

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, 1997  
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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  
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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: 602-967-5146  
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Securities registered pursuant to Section 12(b) of the Act: None  
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Securities registered pursuant to Section 12(g) of the Act:

Common Stock, \$.01 Par Value

-----  
(Title of Class)

Redeemable Public Warrant

-----  
(Title of Class)

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 if disclosure of delinquent filers pursuant to  
Item 405 of Regulation S-K 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.  Yes

State the aggregate market value of voting stock held by nonaffiliates  
of the registrant: \$9,849,950 as of December 26, 1997

APPLICABLE ONLY TO REGISTRANTS INVOLVED IN BANKRUPTCY  
PROCEEDINGS DURING THE PRECEDING FIVE (5) YEARS:

Indicate by check mark whether the registrant has filed all documents  
and reports required to be filed by Section 12, 13 or 15(d) of the Securities  
Exchange Act of 1934 subsequent to the distribution of securities under a plan  
confirmed by a court.  Yes  No

APPLICABLE ONLY TO CORPORATE REGISTRANTS

Indicate the number of shares outstanding of each of the registrant's  
classes of Common Stock, as of the latest practicable date: 4,185,106 shares of  
Common Stock, \$.01 par value, outstanding as of December 26, 1997.

DOCUMENTS INCORPORATED BY REFERENCE

PART III (Items 10-13) is incorporated by reference to the registrant's

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Background

Amtech Systems, Inc. (the "Company") was incorporated in Arizona in October, 1981, under the name Quartz Engineering & Materials, Inc., and changed to its present name during 1987. The Company also conducts operations through two (2) wholly owned subsidiaries, Tempres Systems, Inc. ("Tempres Systems") and P.R. Hoffman Machine Products, Inc. ("P.R. Hoffman").

The Company's initial business was the manufacture of low technology quartzware implements for sale to and use by manufacturers of semiconductor chips. The Company is currently, and has been since 1987, engaged in the manufacture and marketing of several items of capital equipment used by customers in the manufacture of semiconductors, one of which is patented. The Company's Processing/Loading product line (Atmoscan(R), IBAL and load stations) is designed to permit its customers to increase the degree of control over their semiconductor chip manufacturing environment and to reduce exposure to contaminants by limiting human contact during the process. In fiscal 1995, the Company began the complementary business of producing and selling horizontal diffusion furnaces for use in semiconductor fabrication, through its wholly owned subsidiary, Tempres Systems.

On July 1, 1997, the Company, through its wholly owned subsidiary, P.R. Hoffman, purchased substantially all of the assets of P.R. Hoffman Machine Products Corporation, based in Carlisle, Pennsylvania. P.R. Hoffman develops, manufactures, markets and sells double sided precision lapping and polishing machines and related products including carriers, semiconductor polishing templates and replacement parts. These products are high throughput precision surface processing systems used in the manufacture of semiconductor wafers and other thin wafer materials, such as computer disk media and ceramic components for wireless communication devices.

In addition, the Company has proposed the development of a new photo chemical vapor deposition ("CVD") product for use in semiconductor manufacturing facilities, which product would be based upon the Company's existing U.S. patent on such technology. In 1994, the Company engaged the University of California, Santa Cruz to conduct a study to determine the feasibility of developing a CVD product. While this study has already proven that the Company's patented method prevents the clouding of the window that separates the light source from the photo CVD reactor chamber, further work is required to determine whether it is feasible to develop a commercially viable reactor incorporating this design. In this regard, the second phase of the study involves testing higher intensity light sources. Although the first of such lamps failed to meet expectations, the Company expects to receive a newly designed version of the lamp in the second quarter of fiscal 1998. That lamp will be used to determine the commercial feasibility of such a product. If the results of the study are sufficiently favorable, the Company intends to commence to design, manufacture and market a photo CVD product. See "--Operating Strategy and Industry Overview."

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Unless the context otherwise requires, the "Company" refers to Amtech Systems, Inc., an Arizona corporation, and its wholly owned subsidiaries. The Company's principal executive offices are located at 131 South Clark Drive, Tempe, Arizona 85281 and its telephone number is (602) 967-5146.

Operating Strategy and Industry Overview

The Company is engaged primarily in the manufacture and marketing of several items of capital equipment and related consumables and spare parts used by customers in the manufacture and fabrication of semiconductors. Semiconductors, or semiconductor "chips," are made of silicon and are part of the circuitry of electronic computers. The manufacture of semiconductors involves many complex operations during which silicon wafers (the substrates from which chips are made) are inserted in a diffusion furnace and subjected to the precise flow of gases under very intense heat. The Company's Processing/Loading product line is intended to permit customers using horizontal diffusion furnaces to increase the degree of control over the manufacturing environment and to reduce exposure to contaminants by reducing the amount of human contact during the process. Following an industry trend, the size of individual chips has tended to decrease and the size of the wafers from which chips are made has tended to increase. As a result, the value of each wafer has increased because each is the source of an increased number of chips. As the value of wafers increase, so too does the importance of control over the manufacturing environment. In addition to the Company's Processing/Loading product line, the Company manufactures and sells horizontal diffusion furnaces through its wholly owned subsidiary, Tempres Systems.

There also is a trend in the industry, related to the trend to smaller chips, toward the use in new semiconductor manufacturing facilities of newer technology, vertical diffusion furnaces, which are more efficient to use than the horizontal diffusion furnaces in certain manufacturing processes of smaller chips on larger wafers. Vertical diffusion furnaces are, however, significantly more expensive to purchase than horizontal diffusion furnaces. The Company's

Processing/Loading product line is useable with horizontal diffusion furnaces only.

The July 1997 addition of P.R. Hoffman's product line of double sided precision lapping and polishing machines and related products enables the Company to offer its existing and prospective customers an expanded product line and a variety of manufacturing solutions for their businesses. Accordingly, the P.R. Hoffman acquisition has broadened and expanded the markets served by the Company, which now include fabricators of semiconductor devices to the producers of the silicon wafers used by those fabricators. The Company intends to expand the markets for the P.R. Hoffman product line to the Company's existing and prospective customers with the aid of the Company's larger and more established international distribution channel. In addition, through this acquisition the Company has obtained access for its existing products to markets currently served by P.R. Hoffman.

The Company's target market for its Processing/Loading product line consists of customers who wish to increase the efficiency of their existing semiconductor manufacturing facilities equipped with horizontal diffusion systems. Through its Tempres System operations, the Company also provides its customers with efficient integrated horizontal diffusion furnace systems. The Company's target market also includes customers who build new facilities but whose operations do not require or otherwise want the higher priced vertical diffusion furnace systems. Based on

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market information obtained through customer and market contacts, the Company believes that a majority of worldwide semiconductor manufacturing facilities are equipped with horizontal diffusion furnaces, as compared with vertical diffusion furnaces. While the Company estimates that in the next several years the percentage of facilities in the world equipped with each type of system will become equal, it believes that a significant demand for its present product line will continue to exist, although there can be no assurance in that regard. The Company plans to increase its share of the diffusion furnace market by expanding its manufacture and sales of horizontal diffusion furnaces. In 1996, Tempres Systems acquired a modern, high-tech manufacturing facility in Heerde, The Netherlands, for its European operations, and moved its operations into the new facility in November 1996.

The Company's target market for its lapping and polishing machines and related consumables and spare parts are original equipment manufacturers ("OEMs") and end users who produce silicon wafers for semiconductor chip manufacturers, as well as, thin wafers of other materials, such as quartz, ceramics and metals used in the manufacture of computer storage disks, optics and ceramic components for wireless communication products. Demand for silicon wafer lapping and polishing machines and related products has been fueled by the inherent need of semiconductor device manufacturers to continually meet the growing demand for such semiconductors caused by the virtual explosion of new uses for such devices. In order to produce today's higher density chips, semiconductor manufacturers must maintain tighter tolerances with respect to the surface finish, flatness, and planerization of the bare silicon wafer, which in turn is requiring more polishing steps and thus more surface processing equipment. A similar trend is occurring in the computer disk industry as manufacturers strive to produce higher density drives in order to satisfy end user demand for greater storage capacity and reduced size. Based upon available industry statistics and analyst data, the following market information reflects future prospects for growth for P.R. Hoffman's product line: (i) the markets for grinding and polishing equipment for blank silicon wafers and disk media are projected to increase at a compound annual growth rate in excess of 20%; (ii) the semiconductor and memory disk industries have experienced rapid growth as a result of continued expansion of the personal computer, workstation, network, and telecommunications markets coupled with increased utilization of semiconductors in products such as automobiles and consumer electronics and appliances; and (iii) United States demand for silicon wafers is projected to increase at a 12% compound annual rate, reaching \$3.8 billion by the year 2000.

**Industry Slowdown.** Semiconductor manufacturers currently are experiencing a significant decrease in the prices of semiconductors, squeezing manufacturers' margins. These factors may affect semiconductor manufacturers' decisions to purchase capital equipment such as the Company's products. Further price declines due to increased supply of semiconductors may have a material adverse effect on the Company's business and results of operations.

**Increased Backlog.** During recent periods, the Company has experienced a significantly greater order backlog than prior periods. This increase in backlog is due primarily to the continuing expansion of Tempres Systems, a large multi-year order and the July 1, 1997 acquisition of the P.R. Hoffman operations. Further, the Company expects that the recent turmoil in the Asian financial markets will likely reduce equipment sales into that region. The Company expects to mitigate or offset any such decline by re-focusing sales and marketing efforts on other regions of the world and adjusting operating costs, if required. Notwithstanding the foregoing, the recent

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acquisition of P.R. Hoffman, which will be included in the results of operations for all four (4) quarters in fiscal 1998 and subsequent years, is expected to allow the Company to continue its growth in sales and operating profits, at

least through the end of fiscal 1998. The Company continues to seek expansion of its revenue and operating profit through the development and acquisition of new products that complement its own. See "--Order Backlog."

## Products

### Processing/Loading Equipment Atmoscan(R)

The Company's "Atmoscan(R)" is a patented controlled environment wafer processing system for use with horizontal diffusion furnaces. When in use, it is loaded with wafers and inserted into the diffusion furnace under a nitrogen controlled environment. The technology protected by the Company's Atmoscan(R) patents is a processing method that includes a cantilever tube used to load silicon wafers into a diffusion furnace and through which a purging inert gas flows during the loading and unloading processes.

The Company believes that among the major advantages afforded by the Atmoscan(R) product are increased control of the environment of the wafers during the gaseous and heating process, thereby increasing yields and decreasing manufacturing costs, and a decreased need for the cleaning of diffusion furnace tubes, which ordinarily involves substantial expense and equipment down time. Additional significant economies in the manufacturing process are also believed to result.

The Company has manufactured and sold Atmoscan(R) units to major semiconductor manufacturers in the United States, the Pacific Rim and Europe, including at various times to International Business Machines, Intel Corporation, Samsung, Digital Equipment Corp., Motorola, SGS-Thompson, SVG-Thermco and others. Sales of Atmoscan(R) have declined from their peak in 1989, due to an industry trend toward use of vertical diffusion furnaces.

The Company has designed and sells an open cantilever paddle system, which remains the most commonly used wafer loading system in the industry. This product was introduced to the market prior to Atmoscan(R), the Company's alternative to the cantilevered processing system.

### IBAL Automation

"IBAL" is an acronym for "Individual Boats with Automated Loading." The Company's IBAL automation is an integrated automation system composed of several modules, with the base module being called simply IBAL. Boats are quartz trays that hold silicon wafers while they are being processed in diffusion furnaces. IBAL, with a patent pending, is a device, including software, which automatically places boats into Atmoscan(R) tubes or onto a cantilever paddle system before they are inserted in the diffusion furnace and automatically removes the trays after completion of the process.

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IBAL Butler is a robotics device which further automates the loading of wafers into the diffusion furnace by automatically transferring wafer carriers onto the IBAL for loading into the Atmoscan(R) or on the cantilever paddle system for the appropriate furnace tube. IBAL Queue provides a convenient staging area for the operator to place boats on a load station and automates the loading of those boats onto the IBAL Butler. The first IBAL Queue unit was shipped during the second quarter of fiscal 1994. Use of the IBAL products reduces human handling and, therefore, reduces exposure of wafers to contaminants during the loading and unloading of the process tubes. All of the IBAL modules have been designed by the Company.

### Load Stations

The IBAL automation products described above are offered and sometimes sold as a complete system, mounted on a device called a "load station," which also includes an ultra-clean environment for wafer loading by filtering and controlling the flow of air. The Company began shipping such high-end load stations, which are assembled and tested in its Tempe, Arizona facility, in fiscal 1992. Further, almost all diffusion furnaces, described below, are sold with either a Tempress(R) load station, manufactured in The Netherlands, or a high-end load station described in the preceding sentence.

### Diffusion Furnaces

Through its wholly owned subsidiary, Tempress Systems, the Company produces and sells horizontal diffusion furnace systems, which generally include a Tempress(R) load station, with the Tempress(R) trademark under the Amtech/Tempress name. These furnaces utilize existing industry technology for sale to customers who do not require the advanced automation of, or want to incur the major expense of, acquiring vertical diffusion furnaces. While the major advantage of vertical diffusion furnaces is their susceptibility to increased automation, which decreases the degree of human intervention in the manufacturing process, the use of horizontal diffusion furnaces, with less automation, is more economical for larger size chips and multi-model semiconductor manufacturing. While industry forecasts indicate that overall market demand for horizontal diffusion furnaces will decline, the Company believes that a significant niche market will persist.

The Company started the horizontal diffusion furnace business utilizing certain acquired assets previously owned by a bankrupt company, Tempress B.V., located in The Netherlands, including the right to use the trade name "Tempress(R)" in connection with such furnaces. Tempress B.V. was involved in the development, manufacture and sale of a number of different products, including a horizontal diffusion furnace. The right to use the trade name "Tempress" is also held by three subsidiaries of the former Tempress B.V. in connection with the sale of other Tempress products and services unrelated to the horizontal diffusion furnace. The Company believes, and sales volume would appear to support, that the diffusion furnace products it designs and sells under the "Tempress" name are gaining acceptance by the Company's targeted market.

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#### Double Sided Planetary Lapping and Polishing Machines

Through its wholly owned subsidiary, P.R. Hoffman, the Company develops, manufactures, markets and sells double sided precision lapping and polishing machines and complementary products including carriers, semiconductor polishing templates and parts. Double sided lapping and polishing machines are designed to process wafer type products such as semiconductor silicon wafers, computer disk media and ceramic components for wireless communication devices to exact tolerances of thickness, flatness, parallelism and surface finish. The polishing process is used to change the characteristics of the surface of a semiconductor wafer or thin film memory disk. Polishing is a complex science, often involving multiple steps, each at a specified set of process parameters such as polishing speed, pressure, time and temperature. Polishing improves the flatness (planarity), smoothness and optical properties of a surface.

Processes similar to polishing includes lapping (a process where no polishing pad is used and the workpiece is pressed into a polishing liquid (slurry) which is applied to a cast-iron lapping wheel). Lapping results in higher removal rates than polishing but produces rougher surface finishes. Dimensional tolerance, surface finish, quantity of material to be removed along with production rates required and cost of operation are the primary variables considered in the determination of the best process for a specific application. Polishing and other surface treatment processes are typically followed by a cleaning process.

The following table summarizes the various models of surface processing machines and the markets for each of these products:

DOUBLE SIDED LAPPING AND POLISHING MACHINES

Model -----	Year Introduced -----	Markets -----
PR-1	1938	Quartz
PR-2	1940	Quartz
1500	1990	Quartz, ceramics, medical
1900	1992	Ceramics, optics, computer disks
3100	1995/96	Computer disks, optics, metal working, ceramics
4800	1981	Silicon semiconductor, optics, metal working, ceramics

On average, the Company's surface processing systems are priced lower than competing systems offered by SpeedFam, Peter Wolters of America, and Lapmaster. The systems offered by the

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Company's competitors tend to feature more sophisticated controls and user interfaces, and thus in some applications can be operated by less skilled employees. The Company intends to evaluate proposed plans to incorporate more sophisticated controls into its next line of lapping and polishing machines.

#### Carriers

Carriers are workholders where wafers are nested during the lapping and polishing processes. Carriers are produced for the Company's line of lapping and polishing machines as well as for competitors' systems. Substantially all of the carriers are customized for specific applications. The Company produces custom carriers in a variety of sizes, configurations and materials. An expanding category of the Company's steel carriers contain plastic inserts molded into the work-holes of the carrier and are referred to as insert carriers. Although 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. Steel carriers can cause damage (edge chipping) to delicate parts (i.e. 8" and larger semiconductor wafers). Insert carriers provide the advantages of steel carriers while reducing the potential of damage to the edges of sensitive materials.

The Company licenses the design for its steel carrier with plastic inserts from Wacker GmbH in Germany ("Wacker"). Under a license agreement with Wacker, the Company pays Wacker a 5% royalty for carriers sold by the Company based on this design. The Company believes that the licensor, despite patenting the design, is currently unable to consistently manufacture carriers which properly hold the wafer in place and the Company believes that its proprietary manufacturing process provides a competitive barrier to entry. The royalty fee does not apply to sales to the licensor.

#### Semiconductor Polishing Templates

The Company's single sided polishing templates are used to polish silicon wafers. Since the Company does not manufacture surface processing systems for single sided applications, templates are designed to work with machines manufactured by leading suppliers in this market segment such as Cybeq, SpeedFam and Westech. Polishing templates are customized for specific applications and are manufactured to such exacting tolerances that even a change in humidity of 10% can result in unacceptable mechanical defects, performance and durability.

#### Plates, Gears, Wear Items and Other Parts

The Company produces a wide assortment of plates, gears, parts and wear items for both its own as well as for competitors' machines. The Company manufactures approximately eighty percent (80%) of the parts that are used in its machines. In addition to producing standard off-the-shelf parts, the Company has the ability to produce highly customized parts.

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#### Proposed New Products

##### CVD Technology

The Company has patented an invention which it believes may be of significant importance to the semiconductor manufacturing industry. It is now having a research study conducted to determine the feasibility of developing semiconductor manufacturing equipment using this patented invention. The invention relates to an improvement to the CVD process used in the manufacture of certain semiconductors. The improvement uses ultraviolet light to activate the deposition reactions rather than thermal heat or plasma, which are presently the common means in commercial CVD processing. This photo-assisted CVD process is separate and distinct from the diffusion process in which the Company's existing products are used and its use is not limited to facilities with horizontal diffusion furnaces, as are the Company's existing products. Accordingly, if a commercially viable photo-assisted CVD machine is developed, it could be used in facilities that only use vertical furnaces.

A photo-assisted CVD process is potentially attractive for the manufacture of semiconductors because it allows a less severe processing environment. First, the photo-assisted CVD processes occur at lower temperatures and the lower temperature reduces the risk of temperature related defects in the deposited materials. In this process, ultraviolet or UV light is used as the energy source to effect the deposition of chemicals on the wafers. The photo-assisted CVD processes also avoid radiation damage which can occur with currently prevalent processes. Furthermore, photo-assisted CVD processes based on the Company's patented method are more readily adaptable to the use of larger wafers (the silicon substrates from which semiconductor chips are made) than other CVD processes now in use. The trend in the industry is toward the use of larger size wafers and smaller size chips.

The Company has not determined whether a commercially feasible product can be developed from this technology. The Company has entered into a Research Agreement with the Regents of the University of California ("University") whereunder a feasibility study is being undertaken by the University under the direction of Roger W. Anderson, Ph.D. It is anticipated that, if the results of the University study are favorable, the Company will design and develop specifications for an initial photo-assisted CVD device. The initial device is expected to have one "chamber," containing a number of light pipes which are patented and a pedestal (called a susceptor) to hold wafers and would be sold to academic and industry research facilities. See "Patents." If use by such facilities results in acceptance of the technology by the industry, the Company will attempt to develop a fully automatic multi-chamber, multi-wafer product for mass production of semiconductors. The automation (or robotic) components of the product are expected to be procured from other manufacturers.

The Company's current plans for developing a saleable model of the proposed new photo CVD product are conceptual only. Detailed planning is expected to be done if, as and when the University study demonstrates the product's commercial feasibility. The development of first a research laboratory product and then an industrial product is expected to take a period of

approximately two to three years.

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The total cost of the photo-assisted CVD product development effort is expected to be approximately \$3,200,000, expended in stages over a two to three year period. All of the Company's plans and estimates are subject to significant uncertainties.

#### Wafer Reclaiming Venture

In November 1995, the Company entered into a joint venture agreement pursuant to which it acquired a 45% ownership interest and a 50% voting interest in Seil Semicon, Inc. ("Seil Semicon"). Seil Semicon intends to develop and operate a silicon test wafer reclaiming business. The Company had invested \$425,000 in the venture. In September 1996, the Company reached an agreement to dispose of its interest in the joint venture. In accordance with the termination agreement, the Company received \$478,143 as a return of its initial investment and reimbursement of certain direct and indirect expenses related to establishing and monitoring the joint venture. The Company estimated that additional costs during the start-up phase of Seil Semicon, as well as additional equipment required for operations, increased the total projected capital requirements by approximately \$2.5 million over previously anticipated amounts. Under the then existing ownership structure, the Company was the joint venture's primary source for these additional funds. The Company concluded that it did not want to increase its investment in the joint venture to \$2-3 million without obtaining majority control.

#### Manufacturing and Suppliers

The Company assembles its equipment and systems from components and fabricated parts manufactured and supplied by others, including quartz and metal components. Certain parts are machined in the Company's own machine shops. Certain of the items manufactured by others are made to the Company's specifications. All final assembly and system tests are performed within the Company's manufacturing/assembly facilities. Quality control is maintained through incoming inspection of components, in-process inspection during equipment assembly and final inspection and operation of manufactured equipment prior to shipment. The Company's Processing/Loading product line is manufactured at its Tempe, Arizona plant. The Company conducts similar engineering, purchasing and assembly operations in the manufacture of its diffusion furnace line in a building owned and located in Heerde, Netherlands. The Company's lapping and polishing machines and related parts are manufactured at the Company's facilities in Carlisle, Pennsylvania.

If the proposed photo-assisted CVD product is developed, the Company plans to continue to do the engineering and purchasing and rely on suppliers for most parts and to assemble and do a small amount of machining work internally.

The Company's operations in Carlisle, Pennsylvania also are equipped to perform a high percentage of the manufacturing process. The manufacturing at this facility includes the following: metal stamping, milling, painting, assembling, welding, punching, cutting, heat treating, machining and laminating. Manufacturing processes which are typically subcontracted out include plastic injection, laser cutting and wire EDM machining, and complex electrical wiring. Key suppliers include two (2) steel mills capable of holding the type and tolerances the Company requires, an injection molder that provides plastic insets for steel carriers, a pad supplier that produces a unique material used to attach semiconductor wafers to the polishing template

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(sole sourced from a Japanese company), and adhesive manufacturing that supplies the critical glue used in the production of the semiconductor polishing templates.

#### Order Backlog

As of November 30, 1997, the Company's order backlog for semiconductor equipment was approximately \$5,860,000 (including \$1,480,000 attributable to the Company's P.R. Hoffman operations) compared to approximately \$3,875,000 at the same date in the previous year. The Company includes in its backlog all credit approved customer purchase orders. The Company anticipates that approximately \$800,000 of its current backlog will be shipped in fiscal 1999. Orders in the backlog may be canceled by the customer upon payment of mutually acceptable cancellation charges. While the current backlog includes the orders of one customer expected to be shipped over two fiscal years (fiscal 1998 and 1999), orders generally are shipped within three to six months of receipt. Accordingly, the backlog may not be a valid measure of revenue for a future period. In addition, a backlog does not provide any assurance that the Company will realize a profit from the order.

#### Research, Development and Engineering

The markets in which the Company competes are characterized by evolving industry standards and frequent improvements in products and service. To compete effectively in its markets, the Company must continually improve its products and its process technologies and develop new technologies and products that compete effectively on the basis of price and performance and that adequately

address current and future customer requirements. The Company's research, development and engineering expenditures during fiscal 1995, 1996 and 1997, were approximately \$232,000, \$325,000 and \$280,000, respectively.

The Atmoscan(R), was acquired in 1983 through a licensing arrangement with its inventor, who was not employed by the Company. The other products (excluding the Company's products acquired in the P.R. Hoffman acquisition) were developed by Company personnel. The patented photo-assisted CVD technology was invented and patent rights assigned to the Company by an employee. The Company presently employs at its Tempe, Arizona plant, four engineers, including one with a Ph.D. and one in the sales department and the Corporate General Manager, and six technicians. The Company presently employs two engineers, one with a Ph.D., and nine technicians in its Netherlands operation. These employees design and support the horizontal diffusion furnace product line manufactured in The Netherlands. One engineer and one technician are employed in the Company's Carlisle, Pennsylvania operation. They design wafer lapping machines and carriers to meet the customers' processing requirements.

Historically, the Company's product development has been accomplished through cooperative efforts with two key customers. While there can be no assurance that such relationships will continue, such cooperation is expected to continue to be a significant element in the Company's future development efforts. The Company's relationship with one of these customers is substantially dependent on the personal relations established by the Company's President, Mr. Jong S. Whang. It is anticipated that approximately five additional engineers and technicians will be required for the proposed new photo-assisted CVD product development effort.

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#### Patents

Generally, the effect of a patent is that the courts will grant to the patent holder the right to prevent others from making, using and selling the combination of elements or combination of steps covered by the patent. The Company has several United States patents on the Atmoscan(R) system, each reflecting an improvement to or modification of the previous patent. The two Japanese patents on the Atmoscan(R) cover the first two U.S. patents listed in the table, below.

The Company has two United States patents on its photo-assisted CVD method, the second being an improvement on the first, and the Japanese patent is pending on the photo-assisted CVD method. Other than certain patents on the IBAL automation, neither the IBAL, cantilever, load stations nor the diffusion furnace products are protected by patents.

The following table shows the patents granted and the expiration date thereof and the patents pending for the Company's products in each of the countries listed below:

Product - - - - -	Country - - - - -	Expiration Date or Pending Approval - - - - -
Atmoscan(R)	United States	July 10, 2001
Atmoscan(R)	United States	July 2, 2002
Atmoscan(R)	United States	August 30, 2005
Atmoscan(R)	Korea	May 30, 1999
Atmoscan(R)	Japan	June 1, 2004
Atmoscan(R)	Japan	July 18, 2005
Atmoscan(R)	European Patent Community	
	- France	July 18, 2004
	- Germany	July 18, 2004
	- United Kingdom	July 18, 2004
	- Italy	July 18, 2004
	- Netherlands	July 18, 2004
IBAL Cantilever Trolley	United States	Pending Approval
Photo CVD	United States	June 1, 2010
Photo CVD	United States	November 15, 2011
Photo CVD	Japan	Pending Approval

The Company's ability to compete may be enhanced by its ability to protect its proprietary information, including the issuance of patents and trademarks. While no intellectual property right of the Company has been invalidated or declared unenforceable, there can be no assurance that such rights will be upheld in the future. There can be no assurance that in the future products, processes or technologies owned by others, necessary to the conduct of the Company's business, can be licensed on commercially reasonable terms.

#### Sales and Marketing

There are two components of the market for the Company's Processing/Loading and diffusion furnace product line, which consists of semiconductor manufacturers in the United

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States, Korea, Western Europe, Taiwan, Japan and recently the People's Republic of China and India. One component consists of customers who are installing new semiconductor manufacturing facilities. The other component consists of customers who wish to install new equipment systems in existing facilities. The Company's products have been sold in both components. The Company has increased and intends to continue to increase its share of that market by expanding sales of horizontal diffusion furnaces manufactured by the Company in its Netherlands facility and increasing its sales, marketing and manufacturing capabilities in Europe. This plan has and is expected to increase revenue not only through added sales of horizontal furnaces, but by making the other products more competitive by offering them as a part of a broader complement of product line with greater capabilities. For example, the Company expects to generate increased sales of diffusion furnaces because it will offer them together with Atmoscan(R) and IBAL products. The Company also expects to obtain orders for its new horizontal diffusion furnace from former Tempress customers as well as customers in the United States, a large market that had not been effectively penetrated by Tempress in recent years.

The Company has historically marketed its polishing machines and related parts and expendables to OEMs fabricating silicon wafers for the semiconductor industry, disk media for the computer industry, equipment with optical components, and ceramic components for wireless communication products. The Company also sells diffusion furnace and process/loading products to some of these customers, as it did prior to the P.R. Hoffman acquisition. Further, the Company believes the process of sales lead generation will be enhanced by the sharing of leads among its increased number of product lines, including those acquired in the P.R. Hoffman acquisition transaction.

The Company's installed base of customers (facilities at which the Company's products are installed and operating) includes IBM Corporation, Motorola, Digital Equipment, Texas Instruments, Intel Corporation, National Semiconductor, Phillips, SGS-Thomson, Matsushita, Oki, Samsung, Sumimoto Sitix, Mitsubishi, Hyundai, IIT Night Vision, Lucent, UMC and Wuxi China. Of these corporations, IBM Corporation, Motorola, Digital Equipment, Intel Corporation, SGS-Thomson, and Samsung have been customers of the Company for approximately 11 years.

The Company markets its products by direct customer contact by the Company's sales personnel, which personnel consists of twelve (12) persons based in the United States, including the President, the Corporate General Manager, the President of P.R. Hoffman, two other outside salesmen and an inside sales and marketing staff of seven (7) persons. The Company employs five sales and marketing personnel in The Netherlands. The Company also markets its products through a network of domestic and international independent sales representatives and distributors. The Company's promotional activities have consisted of advertising in trade magazines and the distribution of product brochures. The Company also participates in trade shows, including Semicon West, Semicon Europa and Diskcon and at least one large optical show per year. The Company is dependent on its President, Jong S. Whang, for continuing relationships with key customers.

During fiscal 1997, two customers accounted for 16% and 16%, respectively, of sales from continuing operations. No other customers accounted for 10% or more of sales. For a

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more complete analysis of significant equipment customers, see Note 6 of the Notes to Consolidated Financial Statements included herein (the "Financial Statements").

There are presently ten independent sales representatives and five international distributors, each covering a specified geographical area on an exclusive basis. The areas now covered by representatives are the New England area, the United Kingdom, Central Europe (including Germany), France, India, Italy, Korea, Singapore, Malaysia, Taiwan, Thailand and the People's Republic of China. Representatives are paid a commission as specified from time to time in the Company's commission schedule, which at present is generally higher for complete systems and lower for spare parts and accessories. Further, a discount has been granted to a customer who is a manufacturer of diffusion furnaces.

Upon the development of the proposed photo-assisted CVD product, the Company will seek initially to make sales to customers who have assisted and will continue to assist in further development. Such customers will probably be granted a discount from published prices. Although marketing the new product, if it is successfully developed, will probably result in an increase in the number of marketing employees and in advertising and other marketing expense, the amount cannot now be predicted with any degree of accuracy.

Semiconductor equipment sales generally fluctuate with the level of capital spending in the semiconductor industry. The semiconductor business is cyclical.

#### Competition

The Company is not aware of any significant product which directly competes with the Atmoscan(R), however, there are several processing systems and



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- (1) Includes sales in Costa Rica in 1997 and Canada in 1996 and 1995.
  - (2) Includes Korea, Singapore, Taiwan, Japan, the People's Republic of China and Malaysia.
  - (3) Includes sales in Israel, which are not material.

For a further description of foreign sales, see Note 6 of the Notes to the Financial Statements included herein.

ITEM 2. PROPERTIES

The Company's semiconductor equipment business and corporate offices are located in 9,000 square feet of office and manufacturing space at its principal address. These facilities are leased at a current rate of \$3,515 per month, on a triple net basis, for a term to expire on January 31, 1998. On December 24, 1997, the term of the lease was extended to May 31, 1998, at a rate of \$4,950 per month on a triple net basis.

The Company also owns a 9,900 square foot building located in Heerde, The Netherlands. This facility is expected to provide adequate space for the Company's assembly operations for its furnace line for the foreseeable future.

The Company subleases a 21,740 square foot building located in Carlisle, Pennsylvania from John R. Krieger, the president of P.R. Hoffman and the former owner of that business. These facilities are leased at a current rate of \$3,515 per month, on a triple net basis, for a term to expire on August 31, 1999. The Company has the option to renew the lease for two successive terms of one year each.

If the results of the University study (described above) are favorable and the Company commences a photo-assisted CVD product development effort, an additional 2,000 square feet will be required for a laboratory. The Company believes that this laboratory, together with the Company's existing plant facility, will be adequate through the first year of the development effort. If and when commercial production begins, an additional 10,000 square feet of space may be

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required. No difficulty is expected in obtaining any additional space at then prevailing rents. However, at some point it may become more efficient to have all U.S. operations in one facility.

ITEM 3. LEGAL PROCEEDINGS

None.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

None.

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PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDERS' MATTERS

Market Information

The Company's Common Stock is traded in the over-the-counter market and is quoted under the symbol "ASYS" in the automated quotation system of the National Association of Securities Dealers SmallCap Market ("NASDAQ").

The following table sets forth the range of the high and low bid price for the shares of the Company's common stock for each quarter of fiscal years 1997 and 1996 as reported by the NASDAQ SmallCap Market.

Quarter Ended -----	High -----	Low -----
Fiscal 1997:		
December 31, 1996	\$ 4.75	\$ 2.38
March 31, 1997	4.00	2.00
June 30, 1997	3.63	2.00
September 30, 1997	3.50	2.50
Fiscal 1996:		
December 31, 1995	4.56	3.88
March 31, 1996	4.31	3.50
June 30, 1996	5.63	4.13
September 30, 1996	5.13	3.50

Holders

As of December 23, 1997, there were approximately 1,477 shareholders of record of the Company's Common Stock.

Dividends

The Company has never paid dividends. Its present policy is to apply cash to investment in product development, acquisition or expansion; consequently, it does not expect to pay dividends within the foreseeable future.

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ITEM 6. SELECTED FINANCIAL DATA

The selected financial data set forth with respect to the Company's operations for each of the years in the three year period ended September 30, 1997 and with respect to the balance sheets at September 30, 1997 and 1996 are derived from audited financial statements that have been audited by Arthur Andersen LLP, independent public accountants, which are included elsewhere in this Report and are qualified by reference to such financial statements. Data from the statements of operations for the fiscal years ended September 30, 1994 and 1993 and the balance sheet data at September 30, 1995, 1994 and 1993 are derived from financial statements not included in this Report. The selected financial data should be read in conjunction with Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, and the Company's Financial Statements (including the related notes thereto) contained elsewhere in this Report.

<TABLE>  
<CAPTION>

	Fiscal Years Ended September 30,				
	1997	1996	1995	1994	1993
<S>	<C>	<C>	<C>	<C>	<C>
Operating Data					
From Continuing Operations:					
Revenues	\$ 11,111,142	\$ 8,414,005	\$ 6,864,068	\$ 4,331,079	\$ 4,087,886
Operating Profit (loss) (1)	215,420	120,813	39,582	(172,648)	426,890
Income (Loss) from					
Continuing Operations (1) (6)	237,709	197,591	171,053	(89,469)	302,390
Net Income (1) (5) (6)	\$ 237,709	\$ 508,683	\$ 226,568	\$ 94,004	\$ 508,670
Primary Earnings Per Share: (1) (2) (3)					
Continuing Operations (loss) (1) (6)	\$ .06	\$ .05	\$ .04	\$ (.05)	\$ .15
Net Income (1) (5) (6)	\$ .06	\$ .10	\$ .06	\$ .05	\$ .26
Balance Sheet Data:					
Cash and Short-Term Investments	\$ 1,975,040	\$ 4,458,337	\$ 4,505,389	\$ 1,080,976	\$ 1,895,042
Working Capital	5,271,320	5,480,452	6,163,304	2,244,628	2,722,362
Total Assets	9,355,092	8,458,614	8,365,519	3,974,922	4,119,928
Total Current Liabilities	2,108,165	1,568,994	1,363,291	852,103	1,091,113
Long-Term Obligations	318,721	265,355	--	--	--
Accumulated Deficit	(174,378)	(412,087)	(920,770)	(1,147,338)	(1,241,342)
Shareholders' Equity (2) (4)	6,928,206	6,624,265	7,002,228	3,122,819	3,028,815

(1) The results for the fiscal years 1997, 1996 and 1994 include \$84,883, \$132,243 and \$355,405, respectively, of expense for the University study described elsewhere herein.

(2) The results shown have been restated to reflect the two-for-one combination or "reverse split" of Common Stock which took place on June 4, 1993 and the two-for-one forward split which was effective March 29, 1996. Earnings per share for 1997, 1996 and 1995 reflect the sale of 2,415,000 shares in a public offering completed December 22, 1994.

(3) The results shown would be the same if they were prepared on a fully-diluted basis, except that the net income per common share for the fiscal year ended September 30, 1993 would have been \$.25.

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(4) The decline in Shareholders' Equity in 1996 resulted from the Company's receipt of 196,034 shares of its Common Stock upon disposition of the stock of Echelon Services Company, as further detailed in the Consolidated Statements of Stockholders' Equity, included in the audit financial statements.

(5) The results for fiscal 1996 include a \$284,335 gain on the disposal of discontinued operations.

(6) Income from continuing operations for fiscal 1997 include a \$115,487 gain

from the disposition of the Company's interest in the Seil Semicon joint venture.

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

The following discussion should be read in conjunction with the financial statements and notes thereto set forth elsewhere herein and the "Forward-Looking Statements" explanation included herein.

PLANS FOR EXPANSION AND CAPITAL RESOURCES

The Company is engaged primarily in the manufacture and marketing of several items of capital equipment and related consumables and spare parts used by customers in the manufacture and fabrication of semiconductors. Some of these products, amounting to an estimated 6% of consolidated sales in fiscal 1997 and up to 15% in fiscal 1998, are also sold for use in the production of wireless communications, optics, memory disk media, ceramics and other products. The Company also provides contract preventative maintenance services to the semiconductor industry, accounting for an estimated 1% of consolidated sales in fiscal 1997 and expected to grow to approximately 5% of consolidated sales in fiscal 1998. The Company intends to focus on expanding its revenue and operating profits derived from sale of such equipment and related consumable products sold to semiconductor fabricators and manufacturers of silicon wafers used in the fabrication of such semiconductors. The Company is seeking to expand its revenue and operating profits through the development and acquisition of new products that serve these markets and to further penetrate these markets with existing and new products.

Acquisitions. As a part of the above strategy, the Company acquired substantially all of the assets and assumed certain of the related liabilities of P.R. Hoffman Machine Products Corporation on July 1, 1997. The total cost of the acquisition, including the liabilities assumed and related transaction costs, was approximately \$3,210,000. See Note 3 to the Consolidated Financial Statements, included herein, for further details of the acquisition and pro forma revenues and earnings for fiscal 1996 and 1997, reflecting the assumption that the acquisition had occurred at the beginning of each such fiscal year. During the 1996 calendar year, the operations acquired produced \$6.6 million of revenue and \$609,023 of operating profit.

During the fourth quarter of fiscal 1997, the Company began providing preventative maintenance service to the semiconductor industry. Although this operation currently serves only one customer and existed only for the months of August and September of fiscal 1997, it is already contributing to operating profit.

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During fiscal 1996, the Company entered into a joint venture agreement pursuant to which it acquired a 45% ownership interest and a 50% voting interest in Seil Semicon, Inc. (the "Korean Joint Venture") in return for a commitment to invest \$500,000 in cash. The purpose of the joint venture was to develop and operate a silicon test wafer reclaiming business. After the end of fiscal 1996, the joint venture was dissolved because management determined that increasing the Company's investment commitment to \$3 million, without obtaining majority control, was more risk than was appropriate for the Company. The Company received \$478,000 during December 1996, pursuant to the termination agreement, which compensated the Company for its actual investment and expenses. As a result, the Company recorded a gain in fiscal 1997 of \$115,487, largely representing recovery of related costs and expenses recorded in the previous year.

Although the Company discontinued its participation in the Korean Joint Venture and has since completed one other larger acquisition, the Company intends to continue to evaluate other potential product or business acquisitions that may complement the Company's business. Based upon current acquisition criteria, such an acquisition could require \$4 million or more of capital resources. The determination of the appropriateness of a potential acquisition is expected to take into consideration many factors including, without limitation, the prospects and timing of the planned photo-assisted CVD product line, described below, and the capital that would be required and available for that product line, the economic terms of the acquisition under review, and the potential synergy of the acquired business with the Company's existing business.

Research and Development; Photo-assisted CVD Project. Relative to many technology businesses, the Company made relatively small investments in product development prior to fiscal 1994. The Company increased research and product development expenditures in fiscal 1994 by \$257,000, primarily through the expenditure of \$355,000 for photo-assisted CVD research. During fiscal 1995, research and development costs consisted entirely of developing the new Tempress line of furnaces, an automated robot to load cantilever paddle systems and product improvements. The Company entered into two amendments of its research and development contract with the University during fiscal 1996, which expanded the Company's financial commitment by a total of \$244,000, all but \$30,000 of which has been expended. The Company intends to enter into a third amendment expanding its commitment by an additional \$251,000 and extending the contract

until the date on which certain agreed upon work is completed, which is expected to occur in the first or second quarter of fiscal 1999. If the results of the photo-assisted CVD feasibility study are sufficiently encouraging, the next phase would be to develop a prototype model for use by research facilities to develop advanced processes for the manufacture of semiconductor devices. Depending on the actual timing and results of the final stage of the feasibility study being conducted by the University, the Company intends to expend an estimated \$3,200,000 on research and development over approximately a three year period, possibly beginning in fiscal 1999, in order to develop a commercial product based upon the Company's patented photo-assisted CVD technology. This expenditure is expected to be made in two stages: approximately \$1,700,000 for the development of an initial product suitable for use in research facilities and approximately \$1,500,000 for the development of a product for use in industrial production facilities. These estimates will need to be updated, if the development project reaches the development stage, do not include any amount for the expansion of facilities for the manufacture of a new photo-assisted CVD product designed for industrial production facilities or for a marketing campaign, and are subject to various assumptions and significant uncertainties. The increased research and development expenses anticipated for this project may thus adversely and significantly affect the Company's future operating results.

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In addition to photo-assisted CVD research, the Company expended \$196,000 in fiscal 1997 on research and development for product improvement and development of diffusion products. Management may consider other development projects in the future, but has not approved any significant projects, pending review of the cost and benefits and their relationship to expected earnings. These other research and development expenses will affect the Company's future operating results.

The funds from the cash and short-term investments on hand should be sufficient for the \$281,000 of commitments made and planned to complete the research phase of the photo-assisted CVD project. The currently available cash and short-term investments are sufficient to service the inter-period liquidity requirement of already expanded and growing operations of the Company. Therefore, any funds required for future acquisitions or for the development of a commercial model of the photo-assisted CVD reactor and the related expansion and marketing campaign are expected to be obtained from one or more sources of financing, such as the possible exercise of the outstanding redeemable common stock warrants, working capital loans from banks, a public offering of debt or equity securities, equipment leasing, mortgage financing and internally generated cash flow from operations. There is no assurance of the availability or sufficiency of these or any other source of funding.

## RESULTS OF OPERATIONS

### Fiscal 1997 Compared to Fiscal 1996

#### Continuing Operations

The consolidated revenues of the semiconductor equipment business increased \$2,697,000, or thirty-two percent (32%), to \$11,111,000 in fiscal 1997 from \$8,414,000 in fiscal 1996. During the same period, operating income increased seventy-eight percent (78%), or \$94,000, from \$121,000 in fiscal 1996 to \$215,000 in fiscal 1997. The acquisition and start-up businesses discussed in the previous section accounted for sixty-six percent (66%) of the increase in revenue and more than all of the increase in operating profit, despite their inclusion for only the fourth quarter of fiscal 1997.

Revenue from the sale of existing diffusion products increased \$923,000, or eleven percent (11%), to \$9,337,000, and accounted for thirty-four percent (34%) of the increase in consolidated revenue. Growth in diffusion product revenue resulted primarily from continued expansion of The Netherlands operation, where the Tempress(R) diffusion furnaces are manufactured. The growth in gross margins resulting from the increase in diffusion product sales was not yet sufficient to offset the \$435,000 increase in the related selling, general and administrative expenses. Further, expanded furnace sales, which typically produce a lower gross margin, were partially offset by a decline in the typically more profitable automation products, thereby producing an unfavorable mix. The gain on the disposal of the Korean Joint Venture described above, partially compensated for the decrease in consolidated operating profit for the diffusion product line.

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Income (loss) from continuing operations before income taxes includes operating income, discussed above, and net interest income. Net interest income was \$64,000 lower in fiscal 1997, as compared to fiscal 1996, due to cash used in the acquisition of P.R. Hoffman and for increased inventories and receivables associated with the expansion of the diffusion product line. As a result of these items, the income from continuing operations before income taxes improved by \$30,000, or 9%, to \$378,000 in fiscal 1997.

The income tax provision is \$140,000 in fiscal 1997 and \$150,000 in fiscal 1996. The effective tax rate for fiscal 1996 is higher than the statutory rate and the effective rate of fiscal 1997, because the equity in the losses of the Korean Joint Venture were not deductible for U.S. income tax purposes in

fiscal 1996, when incurred, but were deductible upon disposition of that investment. See Note 4 to the consolidated financial statements for further details including an analysis of the differences between the statutory rate and the effective rate for fiscal 1997 and 1996. After taking into consideration the provision for income taxes, income from continuing operations is \$238,000, \$.06 per share, for fiscal 1997, a 20% improvement over the income of \$198,000, or \$.05 per share, in fiscal 1996.

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Total Company

For fiscal 1997, net income is equal to income from continuing operations, \$238,000, or \$.06 per share. The non-recurring \$284,000 gain in fiscal 1996 from the disposal of discontinued operations and \$27,000 of income before disposition of that operation, brought net income for fiscal 1996 to \$509,000, or \$.10 per share.

Trends. The historical and expected profitability of the Company's new subsidiary, P.R. Hoffman, and its inclusion in the consolidated operations for four (4) quarters in fiscal 1998, as compared to only one (1) in fiscal 1997, will likely lead to substantially higher consolidated revenue and operating income in fiscal 1998 and later years, compared to fiscal 1997. Management believes that the diffusion operation in The Netherlands has not yet reached its full potential. The resources deployed to acquire P.R. Hoffman detracted significantly from the sale of the higher margin automation products. While the Company intends to pursue other acquisitions in the future, which may cause management resources to be less focused on existing operations, the Company has sought to alleviate this concern by hiring a high level sales and marketing person with significant experience in diffusion products, including the Company's automation product line. In light of these trends, both existing and expected, the Company believes that it can achieve significantly higher sales and operating profit. However, no assurance can be given that such increased sales or profitability will occur or that the Company's measures will be effective.

The Company's diffusion product line has been and will continue to be affected by industry trends. The use and market share of vertical furnaces is increasing throughout the industry on a worldwide basis, particularly for the fabrication of leading edge semiconductor devices, and is expected to increase in usage to an estimated 50% over the next several years. However, the Company believes that there will continue to be demand for horizontal diffusion furnaces, notwithstanding other advantages of vertical systems (e.g. reduced contamination and the capability to produce more sophisticated semiconductors more efficiently), because for all but mass production runs of small chips on larger wafers there is a higher productivity in horizontal furnaces as compared to vertical furnaces. Also, the Company's products may be used to upgrade, retro-fit or replace existing horizontal furnaces in order to extend their useful lives or otherwise avoid the necessity for the customer to acquire more expensive vertical furnaces. Horizontal furnaces are also sold for use in new facilities that do not require vertical furnaces for the particular process. Another important factor is the growth of semiconductor manufacturing using the less capital intensive horizontal diffusion furnaces in the Peoples Republic of China, and other less developed areas, which could further prolong the commercial life of the Company's diffusion products. The Company also has and expects to continue to benefit from a growth trend within the solar cell industry, which uses the Company's diffusion products.

The market for the Company's products remains a small niche market. Thus future revenues are and will continue to be dependent upon continued introduction or acquisition of new products. For example, the IBAL automation products introduced from fiscal 1991 to fiscal 1993, or improved versions of products that exist in the market, such as the Tempress(R) horizontal diffusion furnaces and "clean room" load stations. The Company intends to pursue both types of product introductions in the future. Product or business acquisitions is also a part of the Company's strategy for growth, as evidenced by the acquisition of P.R. Hoffman's product line

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of double sided precision lapping and polishing machines and related consumable products in the fourth quarter of fiscal 1997. The Company intends to pursue acquisitions of other businesses or products that complement its existing product lines. Furthermore, the Company's long range plans include developing, if feasible, a new product based on its patented photo-assisted CVD technology.

As of the date of this filing, memory device manufacturers are continuing to experience falling prices resulting from the excess capacity discussed above, yet their order backlogs and shipments have increased significantly. Turmoil in the Asian financial markets is expected to eliminate most, if not all, capital equipment sales into that region. Sales into the Asian market accounted for 35% of the Company's total sales in fiscal 1997. These negative factors are expected to have a greater impact on the high margin domestic diffusion product line, as the ATMOSCAN(R) and IBAL automation products are believed to improve the customers yields and efficiencies, but are not an absolute necessity, and therefore are the first types of equipment to be cut from a customer's capital budget. The sale of spares, replacement parts and the consumable products associated with the lapping and polishing product line are expected to continue to be sold even in Asia, with little or no decline.

Further, prospective customers outside of Asia are expected to continue to require the horizontal diffusion furnace products manufactured in The Netherlands. In addition, the Company's products are sold on a world-wide basis and therefore, the Company will attempt to offset the sales declines caused by the above factors by focusing more attention on other regions. Again, because of the acquisition of P.R. Hoffman, the Company expects that the net result of all of these variables will be a substantial increase in revenue in fiscal 1998.

In addition to photo-assisted CVD research, the Company expended \$196,000 in fiscal 1997 on research and development for product improvement and development of diffusion products. Management may consider other development projects in the future, but has not approved any significant projects, pending review of the cost and benefits and their relationship to expected earnings. These other research and development expenses may significantly offset the Company's future operating results.

#### Fiscal 1996 Compared to Fiscal 1995

##### Continuing Operations

The revenues of the semiconductor equipment business increased \$1,550,000, or 23%, to \$8,414,000 in fiscal 1996 from \$6,864,000 in fiscal 1995. The increase in revenues is due primarily to the 85% increase in the sales of Tempres horizontal diffusion furnaces and related after market parts resulting from continued growth of the manufacturing operations in The Netherlands. The net sales of the domestic operations' ATMOSCAN(R) and IBAL automation products were essentially unchanged in fiscal 1996 from the level achieved in fiscal 1995. Significant synergies have been achieved with the addition of the Tempres product line, as both the domestic and foreign operations have secured orders by having a broader line of products to offer, orders that might not otherwise have been obtainable.

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Gross profit was \$2,897,000 for fiscal 1996 versus \$2,305,000 for fiscal 1995, representing a 26% increase. The \$592,000 increase in gross margin primarily results from the expansion of The Netherlands operations. Gross margin as a percentage of revenue was 34.4% in fiscal 1996 versus 33.6% in fiscal 1995, with the improvement being attributed to increased sales from The Netherlands' operations.

The selling, general and administrative costs were \$352,000 (17%) higher in fiscal 1996 than in fiscal 1995. Costs associated directly with the relatively new operations in The Netherlands grew approximately 29%, thus accounting for 56% of the total increase. Corporate efforts to further penetrate the market with the entire product line on a world-wide basis, the development of new business opportunities and the write-off of certain doubtful accounts receivable accounted for most of the remaining increase in selling, general and administrative expenses. However, these costs declined from approximately 30% of revenues during fiscal 1995 to 28% in fiscal 1996.

Operating profits were \$121,000 in fiscal 1996, or 200% more than the \$40,000 reported in fiscal 1995. The improvement in operating profit in fiscal 1996 reflects the expansion of The Netherlands' operations, which reached its break-even point in fiscal 1996.

Income (loss) from continuing operations before income taxes includes operating income, discussed above, and net interest income, which was \$5,000 higher in fiscal 1996, as compared to fiscal 1995. As a result of these items, the income from continuing operations before income taxes improved by \$87,000, or 33%, to \$348,000 in fiscal 1996.

The income from continuing operations is \$198,000, \$.05 per share, for fiscal 1996, a 16% improvement over the income of \$171,000, or \$.04 per share, in fiscal 1995, after taking into consideration the income tax provision of \$150,000 in fiscal 1996 and \$90,000 in fiscal 1995. The effective tax rate for fiscal 1996 is higher than the statutory rate and the effective rate of the preceding year because the equity in the losses of the Korean Joint Venture are not deductible for U.S. income tax purposes. The income tax provision for fiscal 1995 approximates the statutory rate. See Note 4 to the consolidated financial statements for further details including an analysis of the differences between the statutory rate and the effective rate for fiscal 1996 and 1995.

##### Discontinued Operations

In October 1995, the Company's Board of Directors decided to concentrate on the Company's core semiconductor equipment operations and discontinue the technical contract personnel business. That discontinued operation produced income before income taxes of \$52,000 and \$86,000 for fiscal 1996 and fiscal 1995, respectively. Income taxes for fiscal 1996 and fiscal 1995 were \$25,000 and \$30,000, respectively, resulting in income from discontinued operations of \$27,000 in fiscal 1996 and \$56,000 in fiscal 1995. The decline in income is due to the fact that the Company owned this operation for one quarter of fiscal 1996, compared to a full year in fiscal 1995. The effective tax rate in fiscal 1996 is higher than the statutory rate because of state income taxes, including the settlement of disputed taxes related to prior years.

Effective December 29, 1995, the Company exchanged all of its ownership interest in the common stock of Echelon Service Company ("Echelon"), the only remaining operation in the technical contract personnel line of business, for 196,034 shares of the Company's outstanding Common Stock previously owned by Eugene R. Hartman, then an officer and director of the Company. The transaction was preceded by a dividend from Echelon to the Company in order to equalize the values. The transaction was structured to be a tax-free reorganization and, as such, no provision was made for income taxes. As a result of the transaction, the Company recognized a gain of \$284,000.

#### Total Company

As a result of the gain on the disposal of discontinued operations, net income increased \$282,000 to \$509,000, or \$.10 per share, in fiscal 1996 from \$227,000, or \$.06 per share, in fiscal 1995.

#### LIQUIDITY AND FINANCIAL CONDITION

As of September 30, 1997 and 1996, cash, cash equivalents and short-term investments amounted to \$1,975,000 and \$4,458,000, respectively. The fiscal 1997 decrease in cash and cash equivalents of \$2,483,000, resulted from the \$2,564,000 cash expended on the acquisition of P.R. Hoffman, including transaction costs. While the Company expects to make up to \$340,000 of capital expenditures during fiscal 1998, and up to \$610,000 for research and development, actual expenditures will be made in light of the existing operating climate. Furthermore, substantial cash flows are expected to be generated by P.R. Hoffman, while cash required for working capital will be controlled by maintaining the level of receivable and inventory turns. As a result of the above, the Company believes there is sufficient liquidity for current operations. However, see "Plans for Expansion and Capital Resources," above, for an explanation of factors that would give rise to requirements for additional sources of liquidity and capital resources, and possible sources of such to meet those needs.

Working capital decreased by \$209,000 to \$5,271,000 from \$5,480,000, a decrease of 4%, primarily as a result of the \$577,000 investment in the goodwill of P.R. Hoffman. See the Consolidated Financial Statements and related notes included herein. For the same reasons, the ratio of current assets to current liabilities decreased to 3.5:1 from 4.5:1. Cash and short-term investments comprise 21% of total assets and stockholders' equity accounts for 74% of total assets. These are measures of financial condition. The Company believes that it continues to be financially strong.

#### FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains certain forward-looking statements. The forward-looking statements contained herein are based on current expectations that involve a number of risks and uncertainties. Among others, these forward-looking statements are based on assumptions that (a) the Company will not lose a significant customer or customers, (b) the Company will not experience significant further reductions in demand or rescheduling of

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customer purchase orders that have occurred recently due to equipment buyers' caution resulting from declining prices for semiconductor chips, (c) that the Company's products will remain accepted within their respective markets and will not be significantly further replaced by newer technology equipment, (d) that competitive conditions within the Company's markets will not change materially or adversely, (e) that the Company efforts to integrate its P.R. Hoffman subsidiary will continue to progress, (f) that the Company's efforts to improve its products and maintain its competitiveness in the markets it competes will continue to progress and that the savings associated with these expenditures and/or the increased product demand resulting therefrom justifies these development costs. (g) that the Company will retain and when needed add to its ranks key technical and management personnel, (h) that business or product acquisitions, if any, will be successfully integrated and the results of operations therefrom will support the acquisition price, (i) that the Company's forecasts will accurately anticipate market demand, (j) that there will be no material adverse changes in the Company's existing operations or business, (k) that the cost and time necessary to complete its photo-assisted CVD feasibility study will not again significantly exceed the Company's projections, and that should the Company proceed to the product development stage, the cost of development will not significantly exceed the Company's projections, (l) the Company will be able to obtain sufficient funding to increase its capital resources by the amount used in business or product acquisitions, if any, and (m) the post-development start-up losses of a photo-assisted CVD product line, if any, will be manageable, and there will be sufficient demand for the photo-assisted CVD products to recover the related development and start-up costs, and to (n) expand its manufacturing facilities and production capacity in order to produce and ship photo-assisted CVD products, the turmoil in the Asian markets will not spread to other geographic regions. Assumptions related to the foregoing involve judgments with respect to, among other things, future economic, competitive and market conditions, and future business decisions, all

of which are beyond the control of the Company. Although the Company believes that the assumptions underlying the forward-looking statements are reasonable, any of the assumptions could prove inaccurate and, therefore, there can be no assurance that the results contemplated in forward-looking statements will be realized. In addition, the business and operations of the Company are subject to substantial risks which increase the uncertainty inherent in such forward-looking statements. In light of the significant uncertainties inherent in the forward-looking information included herein, the inclusion of such information should not be regarded as a representation by the Company, or any other person, that the objectives or plans for the Company will be achieved.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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All Schedules, other than the Schedule listed above, are omitted as the information is not required, is not material or is otherwise furnished.

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REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To AMTECH SYSTEMS, INC.:

We have audited the accompanying consolidated balance sheets of AMTECH SYSTEMS, INC. (an Arizona corporation) and subsidiaries as of September 30, 1997 and 1996, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the three years in the period ended September 30, 1997. 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 generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the 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 financial statements referred to above present fairly, in all material respects, the financial position of AMTECH SYSTEMS, INC. and subsidiaries as of September 30, 1997 and 1996, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 1997, in conformity with generally accepted accounting principles.

Our audits were made for the purposes of forming an opinion on the basic financial statements taken as a whole. The schedule listed in the index of financial statements and supplementary data is presented for purposes of complying with the Securities and Exchange Commission's rules and is not part of the basic financial statements. This schedule has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, fairly states in all material respects the financial data required to be set forth therein in relation to the basic financial statements taken as a

whole.

/s/ Arthur Andersen LLP

Phoenix, Arizona,  
December 12, 1997.

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES  
CONSOLIDATED BALANCE SHEETS  
September 30, 1997 and 1996

	1997	1996
	-----	-----
ASSETS		
-----		
CURRENT ASSETS:		
Cash and equivalents (Note 2)	\$ 1,395,849	\$ 1,994,217
Short-term investments (Note 2)	579,191	2,464,120
Accounts receivable, less allowance for doubtful accounts of \$130,000 in 1997 and \$90,000 in 1996	2,983,573	1,581,973
Inventories (Note 2)	2,062,052	739,201
Deferred income taxes (Notes 2 and 4)	273,000	223,000
Prepaid expenses	85,820	46,935
	-----	-----
Total current assets	7,379,485	7,049,446
	-----	-----
PROPERTY, PLANT AND EQUIPMENT (Note 2):		
Land, building and leasehold improvements (Note 5)	629,604	535,104
Equipment and machinery	785,142	432,435
Furniture and fixtures	726,365	608,972
	-----	-----
	2,141,111	1,576,511
Less accumulated depreciation and amortization	781,078	600,180
	-----	-----
	1,360,033	976,331
	-----	-----
PURCHASE PRICE IN EXCESS OF NET ASSETS ACQUIRED, at amortized cost (Notes 2 and 3)		
	561,238	--
OTHER ASSETS (Note 11)		
	54,336	432,837
	-----	-----
	\$ 9,355,092	\$ 8,458,614
	=====	=====
LIABILITIES AND STOCKHOLDERS' EQUITY		
-----		
CURRENT LIABILITIES:		
Accounts payable	\$ 935,338	\$ 652,771
Accrued liabilities:		
Compensation and related taxes	471,604	442,785
Warranty and installation expenses	369,868	185,450
Other accrued liabilities	208,355	143,988
Income taxes payable (Notes 2 and 4)	123,000	144,000
	-----	-----
Total current liabilities	2,108,165	1,568,994
	-----	-----
LONG-TERM OBLIGATIONS (Note 5)		
	318,721	265,355
	-----	-----
COMMITMENTS AND CONTINGENCIES (Notes 3, 7, 8, and 10)		
STOCKHOLDERS' EQUITY (Notes 2, 9 and 12):		
Preferred stock; no specified terms; 100,000,000 shares authorized; none issued	--	--
Common stock; \$.01 par value; 100,000,000 shares authorized; 4,185,106 (4,109,668 in 1996) shares issued and outstanding	41,850	41,097
Additional paid-in capital	7,345,187	7,043,803
Cumulative foreign currency translation adjustment	(284,453)	(48,548)
Accumulated deficit	(174,378)	(412,087)
	-----	-----
Total stockholders' equity	6,928,206	6,624,265
	-----	-----
	\$ 9,355,092	\$ 8,458,614

The accompanying notes are an integral part of these consolidated balance sheets.

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF OPERATIONS

For The Years Ended September 30, 1997, 1996 and 1995

	1997	1996	1995
	-----	-----	-----
Net product sales (Note 6)	\$ 11,111,142	\$ 8,414,005	\$ 6,864,068
Cost of product sales	7,591,347	5,516,936	4,558,675
	-----	-----	-----
Gross margin	3,519,795	2,897,069	2,305,393
Selling and general	3,139,366	2,386,466	2,034,027
Equity in (income) losses of Korean joint venture (Note 11)	(115,487)	65,063	--
Photo-CVD project (Notes 2 and 10)	84,883	132,243	--
Other research and development (Note 2)	195,613	192,484	231,784
	-----	-----	-----
Operating profit	215,420	120,813	39,582
Interest income-net	162,289	226,778	221,471
	-----	-----	-----
Income from continuing operations before income taxes	377,709	347,591	261,053
Income tax provision (Notes 2 and 4)	140,000	150,000	90,000
	-----	-----	-----
INCOME FROM CONTINUING OPERATIONS	237,709	197,591	171,053
	-----	-----	-----
DISCONTINUED OPERATIONS:			
- - - - -			
Income From Discontinued Operations (Note 12)	--	26,757	55,515
Gain on Disposal of Echelon (Notes 4 and 12)	--	284,335	--
	-----	-----	-----
	--	311,092	55,515
	-----	-----	-----
NET INCOME	\$ 237,709	\$ 508,683	\$ 226,568
	=====	=====	=====

PRIMARY EARNING PER SHARE  
(Notes 2 and 9):

Income From Continuing Operations	\$ 0.06	\$ 0.05	\$ 0.04
Net Income	\$ 0.06	\$ 0.10	\$ 0.06

FULLY DILUTED EARNING PER SHARE  
(Notes 2 and 9):

Income From Continuing Operations	\$ 0.06	\$ 0.05	\$ 0.04
Net Income	\$ 0.06	\$ 0.10	\$ 0.06

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

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

For The Years Ended September 30, 1997, 1996 and 1995

<TABLE>  
<CAPTION>

Common Stock	Additional	Cumulative Foreign Currency
-----		

Total Stockholders' Equity	Number of Shares	Amount	Paid-In Capital	Translation Adjustment	Accumulated Deficit	
<S>	<C>	<C>	<C>	<C>	<C>	<C>
BALANCE AT SEPTEMBER 30, 1994	1,890,702	\$ 18,907	\$ 4,251,250	\$ --	\$ (1,147,338)	\$
3,122,819						
Net Income	--	--	--	--	226,568	
226,568						
Secondary Public Offering (Note 9)	2,415,000	24,150	3,599,232	--	--	
3,623,382						
Translation adjustment	--	--	--	29,459	--	
29,459						
BALANCE AT SEPTEMBER 30, 1995	4,305,702	43,057	7,850,482	29,459	(920,770)	
7,002,228						
Net Income	--	--	--	--	508,683	
508,683						
Shares returned upon disposition of Echelon	(196,034)	(1,960)	(806,679)	--	--	
(808,639)						
Translation adjustment	--	--	--	(78,007)	--	
(78,007)						
BALANCE AT SEPTEMBER 30, 1996	4,109,668	41,097	7,043,803	(48,548)	(412,087)	
6,624,265						
Net Income	--	--	--	--	237,709	
237,709						
Employee stock bonus	16,050	160	34,577	--	--	
34,737						
Stock options exercised	27,000	270	34,930	--	--	
35,200						
Shares and warrants issued in connection with the acquisition of P.R. Hoffman assets (Note 3)	32,388	323	231,877	--	--	
232,200						
Translation adjustment	--	--	--	(235,905)	--	
(235,905)						
BALANCE AT SEPTEMBER 30, 1997	4,185,106	\$ 41,850	\$ 7,345,187	\$ (284,453)	\$ (174,378)	\$
6,928,206						

</TABLE>

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

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
For The Years Ended September 30, 1997, 1996 and 1995

	1997	1996	1995
OPERATING ACTIVITIES:			
Net income	\$ 237,709	\$ 508,683	\$ 226,568
Adjustments to reconcile net income to net cash provided (used) by operating activities:			
Depreciation and amortization	233,938	179,289	144,085
Inventory and accounts receivable write-offs	76,123	91,085	80,428
Gain on disposal of discontinued operations	--	(284,335)	--
Loss (gain) on sale or retirement of assets	592	(1,950)	31,398
Equity in (income) losses of Korean joint venture	(115,487)	65,063	--
Deferred tax benefit	(50,000)	(70,000)	(36,000)

Decreases (increases) in operating assets:			
Accounts receivable	(401,561)	212,067	(762,669)
Inventories, prepaids and other assets	(421,270)	(284,872)	(73,893)
Increases (decreases) in operating liabilities:			
Accounts payable	191,544	160,152	223,091
Accrued liabilities	222,828	254,814	123,063
Income taxes payable	(21,000)	(81,000)	150,000
	-----	-----	-----
Net cash Provided by (Used In) Operating Activities	(46,584)	748,996	106,071
	-----	-----	-----
INVESTING ACTIVITIES:			
Maturities (purchases) of short-term investments - net	1,884,929	1,207,449	(3,327,577)
Proceeds from disposition of (Investment in) unconsolidated Korean joint venture	475,047	(425,000)	--
Proceeds from sale of assets	200	28,983	19,591
Purchases of property, plant and equipment	(236,852)	(541,919)	(328,257)
Cash paid for net assets of P. R. Hoffman Machine Products Corporation	(2,569,580)	--	--
Cash distributed in disposal of Echelon	--	(109,698)	--
	-----	-----	-----
Net Cash Provided by (Used in) Investing Activities	(446,256)	159,815	(3,636,243)
	-----	-----	-----
FINANCING ACTIVITIES:			
Net proceeds from public offering (Note 9)	--	--	3,623,382
Proceeds from stock options exercised (Note 9)	35,200	--	--
Proceeds from (Payments on) mortgage loan	(19,635)	288,297	--
	-----	-----	-----
Net Cash Provided By Financing Activities	15,565	288,297	3,623,382
	-----	-----	-----
EFFECT OF EXCHANGE RATE CHANGES	(121,093)	(36,711)	3,626
	-----	-----	-----
CASH AND EQUIVALENTS (Note 2):			
Net increase (decrease)	(598,368)	1,160,397	96,836
Beginning of year	1,994,217	833,820	736,984
	-----	-----	-----
END OF YEAR CASH AND EQUIVALENTS	\$ 1,395,849	\$ 1,994,217	\$ 833,820
	=====	=====	=====

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

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF CASH FLOWS - CONTINUED

	1997	1996	1995
	-----	-----	-----
SUPPLEMENTAL CASH FLOW INFORMATION:			
Cash paid during the year for:			
Interest	\$ 19,855	\$ 5,376	\$ --
Income taxes, net of refunds	216,000	327,000	6,000

SUPPLEMENTAL SCHEDULE OF NONCASH  
INVESTING AND FINANCING ACTIVITIES:

Value received in the form of the Company's \$.01 par value Common Stock in exchange for the net assets of Echelon Service Company (Note 12)	--	808,639	--
--	----	---------	----

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

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
For The Years Ended September 30, 1997, 1996, and 1995

(1) NATURE OF OPERATIONS:

Amtech Systems, Inc., based in the United States, Tempress Systems, Inc., a wholly-owned subsidiary formed in September 1994, and based in The Netherlands, and P. R. Hoffman Machine Products, Inc., a wholly-owned subsidiary formed in July 1997, and based in the United States, comprise the "Company". The Company designs, assembles, sells and installs capital equipment and related consumables used in the manufacture of wafers of various materials, primarily silicon wafers for the semiconductor industry, and in certain processes of semiconductor fabrication. These products are sold to manufacturers of silicon wafers and semiconductors world-wide, particularly in the United States, Korea, and Northern Europe. During fiscal 1997, the Company began providing preventative maintenance services to the semiconductor industry in the United States. See Note 12 regarding discontinued operations.

The Company serves a niche market in an industry which experiences rapid technological advances and which in the past has been very cyclical. Therefore, the Company's future profitability and growth depend on its ability to develop or acquire and market profitable new products and its success in adapting to future cyclical trends.

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

Basis of Presentation - The accompanying consolidated financial statements include the accounts of Amtech Systems, Inc. and its wholly owned subsidiaries, including Echelon Service Company (Note 12) through the date of its disposition, and P. R. Hoffman Machine Products, Inc. (Note 3) since its acquisition date. All significant intercompany accounts and transactions have been eliminated in consolidation.

Revenue Recognition - Revenue is recognized on the accrual basis when the product is shipped and title passes to the customer.

Cash Equivalents and Short-term Investments - Cash equivalents and short-term investments consist of time certificates of deposit and U.S. treasury bills. The Company considers certificates of deposit and treasury bills to be cash equivalents if their maturity is 90 days or less from purchase. Investments maturing in over 90 days are considered to be "available-for-sale" (as defined by the Statement of Financial Accounting Standards (SFAS) No. 115) and are recorded at fair value, which approximates cost.

Inventories - Inventories are stated at the lower of cost (first-in, first-out method) or market. The components of inventory as of September 30, 1997 and 1996 are as follows:

	1997	1996
Purchased parts	\$ 995,850	\$ 527,321
Work-in-progress	618,295	211,880
Finished Goods	447,907	--
	-----	-----
	\$2,062,052	\$ 739,201
	=====	=====

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (continued)

Property, Plant and Equipment - Maintenance and repairs are charged to expense as incurred. The costs of additions and improvements are capitalized. The cost of property retired or sold and the related accumulated depreciation are removed from the applicable accounts and any gain or loss is recognized.

Depreciation is computed using the straight-line method. Useful lives for equipment, machinery, and leasehold improvements are from three to five years; for furniture and fixtures from five to ten years; and for buildings twenty years.

In fiscal 1996, the Company adopted SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed of." This standard requires that long-lived assets be reviewed for impairment whenever events or circumstances indicate that the carrying amount of the asset may not be recoverable. If the sum of the expected cash flows from an asset to

be held and used in operations is less than the carrying value of the asset, an impairment loss is recognized. Adoption of this Standard did not have a material effect on the Company's financial position or results of operations.

Purchase Price in Excess of Net Assets Acquired - The purchase price in excess of net assets acquired, commonly referred to as goodwill, is being amortized over fifteen years using the straight-line method.

Research and Development Expenses - The Company expenses product development costs as they are incurred. The Company incurred approximately \$280,000 in 1997, \$325,000 in 1996, and \$232,000 in 1995, of expenses related to research of photo-assisted CVD (chemical vapor deposition) equipment and process, the development of diffusion furnaces, and the improvement of Atmoscan (Note 8) and other products.

Foreign Currency Transactions and Translation - Income from continuing operations includes gains from foreign currency transactions of \$34,000 in 1997, \$56,000 in 1996 and \$11,000 in 1995. There were no material foreign currency transactions prior to 1995. The functional currency of Tempres Systems, Inc. is The Netherlands guilder.

Income Taxes - The Company files consolidated federal income tax returns and computes deferred income tax assets and liabilities based upon cumulative temporary differences between financial reporting and taxable income, carryforwards available and enacted tax law. See Notes 4 and 12.

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (continued)

Income Per Common Share - Primary and fully diluted earnings per share are computed using the modified treasury stock method, because the number of warrants and options exceed 20% of the common shares outstanding as of year-end. The weighted average shares outstanding for the purposes of calculating primary earnings per share were 4,168,111, 6,341,027, and 3,802,853 for 1997, 1996 and 1995, respectively. The average outstanding shares for the calculation of fully diluted earnings per share were not materially different. The weighted average shares outstanding for 1996 include 2,165,299, shares issuable upon exercise of the warrants and stock options because they are dilutive. Shares issuable upon the exercise of warrants and stock options were not included in the weighted average shares outstanding used in the calculation of earnings per share for fiscal 1997, because they were anti-dilutive under the modified treasury stock method.

The Financial Accounting Standards Board ("FASB") issued a Statement of Financial Accounting Standards (SFAS) No. 128, "Earnings Per Share" during fiscal 1997. SFAS No. 128 supersedes Accounting Principles Board (APB) Opinion No. 15, the existing authoritative guidance effective with financial statements for both interim and annual periods ending after December 15, 1997. After SFAS No. 128 becomes effective for a company, all prior period earnings per share (EPS) data presented must be restated. The new statement modifies the calculation of primary and fully diluted EPS and replaces them with basic and diluted EPS. Assuming SFAS No. 128 had become effective on or before September 30, 1997, 1996 and 1995, the pro forma basic and diluted EPS would have been the same as the primary and fully diluted EPS, respectively, reported on the consolidated Statement of Operations, except that in fiscal 1997 the diluted EPS would have been \$.05 per share, and in 1996 diluted EPS from continuing operations would have been \$.04 per share.

Accounting for Stock-Based Compensation - During 1995, the FASB issued SFAS No. 123, "Accounting for Stock-Based Compensation", which defines a fair value based method of accounting for employee stock options or similar equity instruments and encourages all entities to adopt that method of accounting for all of their employee stock compensation plans. However, it also allows an entity to continue to measure compensation cost related to stock options issued to employees under these plans using the method of accounting

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (continued)

prescribed by APB Opinion No. 25, "Accounting for Stock Issued to Employees". Entities electing to continue using the accounting in APB Opinion No. 25 must make pro forma disclosures of net income and earnings per share, as if the fair value based method of accounting defined in SFAS No. 123 had been applied.

The Company has elected to account for its stock-based compensation plans under APB Opinion No. 25; therefore, no compensation cost is recognized in the accompanying financial statements for employee stock options granted in

fiscal 1997. Employee stock options granted in fiscal 1996 were not material.

During fiscal 1997, the Company issued stock options exercisable for the purchase of approximately 264,000 shares of its \$.01 par value common stock (Note 9). These options have been valued at \$440,000, using the Black-Scholes valuation method. Had the effects of stock-based compensation been accounted for in the financial statements, net income and earnings per share would have been reduced by \$51,000 and \$.02, respectively. The primary assumptions used in the valuation were a weighted average risk free rate of 6.23%, an expected dividend yield of 0%, holding periods of four to eight years and 69% volatility. No adjustment has been made for the non-transferability of the options or for the risk of forfeiture.

Use of Estimates - The preparation of financial statements in conformity with generally accepted accounting principles 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 financial statements and the reported amounts of revenues and expenses during the year. Actual results could differ from those estimates.

Fair Value of Financial Instruments - The carrying values of the Company's current assets and current liabilities approximate fair value due to the short term in which these instruments mature. The carrying value of the Company's long-term debt approximates fair value because the interest rate of the mortgage note payable (Note 5) approximates prevailing interest rates for similar debt instruments.

Accounting Pronouncements Not Yet Adopted - In June 1997, the Financial Accounting Standards Board issued SFAS No. 130, "Reporting Comprehensive Income," and SFAS No. 131, "Disclosures About Segments of an Enterprise and Related Information." SFAS No. 130 establishes standards for reporting and display of all changes in equity that result from transactions and other economic events of the period other than transactions with owners ("comprehensive income"), and requires companies to retroactively display the cumulative total of comprehensive income other than net income for the period as a separate component of equity in both interim and annual financial statements. SFAS No. 131

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (continued)

establishes a new model for interim and annual segment reporting which is based on the way management organizes segments for making operating decisions and assessing segment performance. The Company is required to adopt these standards in fiscal 1999. Management has not assessed the effect of these standards on future disclosures.

(3) PURCHASE OF P. R. HOFFMAN MACHINE PRODUCTS:

Effective July 1, 1997, the Company acquired substantially all of the assets and related operating liabilities of P. R. Hoffman Machine Products Corporation. P. R. Hoffman specializes in the development, manufacture and marketing of double sided lapping and polishing machines a related consumables used in the manufacture of semiconductor silicon wafers. The purchase method of accounting is being used for this acquisition, and therefore, the accompanying statements include the results of the operations of P. R. Hoffman for the three month period beginning July 1, 1997.

The cost of the acquisition is summarized as follows:

Cash	\$2,307,757
Liabilities assumed	382,276
Acquisition transaction costs	261,823
Issuance of 32,388 shares of common stock	65,000
Issuance of 150,000 warrants	167,200
	-----
Total cost of acquisition	\$3,184,056
	=====

The cost of the acquisition was allocated as follows:

Accounts Receivable	\$1,122,518
Inventory	1,060,191
Property	420,923
Other Assets & Liabilities	9,702
Purchase price in excess of net assets acquired	570,722
	-----

Total

\$3,184,056

=====

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## AMTECH SYSTEMS, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

## (3) PURCHASE OF P. R. HOFFMAN MACHINE PRODUCTS: - (continued)

Valuation of the common stock issued in connection with these transactions was determined based on the fair market value of the common stock on the date of issuance, taking into account the illiquidity arising from restrictions on the sale of the stock.

The purchase price in excess of net assets acquired commonly referred to as "goodwill" is being amortized on a straight-line basis over a period of 15 years.

In addition to the above purchase price, the former owner of P. R. Hoffman Machine Products Corporation is entitled to additional payments equal to 50% of pretax income in excess of \$800,000 per year for a period of 5 years, limited to a maximum aggregate of \$2 million of such payments. The additional contingent purchase price of up to \$2 million is payable in a combination of cash and unregistered and registered common stock of Amtech as defined in the Asset Purchase Agreement. This additional consideration will be treated as part of the purchase price to the extent earned and will be amortized over the remaining fifteen year period that began on the July 1, 1997 acquisition date.

The following consolidated pro forma financial information was prepared assuming that the acquisition had occurred at the beginning of each fiscal year. This pro forma information does not necessarily reflect the results of operations that would have occurred had the acquisition taken place at the beginning of each fiscal year and is not necessarily indicative of results that may be obtained in the future (unaudited):

	1997	1996
	-----	-----
Revenues	\$16,121,577	\$15,028,672
Income from continuing operations	575,069	355,643
Net Income	575,069	666,735
Earnings per share:		
Income from continuing operations	\$ .11	\$ .08
Net Income	\$ .11	\$ .13

For purposes of the above pro forma presentation, the historical revenues and earnings of P. R. Hoffman for the twelve month period ended September 30, 1997 and the year ended December 31, 1996 have been combined with the revenues and earnings of Amtech for the years ended September 30, 1997 and 1996, respectively. Therefore, both columns include the operating results of P. R. Hoffman for the three months ended December 31, 1996, including \$ 1,332,814 of revenues and \$227,591 of operating losses.

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## AMTECH SYSTEMS, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

## (4) INCOME TAXES:

The provision for (benefit from) income taxes on continuing operations consists of:

	1997	1996	1995
	-----	-----	-----
Current-			
Federal	\$ 170,000	\$ 212,000	\$ 130,000
State	20,000	8,000	2,000
	-----	-----	-----
	190,000	220,000	132,000
	-----	-----	-----
Deferred-			
Federal	(48,000)	(70,000)	(42,000)
State	(2,000)	--	--
	-----	-----	-----
	(50,000)	(70,000)	(42,000)
	-----	-----	-----
	\$ 140,000	\$ 150,000	\$ 90,000
	=====	=====	=====

The provision for income taxes on continuing operations is different than the amount which would be computed by applying the United States corporate

income tax rate to the income before income taxes. The differences are summarized as follows:

	1997	1996	1995
	-----	-----	-----
Tax provision at the statutory rate	\$ 128,000	\$ 118,000	\$ 89,000
Effect of amortization of goodwill and other expenses not deductible for tax	19,000	3,000	13,000
State tax provision	23,000	28,000	54,000
Effect of losses of Korean joint venture	(22,000)	22,000	--
Change in valuation allowance	3,000	(20,000)	(52,000)
Other items	(11,000)	(1,000)	(14,000)
	-----	-----	-----
Actual tax provision	\$ 140,000	\$ 150,000	\$ 90,000
	=====	=====	=====

The components of deferred taxes as of September 30, 1997 and 1996 are as follows:

	1997	1996
	-----	-----
Allowance for doubtful accounts	\$ 40,000	\$ 38,000
Uniform capitalization of inventory costs	48,000	43,000
Inventory write-downs not currently deductible	23,000	45,000
Book vs. tax depreciation	(19,000)	(24,000)
Unrealized currency gains	(24,000)	--
State net operating loss carryforwards	63,000	2,000
Liabilities not currently deductible	203,000	177,000
Valuation allowance	(61,000)	(58,000)
	-----	-----
	\$ 273,000	\$ 223,000
	=====	=====

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

(4) INCOME TAXES - (continued)

In evaluating the probability of realizing its deferred tax assets, the Company has limited its recognition of deferred tax assets to an amount equal to the expected federal income tax rate of 34% applied to the cumulative temporary differences existing at year end. Deferred tax assets attributable to state net operating losses and the state tax effect of the temporary differences are offset by the valuation allowance.

See Note 12 regarding the income tax treatment of the gain on the disposal of discontinued operations.

(5) LONG-TERM OBLIGATIONS

Long-term debt included in long term obligations consists of a twenty (20) year mortgage secured by the Company's land and building located in The Netherlands. The principal balance of this long-term debt was \$ 216,300 and \$ 265,355 as of September 30, 1997 and 1996, respectively. The collateral has a carrying value of \$395,000. Principal is payable in The Netherlands guilder in 240 equal monthly payments. Principal payments are \$13,000 for each of the next five years, with the payments for 1998 being included with accounts payable as of September 30, 1997. Interest is fixed at 6.95% through June 2001, after which the rate will be adjusted to the prevailing market rate. During the five year fixed interest period there is a penalty for prepayment of the loan.

(6) MAJOR CUSTOMERS AND FOREIGN SALES:

The Company had major customers which account for more than 10% of sales as follows:

	1997	1996	1995
	-----	-----	-----
Customer 1	--	17%	28%
Customer 2	--	10%	11%
Customer 3	--	10%	--
Customer 4	--	10%	--
Customer 5	16%	--	--
Customer 6	16%	--	--
	-----	-----	-----
	32%	47%	39%
	=====	=====	=====

As of September 30, 1997 and 1996, receivables from three customers comprise 55% and 50% of accounts receivable, respectively, representing a concentration of credit risk as defined by SFAS No. 105.

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

(6) MAJOR CUSTOMERS AND FOREIGN SALES - (continued)

The Company's sales were to the following geographic regions:

	1997	1996	1995
	-----	-----	-----
United States (including 1% or less to Costa Rica)	38%	39%	36%
Far East (Korea, People's Republic of China, Taiwan, Japan, Singapore, and India)	27%	40%	57%
Europe (including 1% or less to Africa)	35%	21%	7%
	-----	-----	-----
	100%	100%	100%
	=====	=====	=====

(7) LEASES:

The Company leases buildings, vehicles and equipment. As of September 30, 1997 minimum rental commitments under noncancellable operating leases, all of which expire in the next two years, total \$274,000, of which \$169,000 and \$105,000 are payable in fiscal 1998 and 1999, respectively.

Rental expense related to continuing operations, net of sublease income, for 1997, 1996 and 1995 was approximately \$98,000, \$108,000 and \$76,000, respectively.

(8) PROPRIETARY PRODUCT RIGHTS:

The Company acquired the proprietary product rights to Atmoscan in 1983, which provides an improved method for the automatic loading of silicon wafers into diffusion furnaces. The Company has agreed to pay the inventor royalties for 17 years until November 22, 2000. From the first quarter of fiscal 1994 through the year 2000, royalties are 4% on sales of complete Atmoscan systems and 2% on any related spare parts.

Through the acquisition of the net assets of P. R. Hoffman Machine Products Corporation (see Note 3), the company acquired the license for the design of its steel carriers with plastic inserts for abrasive machining of silicon wafers. In 1995, P. R. Hoffman licensed the patent rights from Wacker Siltronincs. Royalties are 5% on net sales of insert carriers to third parties .

Royalty expense included in cost of product sales totaled approximately \$44,000, \$47,000 and \$49,000 in 1997, 1996 and 1995, respectively.

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

(9) STOCKHOLDERS' EQUITY AND STOCK OPTIONS:

Effective with the close of business on March 29, 1996, each share of the \$.01 par value common stock of the Company was split into two shares. All shares and per share amounts have been restated to give effect for this two for one forward stock split.

The Company issued 2,415,000 shares of its \$.01 par value common stock and redeemable warrants in connection with a secondary public offering completed December 22, 1994. Gross proceeds from the offering were \$4,528,125. Each redeemable warrant issued in the offering entitles the holder to acquire two shares of the Company's \$.01 par value common stock at an exercise price of \$2.75 per share at any time prior to the December 15, 1999 expiration date. The redeemable warrants are subject to the Company's right of redemption, under certain circumstances, at \$.05 each during the period in which they are exercisable. In connection with the public offering, the Company also sold the underwriting group a warrant ("underwriter's warrant") entitling the group to purchase 35,000 units at a per unit price of \$13.50 until their expiration on December 15, 1999. In summary, the total number of shares of \$.01 par value common stock issuable under the underwriter's warrant and the redeemable warrants are 210,000 at a per share price of \$2.25 and 2,625,000 at a per share price of \$2.75, respectively.

The Board has reserved 70,000 shares of common stock for use by the 1983 Incentive Stock Option Plan, which is now expired, 40,000 shares under

Director Stock Purchase Agreements, 200,000 shares for the Non-Employee Directors Stock Option Plan and 320,000 shares to be used jointly by the Amended and Restated 1995 Stock Option Plan and the 1995 Stock Bonus Plan, for a total of 630,000 shares so reserved. Incentive 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 the option was granted. Incentive stock option grants expire no later than 10 years from the date of grant, with the most recent grant expiring February 28, 2007. Under the terms of the 1995 Stock Option Plan, nonqualified options may also be issued. Options in fiscal 1997 and 1996 vest at the rate of 20% - 25% per year, for each of the next four to five years. The stock option transactions and the options outstanding for the three years ended September 30, 1997, are summarized as follows:

	Number of Options -----	Weighted-Average Exercise Price -----
Outstanding at September 30,1994	127,000	\$1.27
Granted	20,000 -----	2.24 -----
Outstanding at September 30,1995	147,000	1.40
Expired	(14,000) -----	1.08 -----
Outstanding at September 30,1996	133,000	1.32

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

(9) STOCKHOLDERS' EQUITY AND STOCK OPTIONS - (continued)

Outstanding at September 30,1996	133,000	\$1.32
Granted	282,084	2.50
Exercised	(27,000)	1.07
Expired	(6,000) -----	1.63 -----
Outstanding at September 30,1997	382,084 =====	\$2.17 =====
Outstanding options exercisable as of:		
September 30, 1995	93,000	\$1.67
September 30, 1996	81,000	\$1.52
September 30, 1997	50,000	\$1.45

In addition to the above stock options, in connection with the acquisition of the net assets of P.R. Hoffman during fiscal 1997, the Company issued 150,000 warrants for purchase of one share each of the Company's \$.01 par value common stock at \$3.00 per share. These warrants have been valued at \$167,200 using the Black-Scholes valuation method discussed in Note 2. The primary assumptions used in the valuation of these warrants were a risk free rate of 6.29%, expected dividend yield of 0%, average holding period of 2.5 years, and 69% volatility. The value of these warrants has been included in the goodwill associated with the purchase of the P. R. Hoffman net assets.

(10) COMMITMENTS AND CONTINGENCIES:

During March 1994, the Company entered into a research and development contract with and paid \$355,405 to the University of California at Santa Cruz (the "University"). That amount was expensed in fiscal 1994. The Company's purpose for entering into the contract is to attempt to prove the feasibility and demonstrate the practical application of the Company's patented photo-assisted chemical vapor deposition ("CVD") process. The University has developed designs and specifications for a prototype model of a product embodying the Company's technology and used it to conduct the initial study. The study has proven that the Company's patented method minimizes the clouding of the window that separates the light source from the reactor chamber. However, further study is needed to determine whether it can develop a photo-assisted machine that produces a commercially viable rate of deposition. Subsequent to September 30, 1997, the company opened negotiations to amend its contract to extend its term to the later of December 31, 1998 or the date on which the work is completed, and to increase its financial commitment. Once the amendment is accepted by both parties, the remaining commitment on the contract will be \$250,000. The purpose of the

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES

## (10) COMMITMENTS AND CONTINGENCIES - (continued)

contract amendment is to determine whether deposition rates that are satisfactory for commercial applications can be achieved with the Company's patented method.

Assuming the feasibility of the proposed photo CVD product, the Company expects to expend approximately \$3,200,000 for its development. The expenditure is expected to be made in two stages: approximately \$1,700,000 for the development of an initial product suitable for use in research facilities and approximately \$1,500,000 for the development of a product for use in industrial production facilities. These estimates do not include any amount for the expansion of facilities for the manufacture of a new photo CVD product designed for industrial production facilities and it is reasonably possible that these estimates will be revised based upon an analysis of the final study results. Funds for that expansion, if any, are expected to be obtained from one or more sources of financing, such as the possible exercise of the outstanding redeemable common stock warrants, working capital loans from banks, a secondary public offering, lease financing and internally generated cash from operations. There is no assurance of the availability or sufficiency of these or any other source of financing.

## (11) KOREAN JOINT VENTURE:

In the first quarter of fiscal 1996, the Company entered into a joint venture agreement pursuant to which the Company received a 45% ownership interest and a 50% voting interest in Seil Semicon, Inc. (the "JVC") in return for a commitment to invest \$500,000 in cash. The joint venturers planned to operate a silicon test wafer reclaiming business in Korea through Seil Semicon, Inc., which remains in the start-up phase. Pursuant to that agreement, the Company invested \$425,000 and expensed \$65,000 of that amount as its share of the start-up losses. The joint venture succeeded in acquiring real property for construction of the reclamation facility and in securing \$3 million in third party financing. However, a review during the fourth quarter of fiscal 1996 revealed that the increases in the JVC's anticipated costs during the start-up phase and the cost of additional equipment required for the operation had expanded the total projected capital requirements by \$2,500,000. During the first quarter of fiscal 1997, the Company's financial relationship with the joint venture was terminated because management determined that raising the Company's investment commitment to \$3 million, without obtaining majority control, was more risk than was appropriate for the Company. The Company received \$478,000 during December 1996, pursuant to the termination agreement, which reimbursed the Company's actual investment and expenses. As of September 30, 1996, the \$360,000 carrying value of the investment in the JVC was included in other assets.

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

## (12) DISCONTINUED TECHNICAL CONTRACT PERSONNEL SEGMENT:

The Company entered the technical contract personnel segment in 1988. On September 30, 1992, the Company sold substantially all of the operations of the technical contract personnel segment, with only Echelon Service Company ("Echelon") being retained. Echelon was acquired in 1989, using stock and cash at closing as consideration, as well as an incentive arrangement payable in cash and stock. Since October 1995, when the board of directors approved a plan to discontinue the technical contract personnel business, those operations have been designated as discontinued in financial reports of the Company. Effective December 29, 1995, the Company exchanged all of its ownership interest in the stock of Echelon for 196,034 shares of the Company's outstanding \$.01 par value Common Stock previously owned by Eugene R. Hartman, then an officer and director of the Company. The transaction was preceded by a dividend from Echelon to the Company in order to equalize values. The transaction was structured to be a tax-free reorganization and, as such, no provision for income taxes has been made relative to this transaction.

The results of the discontinued operations reflected in the consolidated statements of operations are those of Echelon through the date of the disposal. Revenue of the discontinued operations were \$1,235,000 for the three months ended December 1995 and \$4,549,000 for the year ended September 30, 1995. Income from discontinued operations for fiscal 1996 and 1995 are net of applicable income taxes of \$25,000 and \$30,000, respectively.

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES

-----  
 FOR THE YEARS ENDED SEPTEMBER 30, 1997, 1996 AND 1995  
 -----

For the Year Ended September 30, -----	Balance at Beginning of Year -----	Charged (credited) to Expense -----	Write-offs -----	Balance at End of Year -----
<b>1. Allowance for Doubtful Accounts</b> -----				
1997	\$ 90,000	\$ 42,960	\$ 2,960	\$130,000
1996	80,000	66,249	56,249	90,000
1995	45,000	35,704	704	80,000
<b>2. Deferred Tax Asset Valuation Allowance</b> -----				
1997	\$ 58,000	\$ 3,000	\$ --	\$ 61,000
1996	78,000	(20,000)	--	58,000
1995	150,000	(72,000)	--	78,000

ITEM 9. S-1  
 CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON  
 ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

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 PART III

ITEM 10. S-1  
 DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information required by this Item is incorporated by reference to the Company's Notice of Meeting and Proxy Statement to be filed in connection with the Company's Annual Meeting of Shareholders anticipated to be held on or about February 27, 1998 (the "1998 Proxy Statement").

ITEM 11. S-1  
 EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to the Company's 1998 Proxy Statement.

ITEM 12. S-1  
 SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND  
 MANAGEMENT

The information required by this Item is incorporated by reference to the Company's 1998 Proxy Statement.

ITEM 13. S-1  
 CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this Item is incorporated by reference to the Company's 1998 Proxy Statement.

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 PART IV

ITEM 14. S-1  
 EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON  
 FORM 8-K

(a) S-1  
 Financial Statements.

The following is a list of all financial statements filed as a part of this Report:

1. Consolidated Balance Sheets - September 30, 1997 and 1996
2. Consolidated Statements of Operations for the years ended September 30, 1997, 1996 and 1995
3. Consolidated Statements of Stockholders' Equity for the years ended September 30, 1997, 1996 and 1995

4. Consolidated Statements of Cash Flows for the years ended September 30, 1997, 1996 and 1995

5. Notes to Consolidated Financial Statements - September 30, 1997, 1996 and 1995

(b) Financial Statement Schedules

The following is a list of a financial statement schedule required to be filed as a part of this Report:

1. Schedule II - Valuation and Qualifying Accounts

All schedules other than the Schedule listed above, are omitted as the information is not required, is not material or is otherwise furnished.

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(c) Exhibits.

Exhibit No.	Description	Method of Filing
3.1	Articles of Incorporation	A
3.2	Articles of Amendment to Articles of Incorporation, dated April 27, 1983	A
3.3	Articles of Amendment to Articles of Incorporation, dated May 19, 1987	B
3.4	Articles of Amendment to Articles of Incorporation, dated May 2, 1988	C
3.5	Articles of Amendment to Articles of Incorporation, dated May 28, 1993	G
3.6	Amended and Restated Bylaws	D
10.1	Amended and Restated 1995 Stock Option Plan	J
10.2	1995 Stock Bonus Plan	J
10.3	Non-Employee Director Stock Option Plan	K
10.4	Employment Agreement with Robert T. Hass, dated May 19, 1992	F
10.5	Registration Rights Agreement with J.S. Whang, dated January 24, 1994	G
10.6	Employment Agreement with J.S. Whang, dated February 28, 1997	M
10.7	Contract of Sale (Real Property) dated June 21, 1996 between Tempress Systems, Inc. and Orgelmakerij Gedr. Rell B.V.	I
10.8	Research Agreement with The Regents of the University of California dated March 1, 1994, together with amendments thereto dated March 1, 1994, March 30, 1994, March 7, 1995, June 26, 1995, October 16, 1995, November 29, 1995, and December 4, 1995	H
10.9	Amendment to Research Agreement with the Regents of the University of California dated July 8, 1996	I
10.10	Employment Agreement, dated July 1, 1997, between the Registrant and John R. Krieger	L

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Exhibit No.	Description	Method of Filing
10.11	Registration Rights Agreement, dated July 1, 1997, between the Registrant and John R. Krieger	L
10.12	Sublease Agreement, dated July 1, 1997, between the Registrant and John R. Krieger	L
10.13	Asset Purchase Agreement, dated July 1, 1997, among the Registrant, P.R. Hoffman Machines Corporation and John R. Krieger	L
11	Schedule of Computation of Net Income per Share	*

21	Subsidiaries of the Registrant	*
23	Consent of Independent Public Accountant	*
24	Powers of Attorney	See Signature Page
27	Financial Data Schedule	*

- 
- \* Filed herewith.
  - A Incorporated by reference to the Company's Form S-18 Registration Statement No. 2-83934-LA
  - B Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 1987
  - C Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 1988
  - D Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 1991
  - E Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 1992
  - F Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 1993
  - G Incorporated by reference to the Company's Form S-1 Registration Statement No. 33-77368
  - H Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 1995
  - I Incorporated by reference to the Company's Form S-3 Registration Statement No. 333-09917
  - J Incorporated by reference to Company's Form S-8 Registration Statement relating to the Amended and Restated 1995 Stock Option Plan and the 1995 Stock Bonus Plan filed with the Securities and Exchange Commission on September 9, 1997.
  - K Incorporated by reference to Company's Form S-8 Registration Statement relating to the Non-Employee Directors Stock Option Plan filed with the Securities and Exchange Commission on August 8, 1996
  - L Incorporated by reference to the Company's Current Report on Form 8-K, dated July 1, 1997.
  - M Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 1997.

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(d) Reports on Form 8-K

On July 9, 1997, the Company filed a Current Report on Form 8-K, dated July 1, 1997, reporting the Company's acquisition of substantially all of the assets of P.R. Hoffman Machine Products Corporation ("P.R. Hoffman"). On September 9, 1997, the Company filed a Form 8-K/A, which report amended the prior Form 8-K to include required financial information relating to P.R. Hoffman.

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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 29, 1997

By /s/ Jong S. Whang  
-----  
Jong S. Whang, President

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints JONG S. WHANG and ROBERT T. HASS, and each of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to this Form 10-K Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully and to all intents and purposes as he might or could do in person hereby ratifying and confirming all that said attorneys-in-fact and agents, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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
-----------	-------	------

- -----	-----	-----
/s/ Jong S. Whang	Chairman of the Board,	December 29, 1997
- -----	President	
Jong S. Whang	(Chief Executive Officer)	
/s/ Robert T. Hass	Vice President-Finance	December 29, 1997
- -----	(Chief Financial	
Robert T. Hass	& Accounting Officer)	
/s/ Donald F. Johnston	Director	December 29, 1997
- -----		
Donald F. Johnston		
/s/ Alvin Katz	Director	December 29, 1997
- -----		
Alvin Katz		
/s/ Bruce R. Thaw	Director	December 29, 1997
- -----		
Bruce R. Thaw		

AMTECH SYSTEMS, INC. AND SUBSIDIARIES

EXHIBIT 11

SCHEDULE OF COMPUTATION OF NET INCOME PER SHARE  
FOR THE YEARS ENDED SEPTEMBER 30, 1997, 1996 AND 1995

	1997	1996	1995
PRIMARY			
Average number of common shares outstanding	4,168,111	4,175,728	3,802,853
Incremental shares attributable to warrants/options	--	2,165,299	--
Total shares used in the calculation	4,168,111	6,341,027	3,802,853
Income from continuing operations	\$ 237,709	\$ 197,591	\$ 171,053
Interest net of tax assumed to be earned on additional short-term investments	--	145,981	--
Income from continuing operations as adjusted	\$ 237,709	\$ 343,572	\$ 171,053
Earnings per share - continuing*	\$ .06	\$ .05	\$ .04
Net income	\$ 237,709	\$ 508,683	\$ 226,568
Interest net of tax assumed to be earned on additional short-term investments	--	145,981	--
Net income as adjusted	\$ 237,709	\$ 654,664	\$ 226,568
Earnings per share*	\$ .06	\$ .10	\$ .06

\* For fiscal 1997 and 1995, there were no incremental shares or earnings included in the calculation of earnings per share, because under the modified treasury stock method the warrants and stock options were anti-dilutive.

AMTECH SYSTEMS, INC. AND SUBSIDIARIES

EXHIBIT 11 - CONTINUED

SCHEDULE OF COMPUTATION OF NET INCOME PER SHARE  
FOR THE YEARS ENDED SEPTEMBER 30, 1997, 1996 AND 1995

	1997	1996	1995
FULLY DILUTED			
Average number of common shares outstanding	4,168,111	4,175,728	3,802,853
Incremental shares attributable to warrants/options	--	2,165,299	--
Total shares used in the calculation	4,168,111	6,341,027	3,802,853
Income from continuing operations	\$ 237,709	\$ 197,591	\$ 171,053

Interest net of tax assumed to be earned on additional short-term investments	--	134,072	--
	-----	-----	-----
Income from continuing operations as adjusted	\$ 237,709	\$ 331,663	\$ 171,053
	=====	=====	=====
Earnings per share - continuing*	\$ .06	\$ .05	\$ .04
Net income	\$ 237,709	\$ 508,683	\$ 226,568
Interest net of tax assumed to be earned on additional short-term investments	--	134,072	--
	-----	-----	-----
Net income as adjusted*	\$ 237,709	\$ 642,755	\$ 226,568
	=====	=====	=====
Earnings per share	\$ .06	\$ .10	\$ .06

\* For fiscal 1997 and 1995, there were no incremental shares or earnings included in the calculation of earnings per share, because under the modified treasury stock method the warrants and stock options were anti-dilutive.

EXHIBIT 22

SUBSIDIARIES OF THE REGISTRANT

Tempress Systems, Inc. -- Incorporated under the laws of the State of Texas.

P.R. Hoffman Machine Products, Inc. -- Incorporated under the laws of the State of Arizona.

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation of our report included in this Form 10-K, into the Company's previously filed Registration Statements on Forms S-3 and Forms S-8 (File Numbers 333-09917, 333-10117, 333-09911 and 333-09909).

/s/ Arthur Andersen LLP

Phoenix, Arizona,  
December 12, 1997.

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THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE BALANCE SHEETS AS OF SEPTEMBER 30, 1997 AND SEPTEMBER 30, 1996, AND THE STATEMENTS OF OPERATION AND THE STATEMENTS OF CASH FLOW FOR THE THREE YEARS ENDED SEPTEMBER 30, 1997 AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED SEPTEMBER 30, 1997.

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