would not own, directly or indirectly, more than a 5% interest in entities which compete with us or our subsidiaries.

#### *Change in Control*

In the event that Mr. Whang's employment with us is terminated either (i) by us for any reason other than for cause during a "pending change in control" (as that term is defined in Mr. Whang's employment agreement) of our Company or within one year following the occurrence of a "change in control" (as that term is defined in Mr. Whang's employment agreement), or (ii) by Mr. Whang for good reason within one year following the occurrence of a change in control of our Company, then Mr. Whang will be entitled to receive within 30 days of the date of termination of his employment (provided, however, if such 30 day period begins in one calendar year and ends in another calendar year, Mr. Whang will not have the right to designate the calendar year of payment), in lieu of the severance payment otherwise payable, (i) an amount equal to three years of his base salary in effect on the date of termination of his employment, (ii) the maximum amount of the incentive compensation which he could earn for the fiscal year in which the termination occurs, and (iii) full vesting of all outstanding stock options and restricted stock he holds.

#### **Employment Agreement with Chief Executive Officer**

On June 29, 2012, we entered into an Employment Agreement with Fokko Pentinga, our chief executive officer. Below is a summary of the terms and conditions of Mr. Pentinga's employment agreement.

##### *Term*

Mr. Pentinga's employment agreement provides for an employment period commencing on the date of the employment agreement and continuing for an indefinite period as required by Dutch statutory employment law.

##### *Base Salary*

Pursuant to his employment agreement, Mr. Peninga receives a base salary of \$370,000 (€284,310, the euro equivalent on the date Mr. Peninga was promoted to Chief Executive Officer) per annum, which base salary shall be reviewed on an annual basis by our Compensation and Stock Option Committee and can be increased, but not decreased below \$370,000, at the discretion of our Compensation and Stock Option Committee. Effective July 1, 2012, Mr. Peninga voluntarily reduced his annual salary to \$314,500 (€241,664). His salary is paid partially in euros and partially in U.S. dollars depending on where he performs his work.

#### *Incentive Compensation*

Mr. Peninga is also entitled to an annual cash bonus for each fiscal year that will be determined in accordance with an annual bonus plan adopted by our Compensation and Stock Option Committee. The annual bonus plan may not be any less favorable to Mr. Peninga than the bonus plan for fiscal 2012 that was adopted by our Compensation and Stock Option Committee on December 15, 2011. The terms of Mr. Peninga's 2010 bonus plan are described above in more detail in the section "Annual Cash Compensation," under the caption "Cash Bonuses."

#### *Stock Options*

Pursuant to Mr. Peninga's employment agreement, any currently outstanding options held by Mr. Peninga will remain in full force and effect in accordance with our stock option plans and applicable stock option agreements. Mr. Peninga will also be issued an annual grant of stock options by our Compensation and Stock Option Committee within 90 days after the end of each fiscal year during his employment period. All of the options granted to Mr. Peninga will be non-qualified stock options within the meaning of the Internal Revenue Code of 1986.

#### *Benefits*

Mr. Peninga will be entitled to receive from our Company such employee benefits as are provided to other management level employees in his country of domicile (i.e. the Netherlands), including disability and life insurance, and participation in pension and retirement plans, incentive compensation plans, stock option plans, disability and life insurance and other benefit plans. We will provide Mr. Peninga with a leased automobile at a cost of not more than €29,500 and such other benefits as we may deem appropriate from time to time.

#### *Termination*

Either we or Mr. Peninga can terminate his employment agreement with prior written notice of termination given in accordance with Dutch statutory employment law, including observance of the Dutch statutory notice period, or by mutual agreement, or by the Company at any time for cause, as defined in the agreement. Mr. Peninga's employment agreement can also be terminated by us due to the disability of Mr. Peninga after meeting the requirements of Dutch statutory employment law.

#### *Severance*

If we terminate the employment of Mr. Peninga against his will and without cause (including by giving notice of termination of his employment agreement as described above), or if Mr. Peninga terminates his employment for good reason, Mr. Peninga is entitled to receive salary, incentive compensation and vacation accrued through the date of termination, plus (i) an amount equal to Mr. Peninga's base salary in effect on the date of termination for two years, which, based upon his salary and the exchange rate as of September 30, 2012, would have been approximately \$621,320 (€483,328); (ii) an amount equal to the maximum amount of incentive compensation he could earn for the fiscal year in which the termination occurs; and (iii) full vesting of all outstanding stock options and restricted stock held by Mr. Peninga. The value of Mr. Peninga's unvested stock options and unvested restricted stock at September 30, 2012 was approximately \$99,000.

If Mr. Peninga voluntarily terminates his employment other than for good reason, if we terminate Mr. Peninga's employment for cause, or if Mr. Peninga's employment is terminated due to his death or disability, Mr. Peninga will be entitled to receive salary and accrued vacation through the date of termination. In addition, if we terminate Mr.

Pentinga's employment due to disability as a result of his becoming incapacitated as defined in the Dutch Civil Code, Mr. Pentinga will be entitled to 70% of the maximum daily social wage for a maximum of 52 weeks, which would total to approximately \$43,193 (€33,600). However, in the event Mr. Pentinga's employment is terminated due to his death or disability, he will also be entitled to receive (i) a pro-rata portion of the amount of incentive compensation he would earn for the fiscal year in which the termination occurs if the results of operations of Amtech for such fiscal year were annualized, and (ii) full vesting of all outstanding stock options and restricted stock held by him.

#### *Noncompetition*

Mr. Pentinga agreed that during the term of his employment agreement he would not engage in certain activities in which he would be competing with us or our subsidiaries. He also agreed that for a period of two years after the end of the term of his employment agreement he would not engage in certain activities in which he would be competing with us or our subsidiaries and he would not own, directly or indirectly, more than a 5% interest in entities which compete with us or our subsidiaries.

#### *Change in Control*

In the event that Mr. Pentinga's employment with us is terminated either (i) by us for any reason other than for cause during a "pending change in control" (as that term is defined in Mr. Pentinga's employment agreement) of our Company or within one year following the occurrence of a "change in control" (as that term is defined in Mr. Pentinga's employment agreement), or (ii) by Mr. Pentinga for good reason within one year following the occurrence of a change in control of our Company, then Mr. Pentinga will be entitled to receive within 30 days of the date of termination of his employment (provided, however, if such 30 day period begins in one calendar year and ends in another calendar year, Mr. Pentinga will not have the right to designate the calendar year of payment), in lieu of the severance payment otherwise payable, (i) an amount equal to two years of his base salary in effect on the date of termination of his employment, (ii) the maximum amount of the incentive compensation which he could earn for the fiscal year in which the termination occurs, and (iii) full vesting of all outstanding stock options and restricted stock he holds.

### **Change of Control Agreement with Chief Financial Officer**

On March 10, 2008, we entered into a Change of Control Severance Agreement with Bradley C. Anderson, our chief financial officer. Below is a summary of the terms and conditions of the agreement.

#### *Term*

The term of the agreement with Mr. Anderson commenced on March 10, 2008 and continues for an initial term of three years. Thereafter, the employment period will continue for successive one-year terms unless either we or Mr. Anderson provides written notice of termination of the employment period at least 120 days prior to the end of any given term.

#### *Change in Control*

In the event that Mr. Anderson's employment with us is terminated (other than as a consequence of death or disability) either (i) by us for any reason other than for cause during a "pending change in control" (as the term is defined in Mr. Anderson's change of control agreement) or within one year following the occurrence of a "change in control" (as the term is defined in Mr. Anderson's change of control agreement), or (ii) by Mr. Anderson for good reason within one year following the occurrence of a change in control, then Mr. Anderson will be entitled to receive from the Company the following: (i) an amount equal to two years of his base salary in effect on the date of termination of his employment (or \$450,500, based upon his salary as of September 30, 2012); (ii) the maximum amount of the incentive compensation which he could earn for the fiscal year in which the termination occurs; and (iii) full vesting of all outstanding stock options and restricted stock he holds. The value of Mr. Anderson's unvested stock options and unvested restricted stock at September 30, 2012 was approximately \$63,000.

### **Change of Control and Severance Agreement with Chief Accounting Officer**

On March 11, 2010, we entered into an Amended and Restated Change in Control and Severance Agreement with Robert T. Hass, our chief accounting officer. In the event that Mr. Hass's employment with us is terminated (other than as a consequence of death or disability) either (i) by us for any reason other than for cause during a "pending change in control" (as the term is defined in Mr. Hass's agreement) or within one year following the occurrence of a "change in control" (as the term is defined in Mr. Hass's agreement), or (ii) by Mr. Hass for good reason within one year following the occurrence of a change in control, then Mr. Hass will be entitled to receive from the Company the following: (i) an amount equal to one year of his base salary in effect on the date of termination of his employment (or \$153,000, based upon his salary as of September 30, 2012); (ii) an amount equal to the amount of accrued but unpaid incentive compensation earned by Mr. Hass as of the date of termination, prorated for the year in which the termination occurs and calculated through the end of the last full month prior to the date of termination with a proportionate adjustment to all caps and floors, if any, based upon the portion of the fiscal year worked prior to the termination; and (iii) full vesting of all outstanding stock options and restricted stock he holds. The value of Mr. Hass's unvested stock options and unvested restricted stock at September 30, 2012 was approximately \$20,000.

### **Change of Control and Severance Agreement with Chief Technology Officer**

On April 25, 2011, the Company entered into a Change of Control and Severance Agreement with Dr. Hwang. In the event that Dr. Hwang's employment with the Company is terminated (other than as a consequence of death or disability) either (i) by the Company for any reason other than for cause during a "pending change in control" (as the term is defined in Dr. Hwang's agreement) or within one year following the occurrence of a "change in control" (as the term is defined in Dr. Hwang's agreement), or (ii) by Dr. Hwang for good reason within one year following the occurrence of a change in control, then Dr. Hwang will be entitled to receive from the Company the following: (i) an amount equal to one year of his base salary in effect on the date of termination of his employment (or \$153,000, based upon his salary as of September 30, 2012); (ii) an amount equal to the amount of accrued but unpaid incentive compensation earned by Dr. Hwang as of the date of termination, prorated for the year in which the termination occurs and calculated through the end of the last full month prior to the date of termination with a proportionate adjustment to all caps and floors, if any, based upon the portion of the fiscal year worked prior to the termination; and (iii) full vesting of all outstanding stock options and restricted stock he holds. The value of Dr. Hwang's unvested stock options and unvested restricted stock at September 30, 2012 was approximately \$8,000.

### **Other Compensatory Arrangements**

On December 11, 2012, the Compensation and Stock Option Committee approved annual base compensation for its executive officers for calendar year 2013 as follows: (i) Jong S. Whang, the Company's Executive Chairman and Chairman of the Board, \$320,000; (ii) Fokko Pentinga, the Company's President and Chief Executive Officer, \$314,500 (which salary will be paid in Euros based upon the exchange rate in effect as of December 17, 2010); (iii) Bradley C. Anderson, the Company's Executive Vice President—Finance and Chief Financial Officer, \$225,250; (iv) Robert T. Hass, the Company's Chief Accounting Officer, \$153,000 and (v) Jeong Mo Hwang, the Company's Chief Technology Officer, \$153,000. In addition, the Compensation Committee approved car allowances of \$18,000 per year for Mr. Whang, €29,500 per year for Mr. Pentinga, \$10,000 per year for Mr. Anderson and \$7,000 per year for Mr. Hass and Dr. Hwang.

On December 11, 2012, the Compensation and Stock Option Committee also approved stock options to purchase 50,000, 50,000, 40,000, 12,500 and 15,000 shares for Mr. Whang, Mr. Pentinga, Mr. Anderson, Mr. Hass and Dr. Hwang, respectively. Each of the options granted has an exercise price of \$2.95 (the closing price of Amtech common stock on December 10, 2012). The options expire ten years from the date of grant and vest 25% per year on the first through fourth anniversaries of the grant date.

### **Compensation Policies and Practices as Related to Risk Management**

The Compensation and Stock Option Committee does not believe the Company's compensation policies and practices create risks that are reasonably likely to have a material adverse effect on the Company. The Compensation



and Stock Option Committee has determined that the Company's executive compensation program does not encourage unnecessary or excessive risk taking as a result of the following factors:

- As discussed elsewhere in this Proxy Statement, our executive officer compensation includes a balanced mix of cash and equity.
- Base salaries do not encourage risk taking as they are fixed in amount.
- Performance-based cash bonus awards under the non-equity incentive plan focus on achievement of short-term or annual goals. Although this may seem to encourage the taking of short-term risks at the expense of long-term results, these bonuses in actuality represent only a portion of the executive officers' total compensation opportunities, and the Compensation and Stock Option Committee believes that the non-equity incentive plan awards appropriately balance risk and the desire to focus executives on specific short-term individual and financial goals important to the Company's success.
- Discretionary cash bonuses are awarded at the discretion of the Compensation and Stock Option Committee, which allows the Compensation and Stock Option Committee to evaluate whether the executives are engaging in activities that create risks prior to awarding any such cash bonuses. This discretion mitigates the likelihood that executives will engage in activities that create risk, and allows the Compensation and Stock Option Committee the ability to refrain from rewarding any such risk-taking.
- Compensation provided to the executive officers in the form of long-term equity awards is important to help further align executives' interests with those of the Company's shareholders. The Compensation and Stock Option Committee believes that these awards do not encourage unnecessary or excessive risk taking because the ultimate value of the awards is tied to the Company's stock price over the long-term. In addition, the awards are subject to long-term vesting schedules to help ensure that executives have significant value tied to long-term stock price performance.

## AUDIT COMMITTEE REPORT

In accordance with its written charter adopted by our Board of Directors on January 12, 2012, a copy of which is available on the Company's website at [www.amtechsystems.com](http://www.amtechsystems.com), the Audit Committee is responsible for reviewing and discussing the audited financial statements with management, discussing with the Company's auditors information relating to the auditors' judgments about the quality of the Company's accounting practices, recommending to our Board of Directors that the Company include the audited financial statements in its Annual Report on Form 10-K and overseeing compliance with the requirements of the SEC for disclosure of auditors' services and activities.

The Board of Directors annually reviews the independence of the Audit Committee members in view of FINRA's listing standards' and the SEC's definitions of independence for audit committee members. The Board has determined that each of the members of the Audit Committee meets those definitions and standards. Additionally, each member of the Audit Committee is financially literate, and one of the Audit Committee members, Michael Garnreiter, has financial management expertise as required by NASDAQ's rules and meets the SEC's definition of an "audit committee financial expert."

Management is responsible for the preparation, presentation and integrity of the Company's financial statements, accounting and financial reporting principles, internal controls, and procedures designed to ensure compliance with accounting standards and applicable laws and regulations. The Company's independent auditors are responsible for performing an independent audit of the consolidated financial statements and expressing an opinion on the conformity of those financial statements with generally accepted accounting principles.

The Audit Committee meets regularly with the independent accountants without management present and also meets in executive session without any others present. The Audit Committee has reviewed the Company's consolidated financial statements for the fiscal year ended September 30, 2012, as audited by its independent auditors, Mayer Hoffman, and has discussed these financial statements with management. In addition, the Audit Committee has discussed with Mayer Hoffman the matters required to be discussed by the statement on Auditing Standards No. 61, as amended (AICPA, Professional Standards, Vol. 1 AU section 380), as adopted by the Public Company Accounting Oversight Board in Rule 3200T. Furthermore, the Audit Committee has received the written disclosures and the letter from Mayer Hoffman required by applicable requirements of the Public Company Accounting Oversight Board regarding Mayer Hoffman's communications with the Audit Committee concerning independence and has discussed with Mayer Hoffman its independence.

Based upon the foregoing review and discussion, the Audit Committee recommended to our Board of Directors that the audited financial statements for the fiscal year ended September 30, 2012 be included in the Company's Annual Report on Form 10-K for filing with the SEC.

RESPECTFULLY SUBMITTED,

Michael Garnreiter, Chairman  
Alfred W. Giese  
Robert F. King

## PRE-APPROVAL POLICY

In March 2008, the Audit Committee adopted a Pre-Approval Policy (the "Policy") governing the approval of all audit and non-audit services performed by the Company's independent auditor in order to ensure that the performance of such services does not impair the auditor's independence.

According to the Policy, the Audit Committee will annually review and pre-approve the types of services, and will set a limit on the fees for such services, that may be provided by the independent auditor during the following year. The Policy specifically describes the annual audit services and fees, other services that are audit-related, the preparation of tax returns and tax related compliance services and all other services that have the general pre-approval of the Audit

Committee. The term of any general pre-approval is twelve (12) months from the date of pre-approval, unless the Audit Committee specifically provides for a different period.

Any service to be provided by the independent auditor that has not received general pre-approval under the Policy is required to be submitted to the Audit Committee for approval prior to the commencement of a substantial portion of the engagement. Any proposed service exceeding pre-approved cost levels is also required to be submitted to the Audit Committee for specific approval. For the years ended September 30, 2011 and 2012, all services rendered by the Company's independent auditors were pre-approved by the Audit Committee pursuant to the pre-approval Policy.

The Audit Committee will revise the list of general pre-approved services from time to time based on subsequent determinations. The Audit Committee does not delegate its responsibilities to pre-approve services performed by the independent auditor to management.

## DISCLOSURE OF AUDIT AND NON-AUDIT FEES

The following table sets forth the fees billed to us by our independent auditors for services rendered for the audit of our annual financial statements and the review of our quarterly financial statements for the fiscal years ended September 30, 2012 and 2011, and fees billed during those fiscal years for (i) services by our auditor that are reasonably related to the performance of the audit or review of our financial statements and that are not reported as audit fees, (ii) services rendered in connection with tax compliance, tax advice and tax planning, and (iii) all other fees for services rendered.

	Year Ended Sept. 30, 2012	Year Ended Sept. 30, 2011
Audit Fees (1)	\$ 441,011	\$ 502,472
Audit-Related Fees (2)	17,771	187,490
Tax Fees	—	—
All Other Fees	—	—
<b>Total Fees</b>	<b>\$ 458,782</b>	<b>\$ 689,962</b>

- (1) Annual audit and review of financial statements included in the Company's reports on Form 10-Q and Form 10-K, including an audit of the Company's internal control over financial reporting, and services normally provided by the auditors in connection with statutory and regulatory filings.
- (2) Consists primarily of assurance services related to the legal restructure of operations in The Netherlands and services related to filing of SEC registration statements.

## CODE OF ETHICS

The Board of Directors has adopted a Code of Ethics for all employees of the Company, as recommended by the Nominating and Governance Committee. A copy of this Code of Ethics may be viewed on our website ([www.amtechsystems.com](http://www.amtechsystems.com)), or obtained at no charge by written request to the Company's Corporate Secretary.

## CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

We had no transactions during fiscal 2012, nor are any transactions currently proposed, with any director, director nominee, executive officer, security holder known to us to own of record or beneficially more than 5% of the common stock, or any member of the immediate family of any of the foregoing persons, in which the amount involved exceeded \$120,000.

The policy of the Board is for it, or one of its committees, to review each related person transaction (as defined below) and determine whether it will approve or ratify that transaction. Any Board member who has any interest (actual or perceived) will not be involved in the consideration of Directors.

For purposes of the policy, a “related person transaction” is any transaction, arrangement or relationship in which we are a participant, the related person (defined below) had, has or will have a direct or indirect material interest and the aggregate amount involved is expected to exceed \$120,000 in any calendar year. “Related person” includes (a) any person who is or was (at any time during the last fiscal year) an officer, director or nominee for election as a director; (b) any person or group who is a beneficial owner of more than 5% of our voting securities; (c) any immediate family member of a person described in provisions (a) or (b) of this sentence; or (d) any entity in which any of the foregoing persons is employed, is a partner or has a greater than 5% beneficial ownership interest.

In determining whether a related person transaction will be approved or ratified, the Board, or committee, will consider a multitude of factors including (a) the extent of the related person’s interest in the transaction; (b) the availability of other sources of comparable products or services; (c) whether the terms are competitive with terms generally available in similar transactions with persons that are not related persons; (d) the benefit to us; and (e) the aggregate value of the transaction.

### SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information concerning the beneficial ownership of our common stock as of January 10, 2013, by (i) each director and executive officer of Amtech, including the named executive officers, (ii) all executive officers and directors of Amtech as a group. The information included in the tables below was determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934, as amended, and is based upon the information furnished by the persons listed below. Except as otherwise indicated, each shareholder listed possesses sole voting and investment power with respect to the shares indicated as being beneficially owned.

Name and Address (1) (2)	No. of Shares of Common Stock Beneficially Held (3)	Percent of Common Stock Ownership (3)
<b>Officers and Directors:</b>		
Jong S. Whang	258,113 (4)	2.7%
<b>Fokko Pentinga</b>	<b>93,959 (5)</b>	<b>1.0%</b>
Bradley C. Anderson	120,766 (6)	1.3%
<b>Robert T. Hass</b>	<b>34,042 (7)</b>	<b>*</b>
Michael Garnreiter	21,333 (8)	*
<b>Alfred W. Giese</b>	<b>17,686 (9)</b>	<b>*</b>
Egbert J. G. Goudena	18,333 (10)	*
<b>Jeong Mo Hwang</b>	<b>14,853 (11)</b>	<b>*</b>
Robert F. King	35,333 (12)	*
<b>Director and Officer Total (9 people)</b>	<b>614,418 (13)</b>	<b>6.4%</b>

\*Less than 1%.

(1) The address for each person listed in this table is c/o Amtech Systems, Inc., 131 South Clark Drive, Tempe, Arizona 85281.

- (2) Mr. Whang is our Executive Chairman and Chairman of the Board of Directors. Mr. Pentinga is our President and CEO and is a director. Mr. Anderson is our Executive Vice President-Chief Financial Officer, Treasurer and Secretary. Mr. Hass is our Vice President and Chief Accounting Officer. Dr. Hwang is our Vice President and Chief Technology Officer. Messrs. Garnreiter, Giese, Goudena and King are directors of Amtech.
- (3) Based on 9,539,234 shares of common stock outstanding as of January 10, 2013. The share amounts and percentages shown include shares of common stock actually owned as of January 10, 2013, and shares of common stock with respect to which the person had the right to acquire beneficial ownership within 60 days of such date pursuant to options or warrants. All shares of common stock that the identified person had the right to acquire within 60 days of January 10, 2013, upon the exercise of options or warrants, are deemed to be outstanding when computing the percentage of the securities owned by such person, but are not deemed to be outstanding when computing the percentage of the securities owned by any other person.
- (4) Includes 176,250 shares issuable upon exercise of options exercisable within 60 days of January 10, 2013.
- (5) Includes 75,209 shares issuable upon exercise of options exercisable within 60 days of January 10, 2013.
- (6) Includes 86,667 shares issuable upon exercise of options exercisable within 60 days of January 10, 2013.
- (7) Includes 24,875 shares issuable upon exercise of options exercisable within 60 days of January 10, 2013.
- (8) Includes 21,333 shares issuable upon exercise of options exercisable within 60 days of January 10, 2013.
- (9) Includes 16,166 shares issuable upon exercise of options exercisable within 60 days of January 10, 2013.
- (10) Includes 11,333 shares issuable upon exercise of options exercisable within 60 days of January 10, 2013.
- (11) Includes 14,228 shares issuable upon exercise of options exercisable within 60 days of January 10, 2013.
- (12) Includes 25,333 shares issuable upon exercise of options exercisable within 60 days of January 10, 2013.
- (13) Includes 451,395 shares issuable upon exercise of options exercisable within 60 days of January 10, 2013.

Based on information received by the Company as of January 10, 2013, there are no shareholders who are beneficial owners of more than 5% of our common stock.

#### **Section 16(a) Beneficial Ownership Reporting Compliance**

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires the Company's directors and executive officers, as well as persons beneficially owning more than 10% of our outstanding Common Stock, to file certain reports of ownership with the SEC within specified time periods. Such officers, directors and shareholders are also required by SEC rules to furnish the Company with copies of all Section 16(a) forms they file.

Based solely on our review of such forms received by us during the fiscal year ended September 30, 2012, or written representations from certain reporting persons, we believe that between October 1, 2011 and September 30, 2012, all Section 16(a) filing requirements applicable to its officers, directors and 10% shareholders were complied with.

## **PROPOSAL NO. 2 -- TO APPROVE THE RATIFICATION OF THE INDEPENDENT REGISTERED PUBLIC ACCOUNTANTS**

The Audit Committee has selected the independent registered public accounting firm Mayer Hoffman McCann P.C. to audit our financial statements for the fiscal year ending September 30, 2013, and is seeking ratification of that choice by our shareholders. Regardless of whether the selection is ratified, the Audit Committee is responsible for the selection and ongoing oversight of the auditors and has the authority to replace Mayer Hoffman as the auditors for the 2013 fiscal year, if it deems it appropriate to do so. Any such change subsequent to the Annual Meeting will not be submitted to the shareholders for ratification.

The Board of Directors anticipates that one or more representatives of Mayer Hoffman will be present at the Annual Meeting. Any such representative will have an opportunity to make a statement if they so desire and will be available to respond to appropriate questions.

## **PROPOSAL NO. 3 -- ADVISORY VOTE TO APPROVE NAMED EXECUTIVE OFFICER COMPENSATION**

We are seeking an advisory vote from our shareholders to approve the compensation of our named executive officers. This proposal, commonly known as a "Say on Pay" proposal, gives our shareholders the opportunity to express their views on the compensation of our named executive officers.

Our Compensation and Stock Option Committee establishes our general compensation policies and specific compensation for each of our executive officers, and administers our equity incentive compensation program. Our Compensation and Stock Option Committee is responsible for developing, administering and interpreting the compensation program for executive officers and other key employees.

Our Compensation and Stock Option Committee's objective is to make the compensation packages of our executive officers sufficient to attract and retain persons of exceptional quality and to provide effective incentives to motivate and reward our executives for achieving our financial and strategic goals, which are essential to our long-term success and growth in shareholder value.

Our compensation programs for our named executive officers are designed to achieve the following objectives:

- attract and retain talented and experienced executives in our industry;
- motivate and reward executives whose knowledge, skills and performance are critical to our success;
- align the interests of our executives and shareholders by rewarding executives when shareholder value increases; and
- motivate our executives to manage our business to meet our short-term and long-term corporate goals and business objectives, and reward them for meeting these objectives.

We use a mix of short-term compensation in the form of base salaries and cash incentive bonuses and long-term compensation in the form of equity incentive compensation to provide a total compensation structure that is designed to encourage our executives to achieve these objectives.

Shareholders are urged to read the Compensation Discussion and Analysis section of this Proxy Statement and the tabular disclosure regarding named executive officer compensation (together with the accompanying narrative disclosure) in this Proxy Statement, which discusses how our compensation policies and procedures implement our compensation philosophy. The Compensation and Stock Option Committee and the Board of Directors believe that these policies and procedures are effective in implementing our compensation philosophy and in achieving its goals.

The Board of Directors believes that the compensation of our named executive officers is appropriate and recommends a vote FOR the following advisory resolution:

RESOLVED, that the shareholders approve, on an advisory basis, the compensation of the Company's named executive officers, as disclosed pursuant to the compensation disclosure rules of the SEC (which disclosure includes the Compensation Discussion and Analysis, the compensation tables and any related material).

Although the advisory vote is non-binding, the Compensation and Stock Option Committee and the Board of Directors will review the results of the vote. The Compensation Committee will consider our shareholders' concerns and take them into account in future determinations concerning our executive compensation program. The Board of Directors therefore recommends that you indicate your support for the compensation policies and procedures for our named executive officers, as outlined in the above resolution.

## OTHER MATTERS

### Annual Report

The Annual Report of the Company for the fiscal year ended September 30, 2012, is enclosed herewith.

### Voting By Proxy

In order to ensure that your shares will be represented at the Annual Meeting, please sign and return the enclosed proxy in the envelope provided for that purpose, whether or not you expect to attend. Any shareholder may, without affecting any vote previously taken, revoke a written proxy by delivering to our executive offices, to the attention of our corporate Secretary prior to the vote at the Annual Meeting, written notice of revocation or a duly executed proxy bearing a later date, or by attending the Annual Meeting and voting in person.

### Independent Auditors

Our Board of Directors selected the accounting firm of Mayer Hoffman McCann P.C. as the Company's independent registered public accountants for the fiscal year ending September 30, 2012 and expects to reappoint them for the fiscal year ending September 30, 2013, immediately following the Annual Meeting. A representative of Mayer Hoffman is expected to be present at the Annual Meeting and will have the opportunity to make a statement if he or she so desires, and will also be available to respond to appropriate questions.

### Deadline for Shareholder Proposals for Action at the Company's Next Annual Meeting

The Company anticipates holding its 2014 Annual Meeting of Shareholders on March 6, 2014. Any shareholder who wishes to present any proposal for shareholder action at the 2014 Annual Meeting of Shareholders must, in addition to complying with any other applicable requirements, including, without limitation, those set forth in Rule 14a-8 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), submit notice of such proposal to the Company's Secretary, at the Company's offices, not later than September 25, 2013, in order to be included in the Company's proxy statement and form of proxy for that meeting. Such proposals should be addressed to the Corporate Secretary, Amtech Systems, Inc., 131 South Clark Drive, Tempe, Arizona 85281. If a shareholder proposal is introduced at the 2014 Annual Meeting of Shareholders without any discussion of the proposal in the Company's proxy statement, and the shareholder does not notify the Company on or before December 9, 2013, as required by SEC Rule 14(a)-4(c)(1), of the intent to raise such proposal at the Annual Meeting of Shareholders, then proxies received by the Company for the 2014 Annual Meeting will be voted by the persons named in such proxies in their discretion with respect to such proposal. Notice of such proposal is to be sent to the above address.

### Shareholder Communications with Board of Directors

The Company does not have formal procedures for shareholder communications with the Board of Directors. However, any matter intended for the Board of Directors or any Board Committee should be directed to the Corporate Secretary of the Company at 131 South Clark Drive, Tempe, Arizona 85281, with a request to forward the same to the intended recipient. All shareholder communications delivered to the Corporate Secretary of the Company for forwarding to the Board of Directors or specified Board members will be forwarded in accordance with the shareholder's instructions.

### NO INCORPORATION BY REFERENCE

In our filings with the SEC, information is sometimes "incorporated by reference." This means that we refer you to information previously filed with the SEC that should be considered as part of the particular filing. As provided under SEC regulations, the "Audit Committee Report" and the "Compensation Committee Report" contained in this Proxy Statement specifically are not incorporated by reference into any other filings with the SEC and shall not be deemed to be "Soliciting Material." In addition, this Proxy Statement includes several website addresses. These website addresses are intended to provide inactive, textual references only. The information on these websites is not part of this Proxy Statement.



## HOUSEHOLDING OF PROXY MATERIALS

The Securities and Exchange Commission permits companies and intermediaries (i.e., brokers) to satisfy the delivery requirements for proxy statements with respect to two or more security holders sharing the same address by delivering a single proxy statement addressed to those security holders. This process, which is commonly referred to as "householding," potentially means extra convenience for security holders and cost savings for companies.

If you are currently receiving multiple copies of the Company's Proxy Statement and Annual Report at your address and would like to request householding of your communications, please contact your broker. Once you have elected householding of your communications, householding will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in householding, and would prefer to receive a separate Proxy Statement and Annual Report, please notify your broker if you own shares in street name, or direct your written request to Amtech Systems, Inc., 131 South Clark Drive, Tempe, Arizona 85281, Attn: Secretary if you are a shareholder of record. Shareholders currently participating in householding may request additional copies of the Proxy Statement and Annual Report by contacting the Company at (480) 967-5146.

By Order of the Board of Directors:

A handwritten signature in black ink, appearing to read "Bradley C. Anderson", with a long horizontal flourish extending to the right.

Bradley C. Anderson, Secretary

Tempe, Arizona  
January 23, 2013

Dear Shareholders,

In 2012 world-wide installations of solar power are estimated to have reached a record total of 30 gigawatts. The cost of solar power has reached historic lows and is expanding in all regions of the world. At Amtech, we believe in solar as an important component of future global energy solutions and we see the continued growth in solar installations as a leading indicator of future opportunities. The solar industry continues to be under pressure with a supply-and-demand imbalance that is affecting all industry participants. However, the strongest are managing through this challenging time and Amtech, as a leading technology solutions provider, continues to invest for the long term.

The financial results for 2012 were disappointing and reflect the current supply-and-demand imbalance in the solar market which we see continuing into 2013. However, our semiconductor business made a solid contribution in 2012, and we made selective investments in advancing our technologies while streamlining our global operations to best align with the challenging environment. We have aggressively managed our costs with current customer demand and have cut spending, including non-essential research-and-development costs. We believe our aggressive actions during the downturn not only position the company to sustain itself through the cycle but, importantly, provide us with the opportunity to continue to invest in next generation technology solutions for the marketplace.

In 2012, in collaboration with our tier-one customers and well-respected research institutes, we continued to advance our products and technologies, including our solar ion implanter, new batch PECVD and N-type technologies. In May, after only a little over a year of development time, our China subsidiary, Kingstone Semiconductor, introduced its ion implant system at the 6<sup>th</sup> annual International Solar Industry and Photovoltaic Exhibition in Shanghai. Additionally, our subsidiary Tempress Systems introduced its new tube-type batch PECVD product. These new product introductions respond to the solar industry's goal and, more specifically, our customers' goal to obtain higher levels of solar-cell efficiency at a lower total cost of ownership. These technologies significantly expand Amtech's addressable market and product portfolio and present new solutions to

our customers to meaningfully advance their production capabilities.

Tempress Systems was pleased to announce it had been honored with "The WNF Cleantech Star 2012" award by the World Wide Fund for Nature The Netherlands (WNF) during the third WNF Clean Tech Symposium in Rotterdam. The Cleantech Award is given to the most promising and distinctive company in the field of sustainable clean energy in the Netherlands.

In 2013, our objectives are to:

- Continue to collaborate with our industry-leading customers and research partners
- Stay ahead on technology as we further develop our products
- Maintain our leadership position in our existing markets
- Prudently expand our product portfolio and market
- Stay current with our customers at all times
- Enhance the long-term value of our company for all stakeholders

There is work to be done, opportunities to develop and, as a proven provider of leading-edge, next generation solar technology solutions, we enthusiastically look forward to playing an important role in the growth of the solar energy industry.

Sincerely,



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



Fokko Pentinga  
Chief Executive Officer and President

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

FORM 10-K

(Mark  
One)

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

For the fiscal year ended: **September 30, 2012**

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

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

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

Indicate by check mark whether the registrant has submitted electronically 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).  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, 2012, the aggregate market value of the voting and non-voting stock held by non-affiliates of the registrant was approximately \$78,024,000, based upon the closing sales price reported by the NASDAQ Global Market on that date.

As of November 12, 2012, the registrant had outstanding 9,483,588 shares of Common Stock, \$0.01 par value.

#### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Definitive Proxy Statement related to the registrant's 2012 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, 2012, are incorporated by reference into Items 10-14 of Part III of this Form 10-K.

# AMTECH SYSTEMS, INC. AND SUBSIDIARIES

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## **FORWARD-LOOKING STATEMENTS**

Certain information contained or incorporated by reference in this Annual Report on Form 10-K is forward-looking in nature. All statements included or incorporated by reference in this Annual Report on Form 10-K, or made by management of Amtech Systems, Inc. and its subsidiaries (“the Company” or “Amtech”), other than statements of historical fact, are hereby identified as “forward-looking statements” (as such term is defined in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended). Examples of forward-looking statements include statements regarding Amtech's future financial results, operating results, business strategies, projected costs, products under development, competitive positions and plans and objectives of the Company and its management for future operations. In some cases, forward-looking statements can be identified by terminology such as “may,” “will,” “should,” “would,” “expects,” “plans,” “anticipates,” “intends,” “believes,” “estimates,” “predicts,” “potential,” “continue,” or the negative of these terms or other comparable terminology. Any expectations based on these forward-looking statements are subject to risks and uncertainties and other important factors, including those discussed in the section entitled “ITEM 1A. RISK FACTORS.” These and many other factors could affect Amtech's future operating results and financial condition, and could cause actual results to differ materially from expectations based on forward-looking statements made in this document or elsewhere by Amtech or on its behalf.

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

## **PART I**

### **ITEM 1. BUSINESS**

#### **OUR COMPANY**

We are a leading global provider of thermal processing and deposition systems, including related automation, parts and services for the solar / photovoltaic, semiconductor, silicon wafer and microelectromechanical systems (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 thermal processes, deposition and ion implant equipment for solar cell manufacturing, which we believe, collectively, are the keys to driving increased efficiency, lowering cost. The markets we serve are experiencing rapid technological advances and are, historically, cyclical. Therefore, future profitability and growth depend on our ability to develop or acquire and market profitable new technology products, and on our ability to adapt to cyclical trends.

We believe our product portfolio, developed through a track record of technological innovation as well as the successful integration of key acquisitions, reduces the cost of solar cell manufacturing by increasing solar cell efficiency, increasing throughput and increasing yields. We have been providing manufacturing solutions to the semiconductor industry for over 30 years and have leveraged our semiconductor technology and industry presence to capitalize on growth opportunities in the solar industry. Our customers use our equipment to manufacture solar cells, semiconductors, silicon wafers and MEMS, which are used in end markets such as solar power, telecommunications, consumer electronics, computers, automotive and mobile hand-held devices. Through our acquisition in 2011 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.

For fiscal 2012, we recognized net revenue of \$82 million, which included \$44 million of solar revenue or approximately 54% of our total revenue. These results compare to \$247 million of net revenue for fiscal 2011, which included \$212 million of solar revenue or approximately 86% of our total revenue. Our order backlog as of September 30, 2012 and 2011 was \$19 million and \$86 million, respectively, a 78% decrease. Our backlog as of September 30, 2012 included approximately \$14 million of orders and deferred revenue from our solar industry customers compared to \$71 million from our solar industry customers as of September 30, 2011. 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 \$13 million during fiscal 2012, compared to \$199 million and \$162 million in fiscal 2011 and 2010, respectively. The solar book to bill ratio for fiscal years 2012 and 2011 was 0.5:1 and 0.9:1, respectively. Our order pipeline has slowed due mainly to a worldwide overcapacity of solar cell production. The pipeline is also negatively influenced by 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 more than 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, increasing yields, 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.

***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 2012, Asian customers represented 66% 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, while also expanding sales into the semiconductor market.
- 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 Tempress annealing expertise 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 Chairman, Jong S. Whang, has over 39 years of industry experience, including 31 years with Amtech and our Chief Executive Officer and 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 19 Ph.D.'s.

**Financial Strength and Stability.** We have a strong balance sheet, with significant liquidity and no debt. Our conservative approach to capital structure and liquidity have contributed to our ability to successfully serve the cyclical semiconductor and solar industries for over 30 years. As a result, our customers are confident that they can depend on us as a long-term supplier and strategic partner.

## GROWTH STRATEGY

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

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

**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, ion implant and PECVD systems. Our N-type technology has been developed through a three-party research collaboration agreement with the Energy Research Centre of the Netherlands, or ECN, a leading solar research center in Europe and Yingli Green Energy Holding Company Limited, or Yingli, one of the world's leading vertically integrated 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. In 2012, we launched our tube-type PECVD system.

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 an immature market where demand and supply have not yet developed. The market is characterized by short-term periods of rapid capacity expansion followed by periods of rapid contraction in our customers' capital spending. When actual and expected end-user demand outstrips available capacity, this triggers the beginning of the next period of expansion.

**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 utilization of capacity for most semiconductors, including microprocessors, memory, power management chips and other logic devices. Unlike the solar market, the cyclical nature of the semiconductor market is primarily driven by a lack of demand. When capacity utilization decreases due to the addition of excess capacity, semiconductor manufacturers typically slow their purchasing of capital equipment. Conversely, when capacity utilization increases, so does capital spending.

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

## **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, Tempres 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  $\text{POCl}_3$ , boron tribromide, or  $\text{BBR}_3$ , low-pressure chemical vapor deposition, or LPCVD, oxidation, and annealing.

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

**Automation Products - Solar.** Our automation technology products are used in several of the diffusion steps and in the anneal processing step of solar cell manufacturing. Our R2D Automation equipment includes mass wafer transfer

systems, sorters, long-boat transfer systems, load station elevators, buffers and conveyers. We use a vacuum technology in our Comet Standalone and our Comet Full Automation solar wafer transfer systems designed to ensure high throughput, reduced breakage and thereby increased yield.

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

**Solar Ion Implant.** Kingstone is developing an ion implant system specifically designed for the solar industry, which will contribute to higher efficiencies at a lower cost of ownership.

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

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

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

## **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 450mm in diameter, and other fragile materials or where contamination is an issue, because they provide the advantages of steel carriers while reducing the potential for damage to the edges of such sensitive materials. Our insert carriers are used for double-sided lapping or polishing of wafers up to 450mm in diameter.

**Semiconductor Polishing Templates.** Our polishing templates are used to securely hold sapphire or other wafer materials in place during single-sided polishing processes. Polishing templates are customized for specific applications and are manufactured to exacting tolerances. We manufacture polishing templates for most brands of tools and various processes.

In addition to silicon wafers, these products are used in polishing silicon carbide wafers and sapphire crystals used in LEDs.

***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 and related automation 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 for specific applications and to meet the increasingly tight tolerances required by our customers. Many items, such as proprietary components for our solar and semiconductor equipment and lapping plates, are also purchased from suppliers who manufacture these items to our specifications.

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

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

## **RESEARCH, DEVELOPMENT AND ENGINEERING**

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

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 expenditures (net of grants earned) that have been accounted

for as research and development were \$13.7 million (16.8% of net revenue) for fiscal 2012, \$5.8 million (2.3% of net revenue) for fiscal 2011, and \$2.1 million (1.8% of net revenue) for fiscal 2010.

## 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
Heating element wire spacer	United States	January 17, 2026
RFID use in carrier products	United States	Pending
Charge control of solar passivation layers	Europe	Pending
Charge control of solar passivation layers	United States	Pending
Systems and methods for charging solar cell layers	United States	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 S-300	United States	March 21, 2021
IBAL Model E-300	United States	July 13, 2021
Lapping Machine adjustable mechanism	United States	February 15, 2027
Lapping Machine	Germany	Pending
Lapping Machine	Japan	Pending
System and method of ion implantation	United States (2)	March 18, 2030
System and method of ion implantation	United States	Pending
System and method of ion implantation	China (11)	Pending
Ion beam transportation	China (6)	Pending
Wafer handling	China (2)	Pending
System and method of high voltage power supply	China	Pending
System and method of making solar cells	China (11)	Pending
Vacuum chamber apparatus and method of moving objects within vacuum	China (6)	Pending
Method of making and transporting SiC layer	China (2)	Pending
Device for repairing heating wire	The Netherlands	January 18, 2025
Device for repairing heating wire	Germany	January 17, 2026
Photovoltaic cell and method to produce photovoltaic cell	The Netherlands	November 18, 2030
Method for producing semiconductor device	Taiwan	November 18, 2030
Method for manufacturing a solar cell	The Netherlands	Pending
CVD system	Europe	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 2012, 87% of our net revenue came from customers outside of North America. This group represented 94% of revenues in fiscal 2011. In fiscal 2012, net revenue was distributed among customers in different geographic regions as follows: North America 13% (all of which is in the United States), Asia 66% (including 43% to China and 9% to Taiwan) and Europe 21%. In fiscal 2012, one customer accounted for 11% of net revenue. 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. Yingli accounted for 7%, 15% and 28% of our net revenues in fiscal 2012, 2011 and 2010, respectively. Yingli accounted for 14% and 33% of our accounts receivable balance as of September 30, 2012 and 2011, 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 equipment markets for solar cells, semiconductor devices, semiconductor wafers, 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 these markets 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., S.C New Energy and Expertech, Inc. We are experiencing increased competition from local Chinese equipment manufacturers, including 48th Institute, S.C New Energy and Sevenstar Electronics, which may receive varying levels of financial support from the Chinese government. Our primary competitive advantages over such local manufacturers include our automation and higher-efficiency solar cell production technologies we develop in collaboration with customers and research institutes. Also, our furnaces and lapping and polishing machines face, to a limited extent, competition from equipment on the low-end of the price spectrum.

**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, 2012, we employed approximately 350 people. Of these employees, approximately 15 were based at our corporate offices in Tempe, Arizona, 35 at our manufacturing plant in Carlisle, Pennsylvania, 30 at our manufacturing plant in Billerica, Massachusetts, 170 at our operations in The Netherlands, 60 at our facilities in China and 40 at our facilities in France. Of the approximately 35 people employed at our Carlisle, Pennsylvania facility, 18 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.

## **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 four wholly-owned subsidiaries: Tempress Systems, Inc., or Tempress, a Texas corporation with all of its operations in Vaassen, The Netherlands, acquired in 1994 and subsequently reincorporated in The Netherlands; P.R. Hoffman Machine Products, Inc., or P.R. Hoffman, an Arizona corporation based in Carlisle, Pennsylvania, acquired in July 1997; Bruce Technologies, Inc., or Bruce Technologies, a Massachusetts corporation based in North Billerica, Massachusetts, acquired in July 2004; R2D Automation SAS, or R2D, a French corporation located near Montpellier, France, acquired in October 2007. We also own a 55% interest in 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.

## **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](http://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 solar and semiconductor production to Asia, where there often is increased price competition.

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

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

The purchasing decisions of our customers are highly dependent on their capacity utilization that changes when new facilities are put into production and 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 are adversely affected. 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; effectively manage the supply chain; and motivate and retain key employees. 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 the industry cycles. Our failure to timely and effectively respond to these cyclical changes could have a material adverse effect on our business.

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

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



- the varying energy policies of governments around the world and their effect in influencing the rate of growth of the solar photovoltaic (PV) market, including the availability and amount of government incentives for solar power such as tax credits, feed-in tariffs, rebates, renewable portfolio standards that require electricity providers to sell a targeted amount of energy from renewable sources, and goals for solar installations on government facilities;
- the need to continually decrease the cost-per-watt of electricity produced by solar PV products to or below 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;
- trade tensions with China and potential retaliatory actions
- the varying levels of operating and industry experience among solar PV manufacturers and the resulting differences in the nature and extent of customer support services requested from the Company;
- challenges associated with marketing and selling manufacturing equipment and services to a diverse and diffuse customer base;
- the cost of polysilicon and other materials;
- access to affordable financing and capital by customers and end-users; and
- an increasing number of local equipment and parts suppliers based in Asia with certain cost and other advantages over suppliers from outside Asia.

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

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

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

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

During fiscal 2011, 94% of our net revenue came from customers outside of North America. During fiscal 2012, 87% of our net revenue came from customers outside of North America as follows:

- Asia - 66% (including China - 43% and Taiwan - 9%)
- Europe – 21%.

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. Our business and results of operations could be negatively affected by periodic local or international economic downturns, trade balance issues and political, social and military instability in countries such as China, India, South Korea, Taiwan and possibly elsewhere. In addition, we face competition from a number of suppliers based in Asia that have certain advantages over suppliers from outside of Asia. These advantages include lower operating, shipping and regulatory costs, proximity to customers, favorable tariffs and other government policies that favor local suppliers.

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

We incurred net foreign currency transaction losses of less than \$0.1 million and approximately \$0.2 million in fiscal 2012 and fiscal 2011, 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. Our wholly-owned subsidiary, Tempres 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 and international monetary fluctuations. Changes in such laws and regulations may have a material adverse effect on our revenue and costs. We are subject to the Foreign Corrupt Practices Act, which may place us at a competitive disadvantage to foreign companies that are not subject to similar regulations.

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

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

***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.

***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 7%, 15% and 28% of our net revenues in fiscal 2012, 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, 2012 two customers individually represented 14% and 12% of accounts receivable. As of September 30, 2011 one customer represented 33% of accounts receivable. Yingli accounts for 14% and 33% of our accounts receivable balance as of September 30, 2012 and 2011, respectively. A significant change in the liquidity or financial position of any of our customers that purchase large systems could have a material impact on the collectability of our accounts receivable and our future operating results. A concentration of our receivables from one or a small number of customers places us at risk. We attempt to manage this credit risk by performing credit checks, by requiring significant partial payments prior to shipment where appropriate and by actively monitoring collections. We also require letters of credit of certain customers depending on the size of the order, type of customer or its creditworthiness and its country of domicile. Our major customers may seek, and on occasion, may receive pricing, payment, intellectual property-related, or other commercial terms that are less favorable to the Company. If any one or more of our major customers does not pay us it could adversely affect our financial position and results of operations.

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

Our backlog includes orders for large systems, such as our diffusion furnaces, with system prices of up to and in excess of \$1.0 million depending on the system configuration, options 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. Cancellations may result in inventory that we may not be able to sell or reuse if those products have been tailored for a specific customer's requirements and cannot then be sold without significant incremental cost. We have experienced cancellations in the past. 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.

***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. 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.

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.

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

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

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

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

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

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

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

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

Furthermore, it may not be feasible for any successor to maintain the same business relationships that our Executive Chairman, Mr. J.S. Whang, has established. Even though we are the beneficiary of life insurance policies on the life

of Mr. Whang, in the amount of \$2.0 million, there is no assurance that such amount will be sufficient to cover the cost of finding and hiring a suitable replacement for Mr. Whang. If we were to lose the services of either Mr. Whang or Mr. Pentinga for any reason, it could have a material adverse effect on our business.

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

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

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

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

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

We continually evaluate potential acquisitions and consider acquisitions an important part of our future growth strategy. In the past, we have made acquisitions of, or significant investments in, other businesses with synergistic products, services and technologies and plan to continue to do so in the future. Acquisitions, including our acquisition of R2D 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, functionality and a lower cost of ownership of our products, to keep pace with competitive products and to satisfy customer demands for improved performance, features and functionality. There can be no assurance that revenue from future products or enhancements will be sufficient to recover the development costs associated with such products or enhancements, or that we will be able to secure the financial resources necessary to fund future development. Research and development costs are typically incurred before we confirm the technical feasibility and commercial viability of a product, and not all development activities result in

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

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

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

***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.

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

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

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

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

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

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

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

Some of these claims may lead to litigation. We cannot assure 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.

***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.

***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 affect our tax rate:

- The Company sells and operates globally in the United States, Europe and Asia. Disagreement could occur on the jurisdiction of income and taxation among different governmental tax authorities. Potential areas of dispute may include transfer pricing, intercompany charges and intercompany balances.
- Tax rates may increase and, therefore, have a material adverse effect on our earnings and cash flows.

**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.

<u>Location</u>	<u>Use</u>	<u>Size</u>	<u>Monthly Rent</u>	<u>Lease Expiration</u>
Tempe, AZ	Corporate	15,000 sf	Owned	N/A
Billerica, MA	Office, Mfg. & Warehouse	17,000 sf	\$10,000	8/31/2013
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	3/31/2014
Vaassen, The Netherlands	Production	38,000 sf	\$17,000	3/31/2013
Vaassen, The Netherlands	Warehouse	23,000 sf	\$11,000	3/31/2014
Clapiers, France	Office, Mfg. & Warehouse	12,000 sf	\$9,000	9/30/2016 (1)
Clapiers, France	Manufacturing	6,500 sf	\$4,000	2/16/2020 (2)
Le Cres, France	Warehouse	3,000 sf	\$1,000	5/13/2020
Shanghai, China	Office, Warehouse & Mfg.	13,000 sf	\$11,000	3/31/2013
Shanghai, China	Office, Warehouse & Mfg.	4,000 sf	\$4,000	10/31/2014
Shanghai, China	Office, Warehouse & Mfg.	3,000 sf	\$3,000	11/30/2013
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) This lease can be canceled by the Company with six months notice beginning March 1, 2014.

**ITEM 3. LEGAL PROCEEDINGS**

None.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

## PART II

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

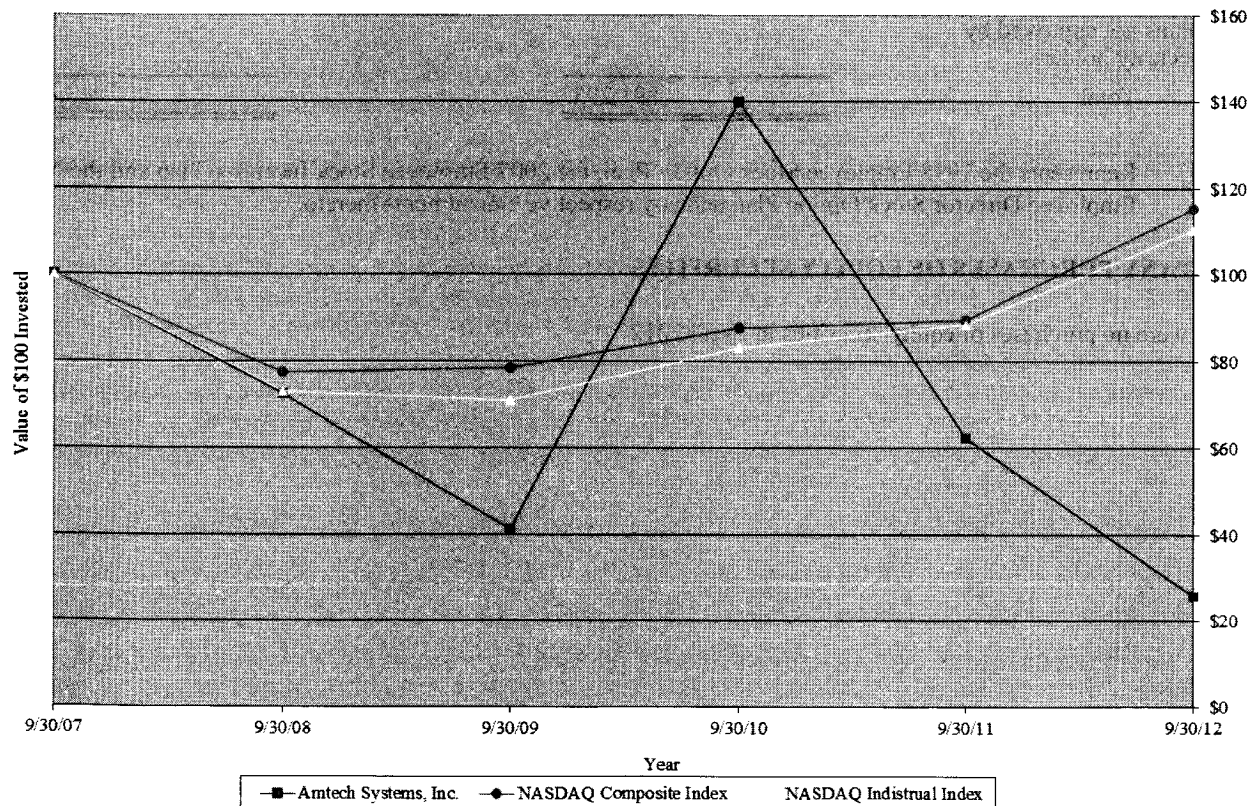
#### MARKET INFORMATION

Our common stock, par value \$0.01 per share (“Common Stock”), is trading on the NASDAQ Global Market (formerly the NASDAQ National Market), under the symbol “ASYS.” On November 12, 2012, the closing price of our Common Stock as reported on the NASDAQ Global Market was \$3.04 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 2012 and 2011, as reported by the NASDAQ Global Market.

	Fiscal 2012		Fiscal 2011	
	High	Low	High	Low
First quarter	\$ 11.60	\$ 7.12	\$ 27.19	\$ 15.55
Second quarter	\$ 11.60	\$ 7.90	\$ 30.80	\$ 19.56
Third quarter	\$ 8.40	\$ 3.75	\$ 26.03	\$ 17.08
Fourth quarter	\$ 4.43	\$ 3.27	\$ 21.65	\$ 7.86

#### 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, 2007.



## HOLDERS

As of November 12, 2012, there were 532 shareholders of record of our Common Stock. Based upon a recent survey of brokers, we estimate there were approximately an additional 5,817 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, 2012, 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.

<u>Plan Category</u>	<u>Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)</u>	<u>Weighted-average exercise price of outstanding options, warrants and rights (b)</u>	<u>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)</u>
Equity compensation plans approved by security holders (1)	891,293	9.37	443,478
Equity compensation plans not approved by security holders	—		—
Total	<u>891,293</u>		<u>443,478</u>

(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

There were no purchases of equity securities in fiscal 2012.

## 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,				
	2012	2011	2010	2009	2008
<b>Operating Data:</b>					
Net revenue	\$ 81,539	\$ 246,705	\$ 120,019	\$ 52,973	\$ 80,296
Gross profit	\$ 9,193	\$ 90,657	\$ 42,712	\$ 15,019	\$ 22,961
Gross profit %	11%	37%	36%	28%	29%
Operating income (loss) <sup>(1)</sup>	\$ (32,984)	\$ 38,279	\$ 15,909	\$ (1,938)	\$ 3,802
Net income (loss) attributable to Amtech Systems, Inc. <sup>(2)</sup>	\$ (23,031)	\$ 22,882	\$ 9,563	\$ (1,589)	\$ 2,857
<b>Earnings (loss) per share attributable to Amtech Systems, Inc.:</b>					
Basic earnings (loss) per share	\$ (2.43)	\$ 2.41	\$ 1.06	\$ (0.18)	\$ 0.33
Diluted earnings (loss) per share	\$ (2.43)	\$ 2.34	\$ 1.04	\$ (0.18)	\$ 0.32
<b>Order backlog<sup>(3)</sup></b>	\$ 18,703	\$ 85,892	\$ 94,427	\$ 32,357	\$ 46,719
<b>Balance Sheet Data:</b>					
Cash and cash equivalents	\$ 46,726	\$ 67,382	\$ 56,764	\$ 42,298	\$ 37,501
Working capital	\$ 60,232	\$ 94,057	\$ 65,638	\$ 55,868	\$ 58,275
Current ratio	2.4:1	2.2:1	2.3:1	4.1:1	3.2:1
Total assets	\$ 129,022	\$ 205,865	\$ 136,101	\$ 92,526	\$ 102,355
Total current liabilities	\$ 42,611	\$ 80,794	\$ 50,816	\$ 18,077	\$ 26,159
Long-term obligations	\$ 2,360	\$ 2,740	\$ 1,042	\$ 644	\$ 1,663
Total stockholders' equity	\$ 84,051	\$ 122,331	\$ 84,243	\$ 73,805	\$ 74,533

- (1) Includes \$12.8 million of expense related to inventory write-downs and loss contracts for inventory purchase commitments, and \$5.4 million of impairment charges in fiscal 2012. Includes \$2.9 million of expense related to reacquired shares in fiscal 2011.
- (2) Includes \$2.4 million and \$1.0 million of losses in fiscal 2012 and 2011, respectively, resulting from the 55% controlling interest in Kingstone acquired February 18, 2011.
- (3) The backlog as of September 30, 2009 and 2008 includes \$1.2 million and \$1.3 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. Since the 2011 acquisition of Kingstone, we have advanced the development of an ion implanter to provide our solar 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 2012, the solar cell industry experienced a structural imbalance between supply and demand and we expect this structural imbalance to continue into 2013. This imbalance has negatively impacted our results of operations and is expected to do so in the future.

Our strategy has been, and continues to be, to grow the Company through strategic product development and acquisitions. In addition to internal product development, we have acquired companies with complementary products or products that serve adjacent process steps. In October 2007, we acquired R2D Automation SAS, which allowed us to provide our diffusion furnaces with integrated automation that is also sold as a stand-alone product. In February 2011, we acquired a 55% ownership interest in Kingstone Technology Hong Kong, Limited ("Kingstone"), a holding company that owns 100% of Kingstone Semiconductor Company Ltd., a Shanghai-based technology company specializing in ion implant solutions for the solar industry.

## 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,		
	2012	2011	2010
Net revenue	100.0 %	100.0%	100.0 %
Cost of sales	73.0 %	62.8%	63.9 %
Write-down of inventory	12.7 %	0.5%	0.5 %
Losses on inventory purchase commitments	3.0 %	—%	— %
Gross margin	11.3 %	36.7%	35.6 %
Selling, general and administrative	28.3 %	17.6%	20.0 %
Impairment and restructuring charges	6.7 %	—%	0.5 %
Research and development	16.8 %	2.3%	1.8 %
Expense related to reacquired shares	— %	1.2%	— %
Operating income (loss)	(40.5)%	15.6%	13.3 %
Interest and other income (expense), net	— %	—%	(0.2)%
Income (loss) before income taxes	(40.5)%	15.6%	13.1 %
Income tax provision (benefit)	(6.5)%	6.6%	5.1 %
Net income (loss)	(34.0)%	9.0%	8.0 %
Add: net loss attributable to noncontrolling interest	5.6 %	0.3%	— %
Net income (loss) attributable to Amtech Systems, Inc.	(28.4)%	9.3%	8.0 %

### Fiscal 2012 compared to Fiscal 2011

#### *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 thermal 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, 2012 and 2011 were \$81.5 million and \$246.7 million, respectively; a decrease of \$165.2 million or 67%. Revenue decreased primarily due to significantly lower capital expenditures for equipment by our customers as they curtailed capacity expansion plans during the industry downturn, partially offset by increased recognition of previously-deferred revenue. Net revenue from the solar market was \$44.2 million and \$211.9 million in fiscal 2012 and 2011, respectively; a 79% decrease. Net revenue from all other markets served was \$37.3 million in fiscal 2012 compared to \$34.8 million in fiscal 2011, an increase of 7%, due primarily to increased demand from the semiconductor and LED markets.

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. These supply / demand imbalances and global economic conditions have negatively impacted our results. We expect this downturn to continue into 2013, and it is difficult to predict when the market will improve.

#### *Backlog*

Our backlog as of September 30, 2012 and 2011 was \$18.7 million and \$85.9 million, respectively. Our backlog as of September 30, 2012 included approximately \$13.8 million of orders and deferred revenue from our solar industry customers compared to \$71.2 million as of September 30, 2011. New orders booked in fiscal 2012 were \$40.9 million compared to \$239.8 million in fiscal 2011. As the majority of the backlog is denominated in Euros, the weakening of the Euro during fiscal 2012 resulted in a decrease in backlog of approximately \$3.7 million. At the end of fiscal 2012,

one customer accounted for 10% of our total backlog. At the end of fiscal 2011, two customers individually accounted for 22% and 10% of our total backlog, respectively.

Our order pipeline has slowed significantly, due mainly to the worldwide overcapacity of solar cell production. The pipeline is also negatively influenced by slower growth in demand caused by the frequently-fluctuating government subsidies for solar energy installations. In fiscal 2012, \$5.7 million of customer orders were canceled. These orders were not in our September 30, 2011 reported backlog as they were previously expected to ship beyond twelve months.

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. We have excluded from reported backlog approximately \$23 million of customer orders that have not been cancelled, but are not expected to ship in the next twelve months.

### ***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 significant effect on gross margin when a portion of 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, 2012 and 2011 was \$9.2 million and \$90.7 million respectively; a decrease of \$81.5 million or 90%. Gross margin for fiscal 2012 and 2011 was 11% and 37%, respectively. In fiscal 2012, our cost of goods sold includes \$12.8 million of costs for inventory write-downs and losses on inventory purchase commitments. These losses resulted from the industry downturn and the overall decrease in manufacturing activities. Lower gross profit and gross margins were also negatively impacted by lower sales volumes which resulted in less efficient capacity utilization. These lower profits were partially offset by higher recognition of previously-deferred profit. In fiscal 2012, we had a net recognition of previously-deferred profit of \$16.1 million compared to a net profit deferral of \$16.6 million in fiscal 2011.

### ***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, 2012 were \$23.1 million or 28% of net revenue. For the year ended September 30, 2011, SG&A expenses were \$43.7 million or 18% of net revenue. SG&A expenses include \$1.8 million and \$1.5 million of stock-based compensation expense for fiscal 2012 and 2011, respectively. The decrease in SG&A expenses was primarily due to lower commissions and shipping costs related to lower revenues and company-wide cost reduction initiatives.

### ***Impairment and Restructuring Charges***

Impairment charges for the year ended September 30, 2012 were \$5.4 million. There were no impairment or restructuring charges in fiscal 2011.

The Company conducted its periodic assessment of long-lived assets in the fourth quarter of fiscal 2012. The Company identified an impairment of the goodwill in two of its reporting units that serve the solar equipment market resulting in a \$4.7 million impairment charge, due primarily to the current supply / demand imbalance in the solar equipment market, the expectation that the market downturn will continue into 2013 and the decline in the market value of the shares of solar companies.

The Company also recorded charges of \$0.7 million in fiscal 2012 for impairment of assets related to license agreements with one of its technology partners. As a result of our technology partner's financial difficulties, their possible inability to service the product and insufficient revenues, management determined that the carrying value of the related assets is not recoverable.

### ***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 as well as materials, supplies and facilities used in producing prototypes. Reimbursement of research and development costs in the form of governmental research and development grants are netted against these expenses.

	<b>Years Ended September 30,</b>		
	<b>2012</b>	<b>2011</b>	<b>2010</b>
	(dollars in thousands)		
Research and development	\$ 14,723	\$ 7,362	\$ 2,986
Grants earned	(1,029)	(1,578)	(868)
Net research and development	<u>\$ 13,694</u>	<u>\$ 5,784</u>	<u>\$ 2,118</u>

Research and development costs for the fiscal year ended September 30, 2012 increased \$7.9 million compared to fiscal 2011. Increased investment in research and development relates primarily to development of a solar ion implanter. Additional investments were made in the development of other technologies and processes for solar cell manufacturing to increase throughput and cell efficiency. We receive reimbursements through governmental research and development grants which are netted against these expenses.

### ***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. In September 2011, the Company agreed to amend the original stock purchase agreement, to repurchase the shares for cash in the amount of \$4.1 million, \$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.

### ***Income Tax Provision***

Our effective tax rate was approximately 16% in fiscal 2012 and 42% in 2011. The effective tax rate is the ratio of total income tax expense (benefit) to pre-tax income (loss). The effective tax rate in 2012 was lower than in 2011 and the 34% U.S. tax rate primarily due to the valuation allowance on net operating losses related to the ion implant research and development and the 25% tax rate applicable to the losses in The Netherlands.

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

We expect our future effective tax rate to be favorably affected by our tax planning strategies 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 2011 compared to Fiscal 2010**

### ***Net Revenue***

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.

### ***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 significant effect on gross margin when a portion of 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. Impairment charges for fiscal 2010 were \$0.6 million and were related to licenses that were determined not to be fully recoverable.

***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	<u>\$ 5,784</u>	<u>\$ 2,118</u>	<u>\$ 509</u>

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. In fiscal 2011, we invested \$1.5 million in research and development activity related to a solar ion implanter.

***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.

## Liquidity and Capital Resources

As of September 30, 2012 and 2011, cash and cash equivalents were \$46.7 million and \$67.4 million, respectively. As of September 30, 2012 and 2011, restricted cash was \$4.6 million and \$6.6 million, respectively. Restricted cash decreased due to the usage of funds deposited in escrow for the ion implant development project, partially offset by an increase in customer deposits requiring bank guarantees collateralized by cash and an increase in restricted cash related to ion implant research and development grants. Our working capital was \$60.2 million as of September 30, 2012 and \$94.1 million as of September 30, 2011. The decline in working capital results primarily from the net loss in 2012. The decrease in cash was primarily cash used in operating activities of \$12.4 million discussed below, \$4.1 million used to repurchase shares related to the Kingstone acquisition and \$1.5 million of cash used in investing activities discussed below. Our ratio of current assets to current liabilities was 2.4:1 as of September 30, 2012 compared to 2.2:1 as of September 30, 2011.

At September 30, 2012, we have a current tax liability of \$7.1 million. Also see information below regarding payments expected as a result of contractual obligations. We have never paid dividends on our Common Stock. Our present policy is to apply cash to investments in product development, acquisitions or expansion; consequently, we do not expect to pay dividends on Common Stock in the foreseeable future. We believe that our current cash and other sources of liquidity discussed below are adequate to support operations for at least the next 12 months.

The success of our growth strategy is dependent upon the availability of additional capital resources on terms satisfactory to management. Our sources of capital in the past have included the sale of equity securities, which include common and preferred stock sold in private transactions and public offerings, capital leases and long-term debt. There can be no assurance that we can raise such additional capital resources on satisfactory terms. We believe that our principal sources of liquidity discussed above are sufficient to support operations.

	<b>Fiscal Years Ended September 30,</b>		
	<b>2012</b>	<b>2011</b>	<b>2010</b>
	(dollars in thousands)		
Net cash provided by (used in) operating activities	\$ (12,438)	\$ 15,426	\$ 15,800
Net cash used in investing activities	\$ (1,542)	\$ (6,238)	\$ (2,929)
Net cash provided by (used in) financing activities	\$ (4,108)	\$ 2,058	\$ 1,413

### *Cash Flows from Operating Activities*

Cash used in operating activities was \$12.4 million in fiscal 2012. Cash provided by our operating activities was \$15.4 million and \$15.8 million in fiscal 2011 and 2010, respectively. During fiscal 2012 cash declined primarily due to losses from operations, adjusted for non-cash charges. Cash also decreased due to decreases in liabilities such as deferred profit, income taxes, accounts payable and other accruals, partially offset by collections of accounts receivable. 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.

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

Our investing activities for fiscal 2012, 2011 and 2010 used cash of \$1.5 million, \$6.2 million and \$2.9 million, respectively. During fiscal 2012, \$1.3 million of cash was used for capital expenditures. 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.

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

Cash used in financing activities in fiscal 2012 was \$4.1 million due to the repurchase of shares related to the Kingstone acquisition. 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.

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

As of September 30, 2012, 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, 2012:

Contractual obligations	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
		(dollars in thousands)			
Operating lease obligations:					
Buildings	2,636	926	796	507	407
Office equipment	69	58	11	—	—
Vehicles	507	191	280	36	—
Total operating lease obligations	3,212	1,175	1,087	543	407
Purchase obligations	12,118	12,118	—	—	—
Total	\$ 15,330	\$ 13,293	\$ 1,087	\$ 543	\$ 407
Other commercial obligations:					
Bank guarantees	\$ 3,824	\$ 3,824	\$ —	—	—

### **Critical Accounting Policies**

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

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

A critical accounting policy is one that is both important to the presentation of our financial position and results of operations, and requires management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. These uncertainties are discussed in "ITEM 1A. RISK FACTORS." We believe the following critical accounting policies affect the more significant judgments and estimates used in the preparation of our consolidated financial statements.

**Revenue Recognition.** We review product and service sales contracts with multiple deliverables to determine if separate units of accounting are present 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 amount of deferred tax assets that will be realized in the future and the impact of uncertainties in the application of complex tax laws. Resolution of these uncertainties in a manner inconsistent with our expectations could have a material impact on our operations and financial condition.

We are required to apply a more likely than not threshold to the recognition and derecognition of uncertain tax positions and in determining whether certain tax benefits will be realized in the future. We are required to recognize the amount of tax benefit that has a greater than 50 percent likelihood of being ultimately realized upon settlement. It further requires that a change in judgment related to the expected ultimate resolution of uncertain tax positions be recognized in earnings in the quarter of such change. Prior to adoption, our policy was to establish reserves that reflected the probable outcome of known tax contingencies.

In fiscal 2012 and 2011, judgment was also exercised 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 and Inventory Purchase Commitments.*** We value our inventory at the lower of cost or net realizable value. Costs for approximately 85% of inventory are determined on an average cost basis with the remainder determined on a first-in, first-out (FIFO) basis. We regularly review inventory quantities and record a write-down to net realizable value for excess and obsolete inventory. The write-down is primarily based on historical inventory usage adjusted for expected changes in product demand and production requirements. Our industry is characterized by customers in highly cyclical industries, rapid technological changes, frequent new product developments and rapid product obsolescence. Changes in demand for our products and product mix could result in further write-downs.

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

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

***Warranty.*** We provide a limited warranty, generally for 12 to 24 months, to our customers. A provision for the estimated cost of providing warranty coverage is recorded upon acceptance of all systems. On occasion, we have been required and may be required in the future to provide additional warranty coverage to ensure that the systems are ultimately accepted or to maintain customer goodwill. While our warranty costs have historically been within our expectations and we believe that the amounts accrued for warranty expenditures are sufficient for all systems sold through September 30, 2012, 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 a long-lived asset should be evaluated for possible impairment, we use an estimate of the related undiscounted net cash flows generated by the asset over the remaining estimated life of the asset in measuring whether the asset is recoverable. We make judgments and estimates in establishing the carrying value of goodwill and other long-lived assets. Those judgments and estimates are modified as economic and market conditions change. Changes in these conditions may result in an inability to recover the carrying value of these assets and, therefore, may result in future impairment charges. Below is a more detailed explanation of the procedures we perform.

We first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If the qualitative factors indicate that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, we perform a two-step impairment test of goodwill and indefinite-lived intangible assets. In the first step, we estimate the fair value of the reporting unit and compare it to its carrying value. When the carrying value exceeds the fair value of the reporting unit, the second step is performed to measure the amount of the impairment loss, if any. In the second step, the amount of the impairment loss is the excess of the carrying amount of the goodwill and other intangibles not subject to amortization over their implied fair value.

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

- i. One valuation methodology used is to determine the multiples of market value of invested capital (“MVIC”) of similar public companies to their revenue for the last twelve months (“LTM”) and next twelve months (“NTM”), and apply those multiples to the revenue for the comparable periods of the reporting unit being tested for impairment. This approach provides the closest estimate to quoted market prices that are readily available. However, we generally give less weight to this method, because the market value of the minority interest of public companies may not be relevant to the fair value of our wholly-owned reporting units, which are not public companies. Also, MVIC to revenue for the LTM uses a historical value in the calculation, while the market values tend to be forward looking. MVIC of revenue for the NTM involves the use of projections for both the comparable companies and the reporting unit.
- ii. Another market approach that we sometimes use is based upon prices paid in merger and acquisition transactions for other companies in the same industry, again applying the MVIC to revenue of those companies to the historical and projected revenue of the reporting unit. When we use both market prices determined as described in (i), above, and prices paid in merger and acquisition transactions, we weight them to determine an indicated value under the market approach.
- iii. As stated, we also use discounted cash flows as an indication of a third-party market price for the reporting unit in an arms-length transaction. This method requires projections of EBITDA (earnings before interest, taxes, depreciation and amortization) and applying an appropriate discount rate based on the weighted average cost of capital for the reporting unit.

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

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

**Stock-Based Compensation.** The Company measures compensation costs relating to share-based payment transactions based upon the grant-date fair value of the award. Those costs are recognized as expense over the requisite service period, which is generally the vesting period. The benefits of tax deductions in excess of recognized compensation cost are reported as cash flow from financing activities rather than as cash flow from operating activities.

### **Impact of Recently Issued Accounting Pronouncements**

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

## ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

### 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 2012 and 2011, we did not hold any stand-alone or separate derivative instruments. We incurred net foreign currency transaction losses of less than \$0.1 million and approximately \$0.2 million in fiscal 2012 and fiscal 2011, respectively. As of September 30, 2012, our foreign subsidiaries had \$4.1 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 \$0.4 million. As of the end of fiscal 2012, our foreign subsidiaries had \$5.8 million of accounts payable, consisting primarily of amounts owed 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 \$0.6 million. Our net investment in and long-term advances to our foreign operations totaled \$57.3 million as of September 30, 2012. A 10% change in the value of the Euro relative to the U.S. dollar would cause an approximately a \$5.7 million foreign currency translation adjustment, a type of other comprehensive income (loss), which would be a direct adjustment to our stockholders' equity. In fiscal 2012, we recognized a net other comprehensive loss of \$4.7 million from translation adjustments.

During fiscal 2012 and 2011, U.S. dollar denominated sales of our European operations were \$1.1 million and \$2.9 million, respectively. As of September 30, 2012, sales commitments denominated in a currency other than the functional currency of our transacting operation were \$1.2 million. Our lead-times to fulfill these commitments generally range between 13 and 26 weeks. A 10% change in the relevant exchange rates between the time the order was taken and the time of shipment would cause our gross profit on such orders to be \$0.1 million greater or less than expected on the date the order was taken. As of September 30, 2012, purchase commitments denominated in a currency other than the functional currency of our transacting operation totaled \$ 0.4 million. A 10% change in the relevant exchange rates between the time the purchase order was placed and the time the order is received would not cause our cost of such items to be significantly greater or less than expected on the date the purchase order was placed.



## ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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

<b>Financial Statements</b>	
<u>Report of Independent Registered Public Accounting Firm</u>	<u>38</u>
<u>Consolidated Balance Sheets: September 30, 2012 and 2011</u>	<u>39</u>
<u>Consolidated Statements of Operations: Years ended September 30, 2012, 2011 and 2010</u>	<u>40</u>
<u>Consolidated Statements of Stockholders' Equity and Comprehensive Income (Loss): Years ended September 30, 2012, 2011 and 2010</u>	<u>41</u>
<u>Consolidated Statements of Cash Flows: Years ended September 30, 2012, 2011 and 2010</u>	<u>42</u>
<u>Notes to Consolidated Financial Statements</u>	<u>43</u>

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, 2012 and 2011, 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, 2012. 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, 2012 and 2011, and the results of their operations and their cash flows for each of the years in the three-year period ended September 30, 2012 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, 2012, 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 December 6, 2012 expressed an unqualified opinion.

/s/ MAYER HOFFMAN MCCANN P.C.

Phoenix, Arizona  
December 6, 2012

**PART I FINANCIAL INFORMATION**

**ITEM 1. Consolidated Financial Statements**

**AMTECH SYSTEMS, INC. AND SUBSIDIARIES**

**Consolidated Balance Sheets**

(in thousands except share data)

	September 30, 2012	September 30, 2011
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash equivalents	\$ 46,726	\$ 67,382
Restricted cash	4,644	6,571
Accounts receivable		
Trade (less allowance for doubtful accounts of \$517 and \$246 at September 30, 2012 and September 30, 2011, respectively)	7,486	14,447
Unbilled and other	10,807	30,822
Inventories	25,670	37,162
Deferred income taxes	3,460	9,560
Prepaid income taxes	1,400	4,260
Other	2,650	4,647
Total current assets	102,843	174,851
<b>Property, Plant and Equipment - Net</b>	12,387	12,680
<b>Deferred income taxes - Long Term</b>	470	—
<b>Other Assets - Long Term</b>	871	—
<b>Intangible Assets - Net</b>	4,096	5,021
<b>Goodwill</b>	8,355	13,313
<b>Total Assets</b>	129,022	\$ 205,865
<b>Liabilities and Stockholders' Equity</b>		
<b>Current Liabilities</b>		
Accounts payable	\$ 5,780	\$ 8,928
Accrued compensation and related taxes	5,311	10,686
Accrued warranty expense	2,687	2,265
Deferred profit	10,236	27,608
Customer deposits	3,958	7,862
Other accrued liabilities	7,499	6,775
Income taxes payable	7,140	16,670
Total current liabilities	42,611	80,794
<b>Income Taxes Payable Long-term</b>	2,360	2,630
<b>Deferred Income Taxes - Long Term</b>	—	110
<b>Total liabilities</b>	44,971	83,534
<b>Commitments and Contingencies</b>		
<b>Stockholders' Equity</b>		
Preferred stock; 100,000,000 shares authorized; none issued	—	—
Common stock; \$0.01 par value; 100,000,000 shares authorized; shares issued and outstanding: 9,483,588 and 9,431,393 at September 30, 2012 and September 30, 2011, respectively	95	94
Additional paid-in capital	77,377	83,207
Accumulated other comprehensive loss	(6,817)	(2,078)
Retained earnings	12,065	35,096
Total stockholders' equity	82,720	116,319
Noncontrolling interest	1,331	6,012
Total Equity	84,051	122,331
<b>Total Liabilities and Stockholders' Equity</b>	\$ 129,022	\$ 205,865

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,		
	2012	2011	2010
Revenues, net of returns and allowances	\$ 81,539	\$ 246,705	\$ 120,019
Cost of sales	59,511	154,881	76,725
Write-down of inventory	10,380	1,167	582
Losses on inventory purchase commitments	2,455	—	—
Gross profit	9,193	90,657	42,712
Selling, general and administrative	23,055	43,739	24,075
Research and development	13,694	5,784	2,118
Impairment charges	5,428	—	610
Expense related to reacquired shares	—	2,855	—
Operating income (loss)	(32,984)	38,279	15,909
Interest and other income (expense), net	66	30	(196)
Income (loss) before income taxes	(32,918)	38,309	15,713
Income tax provision (benefit)	(5,320)	16,190	6,150
<b>Net income (loss)</b>	(27,598)	22,119	9,563
Add: net loss attributable to noncontrolling interest	4,567	763	—
<b>Net income (loss) attributable to Amtech Systems, Inc.</b>	<b>\$ (23,031)</b>	<b>\$ 22,882</b>	<b>\$ 9,563</b>
<b>Income (Loss) Per Share:</b>			
Basic income (loss) per share attributable to Amtech shareholders	\$ (2.43)	\$ 2.41	\$ 1.06
Weighted average shares outstanding	9,471	9,480	9,022
Diluted income (loss) per share attributable to Amtech shareholders	\$ (2.43)	\$ 2.34	\$ 1.04
Weighted average shares outstanding	9,471	9,764	9,237

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		Additional Paid- In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity	Non- controlling Interest	Total Equity
	Number of Shares	Amount						
<b>Balance at</b>								
<b>September 30, 2009</b>	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
Share repurchase			202			202		202
Stock compensation expense			987			987		987
Restricted shares released	34	—				—		—
Stock options exercised	214	2	1,327			1,329		1,329
<b>Balance at</b>								
<b>September 30, 2010</b>	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
<b>Balance at</b>								
<b>September 30, 2011</b>	9,431	\$ 94	\$ 83,207	\$ (2,078)	\$ 35,096	\$ 116,319	\$ 6,012	\$ 122,331
Net loss					(23,031)	(23,031)	(4,567)	(27,598)
Translation adjustment				(4,739)		(4,739)	(114)	(4,853)
Comprehensive loss						(27,770)	(4,681)	(32,451)
Write-off of foreign tax credits due to legal reorganization			(7,595)			(7,595)		(7,595)
Stock compensation expense			1,763			1,763		1,763
Restricted shares released	52	1	(1)			—		—
Stock options exercised	1	—	3			3		3
<b>Balance at</b>								
<b>September 30, 2012</b>	9,484	\$ 95	\$ 77,377	\$ (6,817)	\$ 12,065	\$ 82,720	\$ 1,331	\$ 84,051

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,		
	2012	2011	2010
<b>Operating Activities</b>			
Net income (loss)	\$ (27,598)	\$ 22,119	\$ 9,563
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	2,858	2,814	1,763
Write-down of inventory	10,380	1,167	582
Loss on inventory purchase commitments	2,455	—	—
Provision for (reversal of) allowance for doubtful accounts	300	139	(56)
Deferred income taxes	3,781	(635)	(1,402)
Impairment of long-lived assets	5,428	—	610
Non-cash share based compensation expense	1,763	1,470	987
Changes in operating assets and liabilities:			
Change in restricted cash	1,781	(274)	(4,763)
Accounts receivable	23,700	(21,399)	(11,621)
Inventories	(2,130)	(14,194)	(12,128)
Accrued income taxes	(12,683)	7,834	6,549
Prepaid expenses and other assets	1,817	(1,740)	(1,752)
Accounts payable	(2,807)	(3,644)	8,436
Accrued liabilities and customer deposits	(5,387)	5,137	12,057
Deferred profit	(16,096)	16,632	6,975
Net cash provided by (used in) operating activities	<u>(12,438)</u>	<u>15,426</u>	<u>15,800</u>
<b>Investing Activities</b>			
Purchases of property, plant and equipment	(1,306)	(5,183)	(2,929)
Investment in acquisitions, net of cash	—	(1,055)	—
Investment in note receivable	—	—	(1,000)
Proceeds from note receivable	—	—	1,000
Other	(236)	—	—
Net cash used in investing activities	<u>(1,542)</u>	<u>(6,238)</u>	<u>(2,929)</u>
<b>Financing Activities</b>			
Proceeds from issuance of common stock, net	3	1,330	1,328
Repurchase of common stock	(4,080)	—	—
Payments on long-term obligations	(31)	(127)	(117)
Excess tax benefit of stock options	—	855	202
Net cash provided by (used in) financing activities	<u>(4,108)</u>	<u>2,058</u>	<u>1,413</u>
<b>Effect of Exchange Rate Changes on Cash</b>	<u>(2,568)</u>	<u>(628)</u>	<u>182</u>
<b>Net Increase in Cash and Cash Equivalents</b>	<u>(20,656)</u>	<u>10,618</u>	<u>14,466</u>
<b>Cash and Cash Equivalents, Beginning of Year</b>	<u>67,382</u>	<u>56,764</u>	<u>42,298</u>
<b>Cash and Cash Equivalents, End of Year</b>	<u>\$ 46,726</u>	<u>\$ 67,382</u>	<u>\$ 56,764</u>
<b>Supplemental Cash Flow Information:</b>			
Income tax refunds	\$ 1,115	\$ 282	\$ 665
Income tax payments	5,030	8,451	1,508
<b>Supplemental Non-cash Financing Activities:</b>			
Transfer inventory to capital equipment	1,586	—	—
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.

**Notes to Consolidated Financial Statements**  
**For the Years Ended September 30, 2012, 2011 and 2010**

**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 is developing an ion implanter to provide its customers with a more complete solution for their next-generation high-efficiency solar cell production. 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.

**Change in Accounting Estimate** - The Company regularly reviews inventory quantities and inventory purchase commitments and writes down excess and obsolete inventory to its net realizable value, and records a loss for expected purchase order cancellation charges and for excess inventory purchase commitments that cannot be cancelled. The write-down is primarily based on historical inventory usage adjusted for expected changes in product demand and production requirements. Due to a downturn in the solar industry, product demand and production requirements have declined significantly. As the Company began its annual budget review in the fourth quarter of fiscal 2012, it determined that the downturn was expected to continue at least in 2013. As a result, the Company recorded a write-down of inventory of \$10.4 million for the fiscal year ended September 30, 2012. The Company also recorded a loss of \$2.5 million for the fiscal year ended September 30, 2012 on inventory purchase commitments. The inventory write-down and loss on inventory purchase commitments reduced operating income by \$12.8 million, reduced net income attributable to Amtech shareholders by \$9.7 million and increased basic and diluted loss per share by \$1.01 cents per share.

**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,		
	2012	2011	2010
	(dollars in thousands)		
Deferred revenues	\$ 11,200	\$ 29,666	\$ 12,577
Deferred costs	964	2,058	1,138
Deferred profit	<u>\$ 10,236</u>	<u>\$ 27,608</u>	<u>\$ 11,439</u>

**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 \$4.6 million and \$6.6 million as of September 30, 2012 and 2011, 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, 2012, also includes cash received from research and development grants related to our ion implant technology to be used for research and development projects. Restricted cash as of September 30, 2011, also included \$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,		
	2012	2011	2010
	(dollars in thousands)		
Balance at beginning of year	\$ 246	\$ 181	\$ 465
Provision / (adjustment)	271	115	(56)
Write offs	—	(50)	(228)
Balance at end of year	<u>\$ 517</u>	<u>\$ 246</u>	<u>\$ 181</u>

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

**Concentrations of Credit Risk** – Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash and trade accounts receivable. The Company's customers consist of manufacturers of solar cells, semiconductors, semiconductor wafers, LEDs 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 50% 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, 2012, two customers individually represented 14% and 12% of accounts receivable. As of September 30, 2011, one customer represented 33% of accounts receivable. Accounts receivable from Yingli Green Energy (Yingli) was 14% and 33% as of September 30, 2012 and 2011, 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 85% 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, 2012	September 30, 2011
	(dollars in thousands)	
Purchased parts and raw materials	\$ 19,644	\$ 24,925
Work-in-process	2,328	8,257
Finished goods	3,698	3,980
	<u>\$ 25,670</u>	<u>\$ 37,162</u>

**Property, Plant and Equipment** - Property plant, and equipment are recorded at cost. Maintenance and repairs are charged to expense as incurred. The cost of property retired or sold and the related accumulated depreciation and amortization are removed from the applicable accounts when disposition occurs and any gain or loss is recognized. Depreciation and amortization is computed using the straight-line method. Depreciation expense was \$2.2 million, \$2.1 million and \$1.3 million in fiscal 2012, 2011 and 2010, 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:

	<u>September 30, 2012</u>	<u>September 30, 2011</u>
	(dollars in thousands)	
Land, building and leasehold improvements	\$ 10,476	\$ 10,636
Equipment and machinery	7,272	6,003
Furniture and fixtures	5,458	5,434
	<u>23,206</u>	<u>22,073</u>
Accumulated depreciation and amortization	(10,819)	(9,393)
	<u>\$ 12,387</u>	<u>\$ 12,680</u>

**Goodwill** - Goodwill and intangible assets with indefinite lives are not subject to amortization, but are tested for impairment when it is determined that it is more likely than not that the fair value of a reporting unit or the indefinite-lived intangible asset is less than its carrying amount, typically at the end of the fiscal year, or more frequently if circumstances dictate. In the fourth quarter of fiscal 2012, the Company recorded a charge for impairment of goodwill in two of its reporting units. See Note 9, "Impairment Charge" for a description of the facts and circumstances leading to the goodwill impairment charge.

	<u>Years Ended September 30,</u>	
	<u>2012</u>	<u>2011</u>
	(dollars in thousands)	
Balance at beginning of year	\$ 13,313	\$ 4,839
Goodwill recognized due to acquisition	—	8,479
Impairment of goodwill	(4,735)	—
Net exchange differences	(223)	(5)
Balance at end of year	<u>\$ 8,355</u>	<u>\$ 13,313</u>

**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 \$0.7 million, \$0.8 million and \$0.4 million in fiscal 2012, 2011 and 2010, 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, \$0.5 million, \$0.4 million and \$0.2 million in 2013, 2014, 2015, 2016 and 2017 and \$1.6 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. See Note 9, "Impairment Charge" for a description of the facts and circumstances surrounding the impairment charges in fiscal years ending September 30, 2012 and 2010.

In the second quarter of fiscal 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. 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, 2012	September 30, 2011
	(dollars in thousands)	
Non-compete agreements	\$ 1,057	\$ 1,066
Customer lists	828	876
Technology	2,341	2,436
Licenses	—	500
In-process research and development	(1)	1,600
Other	325	97
	6,151	6,575
Accumulated amortization	(2,055)	(1,554)
	\$ 4,096	\$ 5,021

(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,		
	2012	2011	2010
	(dollars in thousands)		
Beginning balance	\$ 2,265	\$ 1,843	\$ 1,429
Warranty expenditures	(1,831)	(1,199)	(622)
Reserve provision	2,253	1,621	1,036
Ending balance	\$ 2,687	\$ 2,265	\$ 1,843

**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,		
	2012	2011	2010
	(dollars in thousands)		
Research and development	\$ 14,723	\$ 7,362	\$ 2,986
Grants earned	(1,029)	(1,578)	(868)
Net research and development	\$ 13,694	\$ 5,784	\$ 2,118

**Shipping expense** – Shipping expenses of \$1.7 million, \$5.9 million and \$2.5 million for fiscal 2012, 2011 and 2010 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 less than \$0.1 million, \$0.2

million and \$0.4 million in fiscal 2012, 2011 and 2010, 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 the Netherlands, France, Hong Kong and China, where separate returns are filed. The Netherlands operations file separate returns in that country and, prior to fiscal 2012, were included in the United States consolidated return. The Company computes deferred income tax assets and liabilities based upon cumulative temporary differences between financial reporting and taxable income, carryforwards available and enacted tax laws. The Company also accrues a liability for uncertain tax positions when it is more likely than not that such tax will be incurred.

Deferred tax assets reflect the tax effects of temporary differences between the carrying value of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management and based on the weight of available evidence, it is more likely than not that a portion or all of the deferred tax asset will not be realized. Each quarter the valuation allowance is re-evaluated.

**Stock-Based Compensation** - The Company measures compensation costs relating to share-based payment transactions based upon the grant-date fair value of the award. Those costs are recognized as expense over the requisite service period, which is generally the vesting period. The benefits 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, 2012, 2011 and 2010 reduced the Company's results of operations as follows:

	Years Ended September 30,		
	2012	2011	2010
	(dollars in thousands, except per share amounts)		
Effect on income before income taxes (1)	\$ (1,763)	\$ (1,470)	\$ (987)
Effect on income taxes	\$ 255	\$ 495	\$ 429
Effect on net income	<u>\$ (1,508)</u>	<u>\$ (975)</u>	<u>\$ (558)</u>

(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 2022. 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,		
	2012	2011	2010
Risk free interest rate	1.12%	2%	2%
Expected life	6 years	6 years	6 years
Dividend rate	0%	0%	0%
Volatility	70%	70%	69%

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 the multiemployer defined benefit pension plans of the Company's operations in the Netherlands and France and the plan for hourly union employees in Pennsylvania. The multiemployer plans in the United States and France are insignificant.

The Company's employees in the Netherlands, approximately 170, participate in a multi-employer union plan Pensioenfond Metaal en Techniek (PMT), determined in accordance with the collective bargaining agreements effective for the industry in the Netherlands. This collective bargaining agreement has no expiration date. This multiemployer union plan covers approximately 34,000 companies and 1.2 million participants. Amtech's contribution to the multiemployer union plan is less than 5.0% of the total contributions to the plan. The plan monitors its risks on a global basis, not by company or employee, and is subject to regulation by Dutch governmental authorities. By law (the Dutch Pension Act), a multiemployer union plan must be monitored against specific criteria, including the coverage ratio of the plan assets to its obligations. This coverage ratio must exceed 104.3% for the total plan. Every company participating in a Dutch multiemployer union plan contributes a premium calculated as a percentage of its total pensionable salaries, with each company subject to the same percentage contribution rate. The premium can fluctuate yearly based on the coverage ratio of the multiemployer union plan. The pension rights of each employee are based upon the employee's average salary during employment, the years of service, and the participants age at the time of retirement.

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

The coverage ratio of the multiemployer union plan is 91% as of September 30, 2012. Because of the low coverage ratio PMT prepared and executed a "Recovery Plan" which was approved by De Nederlandsche Bank, the Dutch central bank, which is the supervisor of all pension companies in the Netherlands. As a result of the Recovery Plan, the employer's premium percentage increased to 16.0% of pensionable wages in calendar year 2012. The coverage ratio is calculated by dividing the plan assets by the total sum of pension liabilities and is based on actual market interest. If the coverage ratio does not increase to 100% by December 31, 2012, the premium percentage may increase in calendar year 2013. As of October 31, 2012 PMT's total plan assets were \$58.2 billion and the actuarial present value of accumulated plan benefits was \$64.1 billion.

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

	<b>Contributions</b>		
	<b>Years Ended September 30,</b>		
	<b>2012</b>	<b>2011</b>	<b>2010</b>
	(dollars in thousands)		
Pensioenfond Metaal en Techniek (PMT)	\$ 1,021	\$ 913	\$ 548
Other plans	181	192	149
<b>Total</b>	<b>\$ 1,202</b>	<b>\$ 1,105</b>	<b>\$ 697</b>

The Company's defined contribution plans covers substantially of the employees in the United States. The Company matches employee funds on a discretionary basis. The match was insignificant in fiscal years 2012, 2011 and 2010.

### Impact of Recently Issued Accounting Pronouncements

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.

## 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 2022. Options issued by the Company vest over 1 to 4 years. The Company may also grant restricted stock awards under the 2007 Plan.

As of September 30, 2012 and 2011, the unamortized expense related to restricted shares was \$0.8 million and \$0.8 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,					
	2012		2011		2010	
	Awards	Weighted Average Grant Date Fair Value	Awards	Weighted Average Grant Date Fair Value	Awards	Weighted Average Grant Date Fair Value
Beginning Outstanding	120,970	\$ 9.42	128,751	\$ 6.34	122,875	\$ 5.85
Awarded	60,600	7.98	35,517	17.28	40,751	8.00
Released	(51,595)	8.72	(43,298)	6.78	(33,625)	6.46
Forfeited	(2,000)	7.22	—	—	(1,250)	8.20
Ending Outstanding	<u>127,975</u>	\$ 9.06	<u>120,970</u>	\$ 9.42	<u>128,751</u>	\$ 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	352,878	688,668	Apr. 2017
1998 Employee Stock Option Plan	500,000	—	79,772	Jan. 2008
Non-Employee Directors Stock Option Plan	350,000	90,600	122,853	Jul. 2015
		<u>443,478</u>	<u>891,293</u>	

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,					
	2012		2011		2010	
	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price
Outstanding at beginning of period	611,384	\$ 10.02	636,283	\$ 7.59	691,403	\$ 7.03
Granted	285,400	7.98	155,233	16.89	165,499	8.05
Exercised	(600)	5.33	(178,882)	7.35	(214,094)	6.19
Forfeited/canceled	(4,891)	9.50	(1,250)	6.94	(6,525)	5.70
Outstanding at end of period	<u>891,293</u>	9.37	<u>611,384</u>	\$ 10.02	<u>636,283</u>	\$ 7.59
Exercisable at end of period	<u>400,638</u>	\$ 9.25	<u>232,018</u>	\$ 8.31	<u>259,595</u>	\$ 7.97
Weighted average grant-date fair value of options granted during the period	\$ 4.95		\$ 10.57		\$ 4.98	

The following tables summarize information for stock options outstanding and exercisable as of September 30, 2012:

Range of Exercise Prices	Options Outstanding			
	Number Outstanding	Remaining Contractual Life (in years)	Average Exercise Price	Aggregate Intrinsic Value (in thousands)
3.01 - 7.00	273,353	6.2	\$ 5.06	\$ —
7.01 - 10.00	314,400	8.7	7.97	—
10.01 - 15.00	158,387	6.6	12.32	—
15.01 - 23.00	145,153	8.1	17.33	—
	<u>891,293</u>	7.5	\$ 9.37	\$ —
Vested and expected to vest as of September 30, 2012	<u>879,805</u>	7.4	\$ 9.38	\$ —

Range of Exercise Prices	Options Exercisable		
	Number Exercisable	Weighted Average Exercise Price	Aggregate Intrinsic Value (in thousands)
3.01 - 7.00	191,162	\$ 5.09	\$ —
7.01 - 10.00	31,000	7.84	—
10.01 - 15.00	130,161	12.68	—
15.01 - 23.00	48,315	17.33	—
	<u>400,638</u>	\$ 9.25	\$ —

The aggregate intrinsic value in the tables above represents the total pretax intrinsic value, based on the Company's closing stock price of \$3.31 per share as of September 30, 2012, 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, 2012, 2011 and 2010 was less than \$0.1 million, \$1.3 million and \$1.8 million, respectively.

### 3. Earnings Per Share

Basic earnings per share is computed by dividing net income (loss) available to common stockholders by the weighted average number of common shares outstanding for the period. Diluted earnings (loss) per share is computed similarly to basic earnings per share except that the denominator is increased to include the number of additional common shares that would have been outstanding if potentially dilutive common shares had been issued, and the numerator is based on net income (loss). In the case of a net loss, diluted earnings per share is calculated in the same manner as basic earnings per share. Options and restricted stock of approximately 1,020,000, 145,000 and 229,000 shares are excluded from the fiscal 2012, 2011 and 2010 earnings per share calculations as they are anti-dilutive.



	2012	2011	2010
	(dollars in thousands, except per share amounts)		
<b><u>Basic Earnings Per Share Computation</u></b>			
Net income (loss) attributable to Amtech Systems, Inc.	\$ (23,031)	\$ 22,882	\$ 9,563
Weighted Average Shares Outstanding:			
Common stock	9,471	9,480	9,022
Basic earnings (loss) per share attributable to Amtech shareholders	\$ (2.43)	\$ 2.41	\$ 1.06
<b><u>Diluted Earnings Per Share Computation</u></b>			
Net income (loss) attributable to Amtech Systems, Inc.	\$ (23,031)	\$ 22,882	\$ 9,563
Weighted Average Shares Outstanding:			
Common stock	9,471	9,480	9,022
Common stock equivalents (1)	—	284	215
Diluted shares	9,471	9,764	9,237
Diluted earnings (loss) per share attributable to Amtech shareholders	\$ (2.43)	\$ 2.34	\$ 1.04

(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 2012 and the repurchase program expired in fiscal 2012.

**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, 2012, we had unrecorded purchase obligations in the amount of \$12.1 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. The Company recorded a \$2.5 million loss on inventory purchase commitments for the fiscal year ended September 30, 2012.

**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.

**Operating Leases** – The Company leases buildings, vehicles and equipment under operating leases. Rental expense under such operating leases was \$1.4 million, \$1.2 million, \$1.0 million in fiscal 2012, 2011 and 2010, respectively. As of September 30, 2012, future minimum rental commitments under non-cancelable operating leases with initial or remaining terms of one year or more totaled \$3.2 million, of which \$1.2 million, \$0.7 million, \$0.4 million, \$0.3 million and \$0.2 million is payable in fiscal 2013, 2014, 2015, 2016 and 2017, respectively, and \$0.4 million, thereafter.

## 6. Major Customers and Foreign Sales

In fiscal 2012, one customer accounted for 11% of net revenue . 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. Yingli accounted for 7%, 15% and 28% of our net revenue in fiscal 2012, 2011 and 2010, respectively.

Our net revenues for fiscal 2012, 2011 and 2010 were to customers in the following geographic regions:

	Years Ended September 30,		
	2012	2011	2010
United States	13 %	6 %	7 %
Taiwan	9 %	16 %	17 %
China	43 %	69 %	64 %
Other	14 %	3 %	3 %
<b>Total Asia</b>	<b>66%</b>	<b>88%</b>	<b>84%</b>
Germany	8 %	3 %	3 %
Other	13 %	3 %	6 %
<b>Total Europe</b>	<b>21%</b>	<b>6%</b>	<b>9%</b>
	<b>100%</b>	<b>100%</b>	<b>100%</b>

## 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:

	<b>Years Ended September 30,</b>		
	<b>2012</b>	<b>2011</b>	<b>2010</b>
	(dollars in thousands)		
Net revenue:			
The Netherlands	\$ 48,294	\$ 195,404	\$ 88,467
United States	27,638	24,079	15,020
France	5,584	26,347	16,532
China	23	875	—
	<u>\$ 81,539</u>	<u>\$ 246,705</u>	<u>\$ 120,019</u>
Operating income (loss):			
The Netherlands	\$ (18,686)	\$ 28,724	\$ 12,165
United States	(1,025)	(1,742)	(1,955)
France	(3,041)	12,992	5,699
China	(10,232)	(1,695)	—
	<u>\$ (32,984)</u>	<u>\$ 38,279</u>	<u>\$ 15,909</u>
		<b>As of September 30,</b>	
		<b>2012</b>	<b>2011</b>
Net Long-lived Assets (excluding intangibles and goodwill)			
The Netherlands		\$ 9,555	\$ 9,960
United States		1,448	1,642
France		676	874
China		708	204
		<u>\$ 12,387</u>	<u>\$ 12,680</u>

## 8. Income Taxes

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

	Year Ended September 30,		
	2012	2011	2010
	(dollars in thousands)		
<b>Current:</b>			
Domestic Federal	\$ 2,440	800	\$ 200
Foreign	(9,380)	15,910	7,200
Domestic state	(90)	110	110
<b>Total current</b>	<u>(7,030)</u>	<u>16,820</u>	<u>7,510</u>
<b>Deferred:</b>			
Domestic Federal	—	(100)	(1,540)
Foreign	1,700	(520)	180
Domestic state	10	(10)	—
<b>Total deferred</b>	<u>1,710</u>	<u>(630)</u>	<u>(1,360)</u>
<b>Total provision (benefit)</b>	<u>\$ (5,320)</u>	<u>\$ 16,190</u>	<u>\$ 6,150</u>

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,		
	2012	2011	2010
	(dollars in thousands)		
Tax provision (benefit) at the statutory federal rate	\$ (11,190)	\$ 13,410	\$ 5,340
Effect of permanent book-tax differences	2,010	510	240
State tax provision	(80)	100	20
Valuation allowance for net deferred tax assets	1,740	470	90
Uncertain tax items	(240)	1,620	530
Expiration of foreign net operating loss	2,320	170	—
Other items	120	(90)	(70)
	<u>\$ (5,320)</u>	<u>\$ 16,190</u>	<u>\$ 6,150</u>

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,		
	2012	2011	2010
	(dollars in thousands)		
Deferred tax assets - current:			
Capitalized inventory costs	\$ 90	\$ 150	470
Inventory write-downs	600	590	820
Accrued Warranty	20	(580)	370
Deferred profits	2,510	6,820	(180)
Accruals and reserves not currently deductible	240	2,580	650
Deferred tax assets - current net of valuation allowance	<u>\$ 3,460</u>	<u>\$ 9,560</u>	<u>\$ 2,130</u>
Deferred tax assets (liabilities)- non-current:			
Stock option expense	470	270	430
Book vs. tax basis of acquired assets	(1,280)	(760)	(670)
Foreign and state net operating losses	3,640	850	380
Book vs. tax depreciation and amortization	100	300	350
Foreign tax credits	—	—	2,540
Other deferred tax assets	140	90	20
Total deferred tax assets - net	<u>3,070</u>	<u>750</u>	<u>3,050</u>
Valuation allowance	<u>(2,600)</u>	<u>(860)</u>	<u>(390)</u>
Deferred tax assets (liabilities)- non-current, net of valuation allowance	<u>\$ 470</u>	<u>\$ (110)</u>	<u>\$ 2,660</u>

Changes in the deferred tax valuation allowance are as follows:

	Year Ended September 30,		
	2012	2011	2010
	(dollars in thousands)		
Balance at the beginning of the year	\$ 860	\$ 390	\$ 300
Additions (subtractions) to valuation allowance	1,740	470	90
Balance at the end of the year	<u>\$ 2,600</u>	<u>\$ 860</u>	<u>\$ 390</u>

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.

At September 30, 2012, the Company has net operating loss carryforwards in some states, China, Hong Kong and France which expire in varying amounts between 2013 and 2021. We have established a valuation allowance on all deferred tax assets related to these foreign and state net operating loss carryforwards, except those in France, as based on the weight of available evidence, it is more likely than not that they will not be realized.

Tax payments of \$5.0 million were made and tax refunds of \$1.1 million were received during fiscal 2012.

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

million of this total represents the amount that, if recognized, would favorably affect our effective income tax rate in future periods.

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

	Year Ended September 30,		
	2012	2011	2010
	(dollars in thousands)		
Balances at beginning of the year	\$ 2,630	\$ 1,010	\$ 480
Additions (reductions) related to current year tax positions	(390)	1,210	490
Additions related to tax positions taken in prior years	360	450	70
Reductions related to settlements with tax authorities	(240)	—	—
Reductions due to lapse of statute of limitations	—	(40)	(30)
Balance at the end of the year	<u>\$ 2,360</u>	<u>\$ 2,630</u>	<u>\$ 1,010</u>

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. We recognized a net expense for interest and penalties of \$0.4 million, \$0.2 million and \$0.1 million for fiscal years 2012, 2011 and 2010, respectively. Income taxes payable long-term on the consolidated balance sheets includes a cumulative accrual for potential interest and penalties of \$0.7 million and \$0.4 million as of September 30, 2012 and 2011 respectively. During the current fiscal year, we recorded a benefit of \$0.2 million, resulting from the reversal of liabilities in taxing jurisdictions where a tax examination was finalized.

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

The Company and one or more of its subsidiaries file income tax returns in The Netherlands, Germany, France 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. During fiscal year 2012, the IRS examination for the fiscal year ending September 30, 2009 was closed without adjustment.

## 9. Impairment 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 value include: projected revenues, material costs and the rates of increase in payroll and other expenses. Projected future cash flows are discounted at a risk-free rate of return adjusted for various risk premiums.

The Company conducted its periodic assessment of long-lived assets in the fourth quarter of fiscal 2012 and identified the need for an impairment charge in two of its reporting units that serve the solar equipment market. The assessment identified the need to record an impairment charge related to goodwill in the amount of \$4.7 million, due primarily to the current supply / demand imbalance in the solar equipment market, the expectation that the market downturn will continue into 2013 and the decline in market value of shares of solar companies.

The Company also recorded charges of \$0.7 million in fiscal 2012 for impairment of assets related to license agreements with one of its technology partners. As a result of our technology partner's financial difficulties, their possible inability to service the product and insufficient revenues, management determined that the carrying value of the related assets is not recoverable. In Fiscal 2010, an impairment charge of \$0.6 million had been recorded for the excess of carrying value over the fair value of all the licenses. The fair value of the licenses had been determined through estimates of the present value of future cash flows based upon the anticipated future use of the licenses.

## **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 Silicon 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 \$4.0 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. The escrow funds have been released in full satisfaction of the Stock Purchase Note.

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 was funded during fiscal 2012 after the Stock Purchase Note had been paid in full.

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, the Company 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 in fiscal year 2011 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
(in thousands, except per share amounts)				
<b>Fiscal Year 2012:</b>				
Revenue	\$ 24,728	\$ 21,566	\$ 24,300	\$ 10,945
Gross margin	\$ 7,201	\$ 4,048	\$ 4,804	\$ (6,860)
Provision for income taxes	\$ (320)	\$ (220)	\$ (1,110)	\$ (3,670)
Net loss attributable to Amtech Systems, Inc.	\$ (876)	\$ (5,079)	\$ (2,965)	\$ (14,111)
Comprehensive loss attributable to Amtech Systems, Inc.	\$ (4,607)	\$ (2,877)	\$ (6,816)	\$ (13,470)
<b>Net loss per share attributable to Amtech Systems, Inc.:</b>				
Basic	\$ (0.09)	\$ (0.54)	\$ (0.31)	\$ (1.49)
Shares used in calculation	9,446	9,479	9,479	9,482
Diluted	\$ (0.09)	\$ (0.54)	\$ (0.31)	\$ (1.49)
Shares used in calculation	9,446	9,479	9,479	9,482
(in thousands, except per share amounts)				
<b>Fiscal Year 2011:</b>				
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 (loss) attributable to Amtech Systems, Inc.	\$ 3,539	\$ 11,430	\$ 8,744	\$ (1,927)
<b>Net income per share:</b>				
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

## 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, 2012.

### **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, 2012.

There were no changes in our internal controls over financial reporting that occurred during the year ended September 30, 2012, 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, 2012 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, 2012, 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 December 6, 2012 expressed an unqualified opinion.

/s/ MAYER HOFFMAN MCCANN P.C.

Phoenix, Arizona  
December 6, 2012

## **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 2012 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.

December 6, 2012

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
* ----- Jong S. Whang	Executive Chairman and Chairman of the Board	December 6, 2012 -----
* ----- Fokko Pentinga	Chief Executive Officer and President  (Principal Executive Officer)	December 6, 2012 -----
/s/ Bradley C. Anderson ----- Bradley C. Anderson	Executive Vice President – Finance and Chief Financial Officer  (Principal Financial Officer)	December 6, 2012 -----
* ----- Robert T. Hass	Vice President and Chief Accounting Officer  (Principal Accounting Officer)	December 6, 2012 -----
* ----- Michael Garnreiter	Director	December 6, 2012 -----
* ----- Alfred W. Giese	Director	December 6, 2012 -----
* ----- Egbert J.G. Goudena	Director	December 6, 2012 -----
* ----- Robert F. King	Director	December 6, 2012 -----

\*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	Amended and Restated Articles of Incorporation, as amended through February 6, 2012.	A
3.2	Certificate of Designations, Preferences and Privileges of the Series A Convertible Preferred Stock (Par Value \$.01 Per Share) of Amtech Systems, Inc., dated as of April 21, 2005.	B
3.3	Amended and Restated Bylaws of Amtech Systems, Inc., dated as of January 4, 2008.	C
4.1	Amended and Restated Rights Agreement dated as of December 15, 2008, by between Amtech Systems, Inc. and Computershare Trust Company, N.A., as rights agent, 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.	D
4.2	Form of Accredited Investor Subscription Agreement for the Series A Convertible Preferred Stock.	B
10.1	Amtech Systems, Inc. 1998 Stock Option Plan, as amended through March 29, 2002.	E
10.2	Non-Employee Directors Stock Option Plan, effective July 8, 2005 as amended through March 11, 2010.	F
10.3	2007 Employee Stock Incentive Plan of Amtech Systems, Inc., as amended through March 11, 2010.	F
10.4	Second Amended and Restated Employment Agreement between Amtech Systems, Inc. and Jong S. Whang, dated February 9, 2012.	A
10.5	Amendment, dated as of July 1, 2012, to the Second Amended and Restated Employment Agreement between Amtech Systems, Inc. and Jong S. Whang, dated as of February 9, 2012.	G
10.6	Employment Agreement between Amtech Systems, Inc. and Fokko Pentinga, dated June 29, 2012.	H
10.7	Amendment, dated as of July 1, 2012, to the Employment Agreement between Amtech Systems, Inc. and Fokko Pentinga, dated as of June 29, 2012.	G
10.8	Change of Control Severance Agreement, dated as of March 10, 2008 between Amtech Systems, Inc. and Bradley Anderson.	K
10.9	Amended and Restated Change of Control and Severance Agreement, dated March 11, 2010, between Amtech Systems, Inc. and Robert T. Hass.	F
10.10	Change of Control and Severance Agreement, dated as of April 25, 2011, between Amtech Systems, Inc. and Jeong Mo Hwang PhD.	I
10.11	Sale Agreement, dated March 15, 2007, for purchase of manufacturing facility located in Vassen, The Netherlands by Tempres Holdings B.V. from Mr. F. H. Van Berlo.	L
10.12	Stock Purchase and Sale Agreement, by and among Tempres Holdings, B.V., R2D Ingenierie SAS and the Shareholders of R2D Ingenierie SAS, dated as of October 8, 2007.	M
10.13	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, dated as of January 27, 2011.	N
10.14	Amendment to the Kingstone Stock Purchase and Sale Agreement, dated as of January 27, 2011, by and among Amtech Systems, Inc., Silicon Jade Limited, effective as of September 30, 2011.	O
21.1	Subsidiaries of the Registrant	*
23.1	Consent of Independent Registered Public Accounting Firm - Mayer Hoffman McCann P.C.	*
24.1	Powers of Attorney	*
31.1	Certification Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as Amended	*
31.2	Certification Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as Amended	*

32.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	*
32.2	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	*
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	**

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- \* 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 Quarterly Report on Form 10-Q for the quarterly period ended December 31, 2011.
- B Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on April 28, 2005.
- C Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 8, 2008.
- D Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on December 15, 2008.
- E Incorporated by reference to Amtech's Form S-8 Registration Statement (related to the 1998 Stock Option Plan), filed with the Securities and Exchange Commission on February 11, 2003.
- F Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on March 17, 2010.
- G Incorporated by reference to Amtech's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2012.
- H Incorporated by reference to Amtech's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 6, 2012.
- I Incorporated by reference to Amtech's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 26, 2011.
- J Incorporated by reference to Amtech's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2006.
- K Incorporated by reference to Amtech's Current Report on Form 8-K/A, filed with the Securities and Exchange Commission on December 3, 2012.
- L Incorporated by reference to Amtech's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2007.
- M Incorporated by reference to Amtech's Current Report on Form 8-K, filed with the Securities and Exchange Commission on October 11, 2007.
- N Incorporated by reference to Amtech's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2011.
- O Incorporated by reference to Amtech's Annual Report on Form 10-K for the quarterly year ended September 30, 2011.



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## Executive Officers

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

Fokko Pentinga  
Chief Executive Officer, President and Director

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](mailto:corporate@AmtechSystems.com)  
Website: [amtechsystems.com](http://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](http://www.computershare.com)

### Legal Counsel

Squire, Sanders & Dempsey L.L.P.  
1 E. Washington St. 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](http://www.nasdaq.com)

## Independent Directors

Michael Garnreiter  
Vice President / Treasurer  
Shamrock Foods Company  
Phoenix, 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

Robert F. King  
President of King Associates  
Surprise, Arizona



## Subsidiaries

**Tempress Systems, Inc. & Subsidiaries**  
Vaassen, The Netherlands

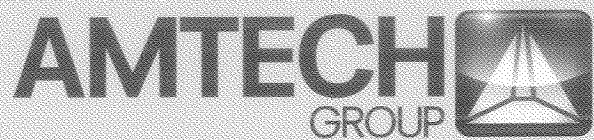
**Bruce Technologies, Inc.**  
Billerica, Massachusetts

**R2D Automation SAS**  
Clapiers, France

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

**Kingstone Semiconductor Ltd.**  
Shanghai, China





visit us online at:

**[www.amtechsystems.com](http://www.amtechsystems.com)**

131 South Clark Drive  
Tempe, Arizona 85281 USA

P 480 967 5146

F 480 968 3763