

MKS INSTRUMENTS INC

Form 10-K

March 16, 2006

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**UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**Form 10-K  
FOR ANNUAL AND TRANSITION REPORTS PURSUANT  
TO SECTIONS 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

(Mark One)

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

**For the fiscal year ended December 31, 2005**

**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 0-23621**

**MKS Instruments, Inc.**

*(Exact Name of Registrant as Specified in Its Charter)*

**Massachusetts**

*(State or other Jurisdiction of  
Incorporation or Organization)*

**90 Industrial Way, Wilmington, Massachusetts**

*(Address of Principal Executive Offices)*

**04-2277512**

*(IRS Employer  
Identification No.)*

**01887**

*(Zip Code)*

**Registrant's Telephone Number, including area code:**

**(978) 284-4000**

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

**None.**

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

**Common Stock, no par value**

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

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

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

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Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) 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.

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

Large accelerated filer  Accelerated filer  Non-accelerated filer

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

Aggregate market value of the voting and non-voting common equity held by nonaffiliates of the registrant as of June 30, 2005 based on the closing price of the registrant's Common Stock on such date as reported by the Nasdaq National Market: \$595,265,198; Number of shares outstanding of the issuer's Common Stock, no par value, as of February 24, 2006: 54,783,234.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the definitive Proxy Statement for MKS' Annual Meeting of Stockholders to be held on May 8, 2006 are incorporated by reference into Part III of this Form 10-K.

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**SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

MKS management believes that this Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. When used herein, the words believe, anticipate, plan, expect, estimate, intend, may, see, will, would and similar expressions are intended to identify forward-looking statements. These forward-looking statements reflect management's current opinions and are subject to certain risks and uncertainties that could cause actual results to differ materially from those stated or implied. MKS assumes no obligation to update this information. Risks and uncertainties include, but are not limited to, those discussed in the section entitled Risk Factors.

**PART I**

**Item 1. Business**

MKS Instruments, Inc. (the Company or MKS) was founded in 1961 as a Massachusetts corporation. We are a leading worldwide provider of instruments, components, subsystems and process control solutions that measure, control, power and monitor critical parameters of semiconductor and other advanced manufacturing processes.

We are managed as one operating segment which is organized around three product groups: Instruments and Control Systems, Power and Reactive Gas Products and Vacuum Products. Our products are derived from our core competencies in pressure measurement and control, materials delivery, gas and thin-film composition analysis, electrostatic charge control, control and information management, power and reactive gas generation and vacuum technology.

Our products are used in diverse markets and applications including the manufacture of, among other things: semiconductor devices for diverse electronics applications;

flat panel displays for hand-held devices, laptop computers, desktop computer monitors and television sets;

magnetic and optical storage media;

optical filters and fiber optic cables for data and telecommunications;

optical coatings for eyeglasses, architectural glass and solar panels; and

magnetic resonance imaging (MRI) medical equipment.

For over 40 years, we have focused on satisfying the needs of our customers by establishing long-term, collaborative relationships. We have a diverse base of customers that includes manufacturers of semiconductor capital equipment, semiconductor devices, data storage equipment, medical equipment and flat panel displays, as well as industrial and biopharmaceutical manufacturing companies, and university, government and industrial research laboratories. During the years ended December 31, 2005, 2004 and 2003, we estimate that approximately 71%, 74% and 69% of our net sales, respectively, were to semiconductor capital equipment manufacturers and semiconductor device manufacturers. Our top 10 customers for the year ended December 31, 2005 were Applied Materials, ASM International, Celerity Group, General Electric, Lam Research, Novellus Systems, Phillips, PSK Tech, Tokyo Electron and Ulvac.

We file reports, proxy statements and other documents with the Securities and Exchange Commission. You may read and copy any document we file at the SEC Headquarters at Office of Investor Education and Assistance, 100 F Street, NE, Washington, D.C. 20549. You should call 1-800-SEC-0330 for more information on the public reference room. Our SEC filings are also available to you on the SEC's Internet site at <http://www.sec.gov>.

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Our internet address is [www.mksinstruments.com](http://www.mksinstruments.com). We are not including the information contained in our website as part of, or incorporating it by reference into, this annual report on Form 10-K. We make available free of charge through our web site our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, as soon as reasonably practicable after we electronically file such materials with the Securities and Exchange Commission.

**Markets and Applications**

We are focused on improving process performance and productivity by controlling advanced manufacturing processes in semiconductor, thin-film and other non-semiconductor market sectors. We estimate that approximately 71%, 74% and 69% of our net sales for the years ended December 31, 2005, 2004 and 2003, respectively, were to semiconductor capital equipment manufacturers and semiconductor device manufacturers. Approximately 8%, 8% and 10% of our net sales in the years ended December 31, 2005, 2004 and 2003, respectively, were for thin-film processing equipment applications, including compact discs, digital video discs (DVDs) and other digital storage media; flat panel displays for computer and television screens; and thin-film coatings for architectural glass and optics. Approximately 21%, 18% and 21% of our net sales in the years ended December 31, 2005, 2004 and 2003, respectively, were for other non-semiconductor manufacturing applications. These include, but are not limited to, industrial manufacturing, magnetic resonance imaging (MRI) medical equipment, biopharmaceutical manufacturing, and university, government and industrial research laboratories.

We estimate that approximately 37%, 34% and 41% of our net sales for the years ended December 31, 2005, 2004 and 2003, respectively, were to customers located in international markets. International sales include sales by our foreign subsidiaries, but exclude direct export sales. Please refer to Note 11 in the Notes to Consolidated Financial Statements for further information.

***Semiconductor Manufacturing Applications***

The majority of our sales are derived from products sold to semiconductor capital equipment manufacturers and semiconductor device manufacturers. Our products are used in the major semiconductor processing steps such as depositing materials onto substrates and etching and cleaning circuit patterns.

Our products are also used for process facility applications such as gas distribution, pressure control and vacuum distribution, and electrostatic charge control in clean rooms where semiconductor manufacturing takes place. In addition, we provide specialized instruments that monitor the performance of manufacturing equipment and products that distribute, manage, and classify process control information. We anticipate that the semiconductor manufacturing market will continue to account for a substantial portion of our sales. While the semiconductor device manufacturing market is global, major semiconductor capital equipment manufacturers are concentrated in Europe, Japan and the United States.

***Thin-Film Manufacturing Applications***

***Flat Panel Display Manufacturing.***

Our products are used in the manufacture of flat panel displays, which require the same or similar fabrication processes as semiconductor manufacturing. Flat panel displays are used in electronic hand-held devices, laptop computers, desktop computer monitors, and television sets. Flat panel display technology is designed to replace bulkier cathode ray tube (CRT) technology in computer monitors and television sets. We sell products to flat panel display equipment manufacturers and to end-users in the flat panel display market. The major manufacturers of flat panel displays are concentrated in Japan, Korea and Taiwan, and the major manufacturers of flat panel display equipment are concentrated in Japan and the United States. The transition to larger panel sizes and higher display resolution is driving the need for improved process controls to reduce defects.

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*Magnetic and Optical Storage Media.*

Our products are used to manufacture:

magnetic storage media which store and read data magnetically;

optical storage media which store and read data using laser technology;

compact discs;

hard disks;

data storage devices; and

digital video discs.

The transition to higher density storage capacity requires manufacturing processes incorporating tighter process controls. The major manufacturers of storage media are concentrated in Japan and the Asia Pacific region, and the major manufacturers of storage media capital equipment are concentrated in Europe, Japan and the United States.

*Optical Filters, Optical Fibers and Other Coating Processes.*

Our products are used in optical filter, optical fiber and other optical thin-film coating processes. Our products are sold both to coating equipment manufacturers and to manufacturers of products made using optical thin-film coating processes. Optical filters and fibers used for data transmission are manufactured using processes to deposit chemical vapors that are similar to those used in semiconductor manufacturing. The requirement for higher data transmission rates is driving the need for improved control of optical filters and fiber coating processes. Optical thin film coating for eyeglasses, solar panels and architectural glass are deposited using processes similar to those used in semiconductor manufacturing. Optical filter, optical fiber and other optical thin-film processing manufacturers are concentrated in Europe, Japan and the United States.

*Other Non-Semiconductor Manufacturing Applications*

Our products are used in advanced applications such as high energy physics, emission control, chemical agent detection, fuel cell research, vacuum freeze drying of pharmaceuticals, foods and beverages, and in vacuum processes involved in light bulb and gas laser manufacturing. Our power delivery products are also incorporated into other end-market products such as MRI medical equipment. In addition, our products are sold to government, university and industrial laboratories for vacuum applications involving research and development in materials science, physical chemistry and electronics materials. The major equipment and process providers and research laboratories are concentrated in Europe, Japan and the United States.

**Product Groups**

We group our products into three product groups: Instruments and Control Systems, Power and Reactive Gas Products and Vacuum Products. Also, please refer to Note 11 in the Notes to Consolidated Financial Statements for further information.

**1. Instruments and Control Systems**

This product group includes pressure measurement and control products, materials delivery products, gas and thin film composition analysis products, electrostatic charge control products, and control and information technology products.

**Pressure Measurement and Control Products.** Each of our pressure measurement and control product lines consists of products that are designed for a variety of pressure ranges and accuracies.

**Baratron Pressure Measurement Products.** These products are typically used to measure the pressure of the gases being distributed upstream of the process chambers, to measure process chamber pressures and to

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measure pressures between process chambers, vacuum pumps and exhaust lines. We believe we offer the widest range of gas pressure measurement instruments in the semiconductor and advanced thin-film materials processing industries.

*Automatic Pressure and Vacuum Control Products.* These products enable precise control of process pressure by electronically actuating valves that control the flow of gases in and out of the process chamber to minimize the difference between desired and actual pressure in the chamber.

In most cases, Baratron pressure measurement instruments provide the pressure input to the automatic pressure control device. Together, these components create an integrated automatic pressure control subsystem. Our pressure control products can also accept inputs from other measurement instruments, enabling the automatic control of gas input or exhaust based on parameters other than pressure.

*Materials Delivery Products.* Each of our materials delivery product lines consists of products that are designed for a variety of flow ranges and accuracies.

*Flow Measurement and Control Products.* Flow measurement products include gas, vapor and liquid flow measurement products based upon thermal conductivity, pressure and direct liquid injection technologies. The flow control products combine the flow measurement device with valve control elements based upon solenoid, piezo-electric and piston pump technologies. These products measure and automatically control the mass flow rate of gases and vapors into the process chamber. Our thermal-based mass flow controllers control gas flow based on the molecular weight of gases and our pressure-based mass flow controllers, based on Baratron pressure instrument measurement and control technology, restrict flow in the gas line to transform pressure control into mass flow control.

Our flow measurement products also include a calibration system that independently measures mass flow and compares this measurement to that of the process chamber mass flow controller. The demand for our calibration system is driven by the increasingly stringent process control needs of the semiconductor industry and the need to reduce costly downtime resulting from stopping operations to address mass flow controller problems.

*Gas and Thin-Film Composition Analysis Products.* Gas and thin-film composition analysis instruments are sold to a variety of industries including the semiconductor industry.

*Mass Spectrometry-Based Gas Composition Analysis Instruments.* These products are based on quadruple mass spectrometer sensors that separate gases based on molecular weight. These sensors include built-in electronics and are provided with software that analyzes the composition of background and process gases in the process chamber. These instruments are provided both as portable laboratory systems and as process gas monitoring systems used in the diagnosis of semiconductor manufacturing process systems.

*Fourier Transform Infra-Red (FTIR) Based Gas and Thin-Film Composition Analysis Products.* FTIR-based products provide information about the composition of gases and thin-films by measuring the absorption of infra-red light as it passes through the sample being measured. Gas analysis applications include measuring the compositions of mixtures of reactant gases; measuring the purity of individual process gases; measuring the composition of process exhaust gas streams to determine process health; monitoring gases to ensure environmental health and safety; and monitoring combustion exhausts. These instruments are provided as portable laboratory systems and as process gas monitoring systems used in the diagnosis of manufacturing processes.

Mass spectrometry-based and FTIR-based gas monitoring systems can indicate out-of-bounds conditions, such as the presence of undesirable contaminant gases and water vapor or out-of-tolerance amounts of specific gases in the process, which alert operators to diagnose and repair faulty equipment.

*Leak Detection Products.* Helium leak detection is used in a variety of industries including semiconductor, HVAC, automotive and aerospace to ensure the leak integrity of both manufactured products and manufacturing equipment. We believe that our products are the smallest mass spectrometer-based helium leak detectors currently available.



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*Optical Monitoring Instruments.* We manufacture a range of optical monitoring instruments that are sold primarily for thin-film coating applications such as the manufacture of optical filters. The optical monitors measure the thickness and optical properties of a film being deposited, allowing the user to better control the process.

*Electrostatic Charge Control Products.* Industries that rely on high technology manufacturing, such as the semiconductor, flat panel display, and data storage industries, are vulnerable to electrostatic charge-related contamination and yield problems. We design and manufacture products to control electrostatic attraction, electrostatic discharge, and electromagnetic interference.

*Control and Information Technology Products.* We design and manufacture a suite of products that allow semiconductor manufacturing customers to better control their processes through computer-controlled automation. These products include digital control network products, process chamber and system controllers, data analysis products and connectivity products. Digital control network products are used to connect sensors, actuators and subsystems to the chamber and system control computers. They support a variety of industry-standard connection methods including DeviceNet, Profibus, ethernet and conventional discrete digital and analog signals. Chamber and system control computers process these signals in real time and allow customers to precisely manage the process conditions. Connectivity products allow information to flow from the process sensors and subsystems and from the process tool control computer to the factory network. By enabling this information flow, we believe that we help customers optimize their processes through Advanced Process Control (APC), and diagnose equipment problems from a remote location (e-diagnostics).

## **2. Power and Reactive Gas Products**

This product group includes power delivery products and reactive gas generation products.

*Power Delivery Products.* Our power delivery products are used in the semiconductor, flat panel display, data storage and medical markets. In the semiconductor, flat panel and data storage markets, our microwave, RF and DC power supplies are used to provide energy to various etching, stripping and deposition processes. A range of impedance matching units transfer power from the power supplies to the customer's process. We also provide sensors to measure delivered voltage and current along with plasma impedance. This information is used both to better control the generator output and as a process chamber diagnostic. Our power amplifiers are also used in MRI medical equipment including the most advanced 3T (three Tesla) machines.

*Reactive Gas Generation Products.* Reactive gases are used to etch, strip and deposit films on wafers, to clean wafers during processing, and to clean process chambers to reduce particle contamination. A reactive gas is created when energy is added to a stable gas to break apart its molecules. The resulting dissociated gas produces rapid chemical reactions when it comes into contact with other matter. Our reactive gas products include ozone generators and subsystems used for deposition of insulators onto semiconductor devices, ozonated water delivery systems for advanced semiconductor wafer and flat panel display cleaning, atomic fluorine generators for process chamber cleaning, microwave plasma based products for photo resist removal and a new line of generators based on the fluorine cleaning architecture which provide reactive gases for a wide range of semiconductor, flat panel and thin film applications.

## **3. Vacuum Products**

This product group consists of vacuum technology products, including vacuum gauges, valves and components.

*Vacuum Gauging Products.* We offer a wide range of vacuum instruments consisting of vacuum measurement sensors and associated power supply and readout units. These vacuum gauges measure phenomena that are related to the level of pressure in the process chamber and downstream of the process chamber between the chamber and the pump. These gauges are used to measure vacuum at pressures lower than those measurable with a Baratron instrument or to measure vacuum in the Baratron instrument range where less accuracy is required. Our indirect pressure gauges use thermal conductivity and ionization gauge technologies to measure pressure from atmospheric pressure to one trillionth of atmospheric pressure.

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*Vacuum Valves and Components.* Our vacuum valves are used on the gas lines between the process chamber and the pump downstream of the process chamber. Our vacuum components consist of flanges, fittings, traps and heated lines that are used downstream from the process chamber to provide leak free connections and to prevent condensable materials from depositing particles near or back into the chamber. The manufacture of devices with small circuit patterns cannot tolerate contamination from atmospheric leaks or particles. Our vacuum components are designed to minimize such contamination and thus increase yields and reduce downtime.

***Application-Specific Integrated Subsystems***

We also combine these products and technologies into application-specific integrated subsystems. Integrated subsystems are made by each product group, and typically provide higher functionality in a smaller footprint, depending upon the application.

For example, we have a line of integrated flow and pressure control subsystems that combine two or more of our products and technologies into products for specific process applications. We have developed a range of Back-Side Wafer Cooling Subsystems which are needed to control the flow and pressure of the helium used to effect the cooling of wafers in semiconductor manufacturing. By combining the functions of our Baratron pressure measurement instruments, flow measurement instruments, control electronics and valves into a range of compact subsystems, this product line addresses the need for smaller components that save valuable clean room space.

Integrated subsystems represented approximately 27% of revenues for the year ended December 31, 2005 compared to approximately 25% and 20% of revenues for the years ended December 31, 2004 and 2003, respectively.

**Customers**

Our largest customers include leading semiconductor capital equipment manufacturers such as Applied Materials, Lam Research, Novellus Systems and Tokyo Electron. Sales to our top ten customers accounted for approximately 48%, 49% and 42% of net sales for the years ended December 31, 2005, 2004 and 2003, respectively. Applied Materials accounted for approximately 18%, 20% and 18% of our net sales for the years ended December 31, 2005, 2004 and 2003, respectively.

**Sales, Marketing and Support**

Our worldwide sales, marketing and support organization is critical to our strategy of maintaining close relationships with semiconductor capital equipment manufacturers and semiconductor device manufacturers. We sell our products primarily through our direct sales force. As of December 31, 2005, we had 155 sales employees worldwide, located in China, France, Germany, Japan, Korea, the Netherlands, Singapore, Taiwan, the United Kingdom and the United States. We also maintain sales representatives and agents in a number of countries, which supplement this direct sales force. We maintain a marketing staff that identifies customer requirements, assists in product planning and specifications, and focuses on future trends in the semiconductor and other markets.

As semiconductor device manufacturers have become increasingly sensitive to the significant costs of system downtime, they have required that suppliers offer comprehensive local repair service and close customer support. Manufacturers require close support to enable them to repair, modify, upgrade and retrofit their equipment to improve yields and adapt new materials or processes. To meet these market requirements, we maintain a worldwide sales and support organization in 14 countries. Technical support is provided by applications engineers located at offices in China, France, Germany, Japan, Korea, the Netherlands, Singapore, Taiwan, the United Kingdom and the United States. Repair and calibration services are provided at 28 service depots located worldwide. We provide warranties from one to three years, depending upon the type of product.

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### **Research and Development**

Our products incorporate sophisticated technologies to power, measure, control and monitor increasingly complex gas-related semiconductor manufacturing processes, thereby enhancing uptime, yield and throughput for our semiconductor device manufacturing customers. Our products have continuously advanced as we strive to meet our customers' evolving needs. We have developed, and continue to develop, new products to address industry trends, such as the transition from 200mm wafers to 300mm wafers and the shrinking of integrated circuit line-widths from 90 nanometers to 65 nanometers and below. In addition, we have developed, and continue to develop, products that support the migration to new classes of materials, such as copper for low resistance conductors, high-k dielectric materials for capacitors and gates and low-k dielectric materials for low loss insulators that are used in small geometry manufacturing. We have undertaken an initiative to involve our marketing, engineering, manufacturing and sales personnel in the concurrent development of new products in order to reduce the time to market for new products. Our employees also work closely with our customers' development personnel. These relationships help us identify and define future technical needs on which to focus research and development efforts. We support research at academic institutions targeted at advances in materials science and semiconductor process development. At December 31, 2005, we had 377 research and development employees, primarily located in the United States. Our research and development expenses were \$55.9 million, \$57.0 million and \$47.7 million for the years ended December 31, 2005, 2004 and 2003, respectively. Our research and development efforts include numerous projects, none of which are individually material, and generally have a duration of 12 to 30 months.

### **Manufacturing**

Our manufacturing facilities are located in China, Germany, Israel, Japan, Mexico, the United Kingdom and the United States. Manufacturing activities include the assembly and testing of components and subassemblies, which are integrated into products. We outsource some of our subassembly work. We purchase a wide range of electronic, mechanical and electrical components, some of which are designed to our specifications. We consider our responsiveness to our customers' significantly fluctuating product demands by using lean manufacturing techniques to be a distinct competitive advantage.

### **Competition**

The market for our products is highly competitive. Principal competitive factors include:

historical customer relationships;

product quality, performance and price;

breadth of product line;

manufacturing capabilities; and

customer service and support.

Although we believe that we compete favorably with respect to these factors, there can be no assurance that we will continue to do so.

We encounter substantial competition in most of our product lines, although no single competitor competes with us across all product lines. Certain of our competitors may have greater financial and other resources than us. In some cases, competitors are smaller than we are, but well established in specific product niches. Celerity offers products that compete with our pressure and materials delivery products. Advanced Energy and Horiba each offer materials delivery products that compete with our product line of mass flow controllers. Nor-Cal Products, Inc. and VAT, Inc., each offer products that compete with our vacuum components. Inficon offers products that compete with our vacuum measurement and gas analysis products. Brooks Automation and Inficon each offer products that compete with our vacuum gauging products. Advanced Energy offers products that compete with our power delivery and reactive gas generator products.



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### **Patents and Other Intellectual Property Rights**

We rely on a combination of patent, copyright, trademark and trade secret laws and license agreements to establish and protect our proprietary rights. As of December 31, 2005, we owned 253 U.S. patents, 170 foreign patents and had 104 pending U.S. patent applications. Foreign counterparts of certain of these applications have been filed or may be filed at the appropriate time.

We require each of our employees, including our executive officers, to enter into standard agreements pursuant to which the employee agrees to keep confidential all of our proprietary information and to assign to us all inventions while they are employed by us.

For a discussion of litigation relating to our intellectual property, see Item 3. Legal Proceedings.

### **Employees**

As of December 31, 2005, we employed 2,270 persons. We believe that our ongoing success depends upon our continued ability to attract and retain highly skilled employees for whom competition is intense. None of our employees are represented by a labor union or are party to a collective bargaining agreement. We believe that our employee relations are good.

### **Item 1A. Risk Factors**

***Our business depends substantially on capital spending in the semiconductor industry which is characterized by periodic fluctuations that may cause a reduction in demand for our products.***

We estimate that approximately 71%, 74% and 69%, of our net sales for the years ended December 31, 2005, 2004 and 2003, respectively, were to semiconductor capital equipment manufacturers and semiconductor device manufacturers, and we expect that sales to such customers will continue to account for a substantial majority of our sales. Our business depends upon the capital expenditures of semiconductor device manufacturers, which in turn depend upon the demand for semiconductors. Periodic reductions in demand for the products manufactured by semiconductor capital equipment manufacturers and semiconductor device manufacturers may adversely affect our business, financial condition and results of operations.

Historically, the semiconductor market has been highly cyclical and has experienced periods of overcapacity, resulting in significantly reduced demand for capital equipment. For example, in 2001 through the first half of 2003, we experienced a significant reduction in demand from OEM customers, and lower gross margins due to reduced absorption of manufacturing overhead. In addition, many semiconductor manufacturers have operations and customers in Asia, a region that in past years has experienced serious economic problems including currency devaluations, debt defaults, lack of liquidity and recessions. We cannot be certain that semiconductor downturns will not continue or recur. A decline in the level of orders as a result of any downturn or slowdown in the semiconductor capital equipment industry could have a material adverse effect on our business, financial condition and results of operations.

***Our quarterly operating results have fluctuated, and are likely to continue to vary significantly, which may result in volatility in the market price of our common stock.***

A substantial portion of our shipments occurs shortly after an order is received and therefore we operate with a low level of backlog. As a result, a decrease in demand for our products from one or more customers could occur with limited advance notice and could have a material adverse effect on our results of operations in any particular period. A significant percentage of our expenses is relatively fixed and based in part on expectations of future net sales. The inability to adjust spending quickly enough to compensate for any shortfall would magnify the adverse impact of a shortfall in net sales on our results of operations. Factors that could cause fluctuations in our net sales include:

the timing of the receipt of orders from major customers;

shipment delays;

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disruption in sources of supply;

seasonal variations of capital spending by customers;

production capacity constraints; and

specific features requested by customers.

In addition, our quarterly operating results may be adversely affected due to charges incurred in a particular quarter, for example, relating to inventory obsolescence, bad debt or asset impairments.

As a result of the factors discussed above, it is likely that we may in the future experience quarterly or annual fluctuations and that, in one or more future quarters, our operating results may fall below the expectations of public market analysts or investors. In any such event, the price of our common stock could decline significantly.

***The loss of net sales to any one of our major customers would likely have a material adverse effect on us.***

Our top ten customers accounted for approximately 48%, 49% and 42% of our net sales for the years ended December 31, 2005, 2004 and 2003, respectively. The loss of a major customer or any reduction in orders by these customers, including reductions due to market or competitive conditions, would likely have a material adverse effect on our business, financial condition and results of operations. During the years ended December 31, 2005, 2004 and 2003, one customer, Applied Materials, accounted for approximately 18%, 20% and 18%, respectively, of our net sales. None of our significant customers, including Applied Materials, has entered into an agreement requiring it to purchase any minimum quantity of our products. The demand for our products from our semiconductor capital equipment customers depends in part on orders received by them from their semiconductor device manufacturer customers.

Attempts to lessen the adverse effect of any loss or reduction of net sales through the rapid addition of new customers could be difficult because prospective customers typically require lengthy qualification periods prior to placing volume orders with a new supplier. Our future success will continue to depend upon:

our ability to maintain relationships with existing key customers;

our ability to attract new customers;

our ability to introduce new products in a timely manner for existing and new customers; and

the success of our customers in creating demand for their capital equipment products which incorporate our products.

***As part of our business strategy, we have entered into and may enter into or seek to enter into business combinations and acquisitions that may be difficult and costly to integrate, may be disruptive to our business, may dilute stockholder value or may divert management attention.***

We made several acquisitions in the years 2000 through 2002 and, more recently, in January 2006. As a part of our business strategy, we may enter into additional business combinations and acquisitions. Acquisitions are typically accompanied by a number of risks, including the difficulty of integrating the operations, technology and personnel of the acquired companies, the potential disruption of our ongoing business and distraction of management, expenses related to the acquisition and potential unknown liabilities associated with acquired businesses. If we are not successful in completing acquisitions that we may pursue in the future, we may be required to reevaluate our growth strategy, and we may incur substantial expenses and devote significant management time and resources in seeking to complete proposed acquisitions that will not generate benefits for us.

In addition, with future acquisitions, we could use substantial portions of our available cash as all or a portion of the purchase price. We could also issue additional securities as consideration for these acquisitions,

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which could cause significant stockholder dilution. Our prior acquisitions and any future acquisitions may not ultimately help us achieve our strategic goals and may pose other risks to us.

As a result of our previous acquisitions, we have added several different decentralized operating and accounting systems, resulting in a complex reporting environment. We expect that we will need to continue to modify our accounting policies, internal controls, procedures and compliance programs to provide consistency across all our operations. In order to increase efficiency and operating effectiveness and improve corporate visibility into our decentralized operations, we are currently implementing a new worldwide Enterprise Resource Planning ( ERP ) system. We completed our first site implementation in October 2005 and we expect to continue to implement the ERP system by converting our remaining operations in phases over the next few years. Although we have a plan to accomplish the ERP implementation, we may risk potential disruption of our operations during the conversion periods and the implementation could require significantly more management time and we could incur significantly higher implementation costs than currently estimated.

***An inability to convince semiconductor device manufacturers to specify the use of our products to our customers that are semiconductor capital equipment manufacturers would weaken our competitive position.***

The markets for our products are highly competitive. Our competitive success often depends upon factors outside of our control. For example, in some cases, particularly with respect to mass flow controllers, semiconductor device manufacturers may direct semiconductor capital equipment manufacturers to use a specified supplier's product in their equipment. Accordingly, for such products, our success will depend in part on our ability to have semiconductor device manufacturers specify that our products be used at their semiconductor fabrication facilities. In addition, we may encounter difficulties in changing established relationships of competitors that already have a large installed base of products within such semiconductor fabrication facilities.

***If our products are not designed into successive generations of our customers' products, we will lose significant net sales during the lifespan of those products.***

New products designed by semiconductor capital equipment manufacturers typically have a lifespan of five to ten years. Our success depends on our products being designed into new generations of equipment for the semiconductor industry. We must develop products that are technologically advanced so that they are positioned to be chosen for use in each successive generation of semiconductor capital equipment. If customers do not choose our products, our net sales may be reduced during the lifespan of our customers' products. In addition, we must make a significant capital investment to develop products for our customers well before our products are introduced and before we can be sure that we will recover our capital investment through sales to the customers in significant volume. We are thus also at risk during the development phase that our products may fail to meet our customers' technical or cost requirements and may be replaced by a competitive product or alternative technology solution. If that happens, we may be unable to recover our development costs.

***The semiconductor industry is subject to rapid demand shifts which are difficult to predict. As a result, our inability to expand our manufacturing capacity in response to these rapid shifts may cause a reduction in our market share.***

Our ability to increase sales of certain products depends in part upon our ability to expand our manufacturing capacity for such products in a timely manner. If we are unable to expand our manufacturing capacity on a timely basis or to manage such expansion effectively, our customers could implement our competitors' products and, as a result, our market share could be reduced. Because the semiconductor industry is subject to rapid demand shifts which are difficult to foresee, we may not be able to increase capacity quickly enough to respond to a rapid increase in demand. Additionally, capacity expansion could increase our fixed operating expenses and if sales levels do not increase to offset the additional expense levels associated with any

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such expansion, our business, financial condition and results of operations could be materially adversely affected.

***We operate in a highly competitive industry.***

The market for our products is highly competitive. Principal competitive factors include:

historical customer relationships;

product quality, performance and price;

breadth of product line;

manufacturing capabilities; and

customer service and support.

Although we believe that we compete favorably with respect to these factors, we may not be able to continue to do so. We encounter substantial competition in most of our product lines. Certain of our competitors may have greater financial and other resources than we have. In some cases, competitors are smaller than we are, but well established in specific product niches. We may encounter difficulties in changing established relationships of competitors with a large installed base of products at such customers' fabrication facilities. In addition, our competitors can be expected to continue to improve the design and performance of their products. Competitors may develop products that offer price or performance features superior to those of our products. If our competitors develop superior products, we may lose existing customer and market share.

***Sales to foreign markets constitute a substantial portion of our net sales; therefore, our net sales and results of operations could be adversely affected by downturns in economic conditions in countries outside of the United States.***

International sales include sales by our foreign subsidiaries, but exclude direct export sales. International sales accounted for approximately 37%, 34% and 41%, of net sales for the years ended December 31, 2005, 2004 and 2003, respectively, a significant portion of which were sales to Japan.

We anticipate that international sales will continue to account for a significant portion of our net sales. In addition, certain of our key domestic customers derive a significant portion of their revenues from sales in international markets. Therefore, our sales and results of operations could be adversely affected by economic slowdowns and other risks associated with international sales.

***We have significant foreign operations, and outsource certain operations offshore, which pose significant risks.***

We have significant international sales, service, engineering and manufacturing operations in Europe and Asia, and have outsourced a portion of our manufacturing to Mexico. We may expand the level of manufacturing and certain other operations that we do offshore in order to take advantage of cost efficiencies available to us in those countries. However, we may not achieve the significant cost savings or other benefits that we anticipate from this program. These foreign operations expose us to operational and political risks that may harm our business, including:

political and economic instability;

fluctuations in the value of currencies and high levels of inflation, particularly in Asia and Europe;

changes in labor conditions and difficulties in staffing and managing foreign operations, including, but not limited to, labor unions;

reduced or less certain protection for intellectual property rights;

greater difficulty in collecting accounts receivable and longer payment cycles;

burdens and costs of compliance with a variety of foreign laws;





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increases in duties and taxation;

imposition of restrictions on currency conversion or the transfer of funds;

changes in export duties and limitations on imports or exports;

expropriation of private enterprises; and

unexpected changes in foreign regulations.

If any of these risks materialize, our operating results may be adversely affected.

***Unfavorable currency exchange rate fluctuations may lead to lower operating margins or may cause us to raise prices, which could result in reduced sales.***

Currency exchange rate fluctuations could have an adverse effect on our net sales and results of operations and we could experience losses with respect to our hedging activities. Unfavorable currency fluctuations could require us to increase prices to foreign customers, which could result in lower net sales by us to such customers. Alternatively, if we do not adjust the prices for our products in response to unfavorable currency fluctuations, our results of operations could be adversely affected. In addition, most sales made by our foreign subsidiaries are denominated in the currency of the country in which these products are sold and the currency they receive in payment for such sales could be less valuable at the time of receipt as a result of exchange rate fluctuations. We enter into forward foreign exchange contracts and may enter into local currency purchased options to reduce currency exposure arising from intercompany sales of inventory. However, we cannot be certain that our efforts will be adequate to protect us against significant currency fluctuations or that such efforts will not expose us to additional exchange rate risks.

***Key personnel may be difficult to attract and retain.***

Our success depends to a large extent upon the efforts and abilities of a number of key employees and officers, particularly those with expertise in the semiconductor manufacturing and similar industrial manufacturing industries. The loss of key employees or officers could have a material adverse effect on our business, financial condition and results of operations. We believe that our future success will depend in part on our ability to attract and retain highly skilled technical, financial, managerial and marketing personnel. We cannot be certain that we will be successful in attracting and retaining such personnel.

***Our proprietary technology is important to the continued success of our business. Our failure to protect this proprietary technology may significantly impair our competitive position.***

As of December 31, 2005, we owned 253 U.S. patents, 170 foreign patents and had 104 pending U.S. patent applications. Although we seek to protect our intellectual property rights through patents, copyrights, trade secrets and other measures, we cannot be certain that:

we will be able to protect our technology adequately;

competitors will not be able to develop similar technology independently;

any of our pending patent applications will be issued;

domestic and international intellectual property laws will protect our intellectual property rights; or

third parties will not assert that our products infringe patent, copyright or trade secrets of such parties.

***Protection of our intellectual property rights may result in costly litigation.***

Litigation may be necessary in order to enforce our patents, copyrights or other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement. We are, from time to time, involved in lawsuits enforcing or defending our intellectual property rights and may be involved in such litigation in the future. Such litigation could result



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in substantial costs and diversion of resources and could have a material adverse effect on our business, financial condition and results of operations.

We may need to expend significant time and expense to protect our intellectual property regardless of the validity or successful outcome of such intellectual property claims. If we lose any litigation, we may be required to seek licenses from others or change, stop manufacturing or stop selling some of our products.

***The market price of our common stock has fluctuated and may continue to fluctuate for reasons over which we have no control.***

The stock market has from time to time experienced, and is likely to continue to experience, extreme price and volume fluctuations. Prices of securities of technology companies have been especially volatile and have often fluctuated for reasons that are unrelated to the operating performance of the companies. The market price of shares of our common stock has fluctuated greatly since our initial public offering and could continue to fluctuate due to a variety of factors. In the past, companies that have experienced volatility in the market price of their stock have been the objects of securities class action litigation. If we were the object of securities class action litigation, it could result in substantial costs and a diversion of our management's attention and resources.

***Our dependence on sole, limited source suppliers, and international suppliers, could affect our ability to manufacture products and systems.***

We rely on sole, limited source suppliers and international suppliers for a few of our components and subassemblies that are critical to the manufacturing of our products. This reliance involves several risks, including the following:

the potential inability to obtain an adequate supply of required components;

reduced control over pricing and timing of delivery of components; and

the potential inability of our suppliers to develop technologically advanced products to support our growth and development of new systems.

We believe that in time we could obtain and qualify alternative sources for most sole, limited source and international supplier parts. Seeking alternative sources of the parts could require us to redesign our systems, resulting in increased costs and likely shipping delays. We may be unable to redesign our systems, which could result in further costs and shipping delays. These increased costs would decrease our profit margins if we could not pass the costs to our customers. Further, shipping delays could damage our relationships with current and potential customers and have a material adverse effect on our business and results of operations.

***We are subject to governmental regulations. If we fail to comply with these regulations, our business could be harmed.***

We are subject to federal, state, local and foreign regulations, including environmental regulations and regulations relating to the design and operation of our products. We must ensure that the affected products meet a variety of standards, many of which vary across the countries in which our systems are used. For example, the European Union has published directives specifically relating to power supplies. In addition, the European Union has issued directives relating to regulation of recycling and hazardous substances, which may be applicable to our products, or to which some customers may voluntarily elect to adhere to. We must comply with any applicable regulation adopted in connection with these directives in order to ship affected products into countries that are members of the European Union. We believe we are in compliance with current applicable regulations, directives and standards and have obtained all necessary permits, approvals, and authorizations to conduct our business. However, compliance with future regulations, directives and standards, or customer demands beyond such requirements, could require us to modify or redesign certain systems, make

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capital expenditures or incur substantial costs. If we do not comply with current or future regulations, directives and standards:

we could be subject to fines;

our production could be suspended; or

we could be prohibited from offering particular systems in specified markets.

***Certain stockholders have a substantial interest in us and may be able to exert substantial influence over our actions.***

As of December 31, 2005, John R. Bertucci, our Executive Chairman, and certain members of his family, in the aggregate, beneficially owned approximately 17% of our outstanding common stock. As a result, these stockholders, acting together, may be able to exert substantial influence over our actions. Pursuant to the acquisition of the ENI Business of Emerson Electric Co. ( Emerson ), we issued approximately 12,000,000 shares of common stock to Emerson and its wholly owned subsidiary, Astec America, Inc. Emerson owned approximately 18% of our outstanding common stock as of December 31, 2005, and a representative of Emerson is a member of our board of directors. Accordingly, Emerson may be able to exert substantial influence over our actions.

***Some provisions of our restated articles of organization, as amended, our amended and restated by-laws and Massachusetts law could discourage potential acquisition proposals and could delay or prevent a change in control of us.***

Anti-takeover provisions could diminish the opportunities for stockholders to participate in tender offers, including tender offers at a price above the then current market price of the common stock. Such provisions may also inhibit increases in the market price of the common stock that could result from takeover attempts. For example, while we have no present plans to issue any preferred stock, our board of directors, without further stockholder approval, may issue preferred stock that could have the effect of delaying, deterring or preventing a change in control of us. The issuance of preferred stock could adversely affect the voting power of the holders of our common stock, including the loss of voting control to others. In addition, our amended and restated by-laws provide for a classified board of directors consisting of three classes. The classified board could also have the effect of delaying, deterring or preventing a change in control of us.

***Changes in financial accounting standards may adversely affect our reported results of operations.***

A change in accounting standards or practices could have a significant effect on our reported results and may even affect our reporting of transactions completed before the change was effective. New accounting pronouncements and varying interpretations of existing accounting pronouncements have occurred and may occur in the future. Such changes may adversely affect our reported financial results or may impact our related business practice.

For example, Statement on Financial Accounting Standards No. 123R Share-Based Payment , which requires us to measure all employee stock-based compensation awards using a fair value method and record such expense in our consolidated financial statements, when adopted in the first quarter of 2006, will have a material adverse impact on our consolidated financial statements as reported under generally accepted accounting principles in the United States. The adoption of this statement will adversely impact our gross margin as well as our operating expenses in 2006.

**Item 1B. *Unresolved Staff Comments***

None.

**Table of Contents****Item 2. Properties**

The following table provides information concerning MKS principal and certain other owned and leased facilities as of December 31, 2005:

<b>Location</b>	<b>Sq. Ft.</b>	<b>Activity</b>	<b>Products Manufactured</b>	<b>Lease Expires</b>
Andover, Massachusetts	82,000	Manufacturing, and Research & Development	Pressure Measurement and Control Products	(1)
Austin, Texas	20,880	Manufacturing, Sales, Customer Support, Service and Research & Development	Control & Information Management Products	May 31, 2012
Berlin, Germany	20,750	Manufacturing, Customer Support, Service and Research & Development	Reactive Gas Generation Products	March 31, 2006
Boulder, Colorado	124,000	Manufacturing, Customer Support, Service and Research & Development	Vacuum Products	(2)
Carmiel, Israel	7,000	Manufacturing and Research & Development	Control & Information Management Products	December 31, 2006
Cheshire, U.K	13,000	Manufacturing, Sales, Customer Support and Service	Materials Delivery Products	(3)
Colorado Springs, Colorado	32,200	Manufacturing, Customer Support, Service and Research & Development	Power Delivery Products	(4)
Lawrence, Massachusetts	40,000	Manufacturing	Pressure Measurement and Control Products	(1)
Methuen, Massachusetts	85,000	Manufacturing, Customer Support, Service and Research & Development	Pressure Measurement and Control Products; Materials Delivery Products	(1)
Morgan Hill, California	27,600	Vacated	Not applicable	(5)
Munich, Germany	14,000	Manufacturing, Sales, Customer Support, Service and Research &	Pressure Measurement and Control Products; Materials Delivery Products	(1)

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Nogales, Mexico	36,700	Development Manufacturing	Pressure Measurement and Control Products; Reactive Gas Generation Products	March 31, 2009
Richardson, Texas	8,800	Sales, Customer Support and Service	Not applicable	November 30, 2012
Rochester, New York	156,000	Manufacturing, Sales, Customer Support, Service and Research & Development	Power Delivery Products	(6)
San Jose, California	32,000	Sales, Customer Support and Service	Not applicable	April 30, 2009
Seoul, Korea	10,000	Sales, Customer Support and Service	Not applicable	May 31, 2008
Shenzhen, China	130,000	Manufacturing	Power Delivery Products	December 31, 2007
Shropshire, U.K	25,000	Manufacturing	Vacuum Products	October 18, 2010
Taiwan	19,300	Sales, Customer Support and Service	Not applicable	August 25, 2007

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<b>Location</b>	<b>Sq. Ft.</b>	<b>Activity</b>	<b>Products Manufactured</b>	<b>Lease Expires</b>
Tokyo, Japan	31,600	Manufacturing, Sales, Customer Support, Service and Research & Development	Materials Delivery Products	(7)
Wilmington, Massachusetts	118,000	Headquarters, Manufacturing, Customer Support, Service and Research & Development	Reactive Gas Generation Products; Power Delivery Products	(8)

- (1) This facility is owned by MKS.
- (2) MKS leases two facilities, one has 39,000 square feet of space and the other has 38,000 square feet of space. Both leases expire on May 31, 2015. MKS also owns a third and fourth facility with 27,000 and 20,000 square feet of space, respectively.
- (3) MKS leases two facilities, one has 2,000 square feet of space and a lease term which expires October 5, 2009 and the second has 11,000 square feet of space and a lease term which expires November 30, 2009.
- (4) MKS leases one facility with 8,200 square feet of space and a lease term which expires on April 30, 2006. MKS owns another facility with 24,000 square feet.
- (5) This facility is entirely subleased. The lease term expires on June 30, 2007.
- (6) MKS owns this facility and has an Industrial Development Revenue Bond of \$5.0 million, due in 2014, that is collateralized by the building.
- (7) MKS leases two facilities, one has 14,500 square feet of space with a lease term that expires April 30, 2007 and the second has 10,500 square feet of space and a lease term that expires on September 30, 2006. MKS owns a third facility of 6,600 square feet.
- (8) MKS owns this facility and has a mortgage note payable of approximately \$1.7 million outstanding at December 31, 2005, which is payable in monthly installments with final payment due in March 2007.

In addition to manufacturing and other operations conducted at the foregoing leased or owned facilities, MKS provides worldwide sales, customer support and services from various other leased facilities throughout the world not listed in the table above. See Business Sales, Marketing and Support.

**Item 3. Legal Proceedings**

On April 3, 2003, Advanced Energy Industries, Inc. ( Advanced Energy ) filed suit against us in federal district court in Colorado ( Colorado Action ), seeking a declaratory judgment that Advanced Energy's Xstream product does not infringe three patents held by our subsidiary, Applied Science and Technology, Inc. ( ASTeX ). On May 14, 2003, we brought suit in federal district court in Delaware against Advanced Energy for infringement of five ASTeX patents, including the three patents at issue in the Colorado Action. We sought injunctive relief and damages for



Advanced Energy's infringement. On December 24, 2003, the Colorado court transferred Advanced Energy's Colorado Action to Delaware. In connection with the jury trial, the parties agreed to present the jury with representative claims from three of the five ASTeX patents. On July 23, 2004, the jury found that Advanced Energy infringed all three patents. On October 3, 2005, we entered into a settlement agreement with Advanced Energy, pursuant to which Advanced Energy paid us \$3,000,000 in cash in October 2005. The settlement agreement also provided that Advanced Energy would not make, use, sell or offer to sell its Rapid, Rapid FE, Rapid OE and Xstream products (or related products) in the United States or any other country in which we held a relevant patent or had pending a patent application on the date of the settlement agreement, during the life of any such patent (or resulting patent, in the case of patent applications). On October 6, 2005, the federal district court in Delaware issued a final judgment of infringement and an injunction prohibiting Advanced Energy from making, using, selling, offering to sell, or importing into the United States such products.

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On November 3, 1999, On-Line Technologies, Inc. ( On-Line ), which we acquired in 2001, brought suit in federal district court in Connecticut against Perkin-Elmer, Inc. and certain other defendants for infringement of On-Line s patent related to its FTIR spectrometer product and related claims. The suit sought injunctive relief and damages for infringement. Perkin-Elmer, Inc. filed a counterclaim seeking invalidity of the patent, costs and attorneys fees. In June 2002, the defendants filed a motion for summary judgment. In April 2003, the court granted the motion and dismissed the case. We appealed this decision to the federal circuit court of appeals. On October 13, 2004, the federal circuit court of appeals reversed the lower court s dismissal of certain claims in the case. Accordingly, the case has been remanded to the United States District Court in Connecticut for further proceedings on the merits of the remaining claims. On March 11, 2005, Perkin-Elmer, Inc. submitted to the court a stipulation that it infringed a specified claim of On-Line s patent and filed a motion for summary judgment that such patent claim is invalid. On April 6, 2005, we filed a reply to the summary judgment motion. The parties are awaiting the court s response to the motion.

We are subject to other legal proceedings and claims, which have arisen in the ordinary course of business.

In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on our results of operations, financial condition or cash flows.

**Item 4. Submission of Matters to a Vote of Security Holders**

No matters were submitted to a vote of security holders during the fourth quarter of 2005 through the solicitation of proxies or otherwise.

**PART II****Item 5. Market for the Registrant s Common Equity and Related Stockholder Matters****Price Range of Common Stock**

Our common stock is traded on the Nasdaq National Market under the symbol MKSI. On February 24, 2006, the closing price of our common stock, as reported on the Nasdaq National Market, was \$22.55 per share. The following table sets forth for the periods indicated the high and low bid prices per share of our common stock as reported by the Nasdaq National Market.

Price Range of Common Stock	2005		2004	
	High	Low	High	Low
First Quarter	\$19.00	\$14.46	\$29.97	\$21.08
Second Quarter	18.10	13.96	26.20	18.62
Third Quarter	20.69	15.29	22.79	12.44
Fourth Quarter	19.72	17.02	18.84	14.36

On February 24, 2006, we had approximately 239 stockholders of record.

**Dividend Policy**

We have never declared or paid any cash dividends. We currently intend to retain earnings, if any, to support our growth strategy and do not anticipate paying cash dividends in the foreseeable future. Payment of future dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs, plans for expansion, and changes in tax and regulatory rulings.

**Table of Contents****Item 6. Selected Financial Data****Selected Consolidated Financial Data****Year Ended December 31**

	2005	2004	2003	2002	2001
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(In thousands, except per share data)

**Statement of Operations Data**

Net sales	\$ 509,294	\$ 555,080	\$ 337,291	\$ 314,773	\$ 286,808
Gross profit(1)	200,434	219,371	118,109	105,795	85,583
Income (loss) from operations(2),(3)	40,548	59,913	(15,717)	(43,047)	(47,360)
Net income (loss)(4)	\$ 34,565	\$ 69,839	\$ (16,385)	\$ (39,537)	\$ (31,043)
Net income (loss) per share:					
Basic	\$ 0.64	\$ 1.30	\$ (0.32)	\$ (0.79)	\$ (0.83)
Diluted	\$ 0.63	\$ 1.28	\$ (0.32)	\$ (0.79)	\$ (0.83)

**Balance Sheet Data**

Cash and cash equivalents	\$ 220,573	\$ 138,389	\$ 74,660	\$ 88,820	\$ 120,869
Short-term investments	72,046	97,511	54,518	39,894	16,625
Working capital	410,060	347,700	210,468	192,008	216,855
Long-term investments	857	4,775	13,625	15,980	11,029
Total assets	863,740	828,677	692,032	685,623	411,189
Short-term obligations	18,886	24,509	20,196	18,472	14,815
Long-term obligations, less current portion	6,152	6,747	8,810	11,726	11,257
Stockholders equity	762,843	726,634	608,310	610,690	352,871

- (1) Gross profit for the year ended December 31, 2001 includes significant charges for excess and obsolete inventory of \$16.6 million. These charges were primarily caused by a significant reduction in demand, including reduced demand for older technology products.
- (2) Income from operations for the years ended December 31, 2005 and December 31, 2004 include restructuring, asset impairment and other charges of \$0.1 million and \$0.4 million, respectively. Loss from operations for the year ended December 31, 2003 includes restructuring, asset impairment and other charges of \$1.6 million. Loss from operations for the year ended December 31, 2002 includes restructuring and asset impairment charges of \$2.7 million and purchase of in-process technology of \$8.4 million. Loss from operations for the year ended December 31, 2001 includes restructuring and asset impairment charges of \$3.7 million, merger expenses of \$7.7 million and purchase of in-process technology of \$2.3 million.
- (3) Income from operations for the year ended December 31, 2005 includes income from a litigation settlement of \$3.0 million.
- (4) Net income for the year ended December 31, 2004 includes a gain from the collection of a note receivable of \$5.0 million which had been written off in 2002. During the years ended December 31, 2002 and 2003, a valuation allowance against net deferred tax assets was maintained. Net loss for the years ended December 31, 2002 and 2003 include tax expense which is comprised primarily of state and foreign taxes. During 2004, the

valuation allowance was reduced against the net deferred tax assets and net income for the year ended December 31, 2004 includes a deferred tax benefit of \$10.2 million. See Note 9 of the Notes to the Consolidated Financial Statements.

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**Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations***  
**Overview**

We are a leading worldwide provider of instruments, components, subsystems and process control solutions that measure, control, power and monitor critical parameters of semiconductor and other advanced manufacturing processes.

We are managed as one operating segment which is organized around three product groups: Instruments and Control Systems, Power and Reactive Gas Products and Vacuum Products. Our products are derived from our core competencies in pressure measurement and control, materials delivery, gas and thin-film composition analysis, electrostatic charge control, control and information management, power and reactive gas generation and vacuum technology. Our products are used to manufacture semiconductors and thin film coatings for diverse markets such as flat panel displays, optical and magnetic storage media, architectural glass and electro-optical products. We also provide technologies for medical imaging equipment.

We have a diverse base of customers that include semiconductor capital equipment manufacturers, semiconductor device manufacturers, industrial and biopharmaceutical manufacturing companies, medical equipment manufacturers and university, government and industrial research laboratories. During the years ended December 31, 2005, 2004 and 2003, we estimate that approximately 71%, 74% and 69% of our net sales, respectively, were to semiconductor capital equipment manufacturers and semiconductor device manufacturers. We expect that sales to semiconductor capital equipment manufacturers and semiconductor device manufacturers will continue to account for a substantial majority of our sales.

During the latter half of 2003 and continuing into the first half of 2004, the semiconductor capital equipment market experienced a market upturn after a downturn of almost three years. Starting in the fourth quarter of 2003, we experienced an increase in sales. Beginning in the third quarter of 2004 and continuing through the fourth quarter of 2005, our quarterly sales were below the level of sales achieved in the second quarter of 2004. We currently expect our first quarter 2006 sales to be significantly higher than the fourth quarter of 2005 based on apparent spending trends in the semiconductor capital equipment market towards the end of 2005. The semiconductor capital equipment industry is subject to rapid demand shifts which are difficult to predict.

A significant portion of our net sales is to operations in international markets. International net sales include sales by our foreign subsidiaries, but exclude direct export sales. International net sales accounted for approximately 37%, 34% and 41% of net sales for the years ended December 31, 2005, 2004 and 2003, respectively, a significant portion of which were sales in Japan. We expect that international net sales will continue to represent a significant percentage of our net sales.

**Critical Accounting Policies and Estimates**

Management's Discussion and Analysis of Financial Condition and Results of Operations discusses our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an on-going basis, we evaluate our estimates and judgments, including those related to revenue recognition, inventory, warranty costs, intangible assets, goodwill and other long-lived assets, in-process research and development and income taxes. We base our estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

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We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements:

*Revenue recognition.* Revenue from product sales is recorded upon transfer of title and risk of loss to the customer provided that there is evidence of an arrangement, the sales price is fixed or determinable, and collection of the related receivable is reasonably assured. In most transactions, we have no obligations to our customers after the date products are shipped other than pursuant to warranty obligations. In some instances, we provide installation and training to customers after the product has been shipped. We defer the fair value of any undelivered elements until the undelivered element is delivered. Fair value is the price charged when the element is sold separately. Shipping and handling fees billed to customers, if any, are recognized as revenue. The related shipping and handling costs are recognized in cost of sales.

We monitor and track the amount of product returns, provide for accounts receivable allowances and reduce revenue at the time of shipment for the estimated amount of such future returns, based on historical experience. While product returns have historically been within our expectations and the provisions established, there is no assurance that we will continue to experience the same return rates that we have in the past. Any significant increase in product return rates could have a material adverse impact on our operating results for the period or periods in which such returns materialize. While we maintain a credit approval process, significant judgments are made by management in connection with assessing our customers' ability to pay at the time of shipment. Despite this assessment, from time to time, our customers are unable to meet their payment obligations. We continuously monitor our customers' credit worthiness, and use our judgment in establishing a provision for estimated credit losses based upon our historical experience and any specific customer collection issues that we have identified. While such credit losses have historically been within our expectations and the provisions established, there is no assurance that we will continue to experience the same credit loss rates that we have in the past. A significant change in the liquidity or financial position of our customers could have a material adverse impact on the collectability of accounts receivable and our future operating results.

*Inventory.* We value our inventory at the lower of cost (first-in, first-out method) or market. We regularly review inventory quantities on hand and record a provision to write down excess and obsolete inventory to our estimated net realizable value, if less than cost, based primarily on our estimated forecast of product demand. Demand for our products can fluctuate significantly. A significant increase in the demand for our products could result in a short-term increase in the cost of inventory purchases from supply shortages or a decrease in the cost of inventory purchases as a result of volume discounts, while a significant decrease in demand could result in an increase in the charges for excess inventory quantities on hand. In addition, our industry is subject to technological change, new product development, and product technological obsolescence that could result in an increase in the amount of obsolete inventory quantities on hand. Therefore, any significant unanticipated changes in demand or technological developments could have a significant impact on the value of our inventory and our reported operating results.

*Warranty costs.* We provide for the estimated costs to fulfill customer warranty obligations upon the recognition of the related revenue. We provide warranty coverage for our products ranging from 12 to 36 months, with the majority of our products ranging from 12 to 24 months. We estimate the anticipated costs of repairing our products under such warranties based on the historical costs of the repairs and any known specific product issues. The assumptions we use to estimate warranty accruals are reevaluated periodically in light of actual experience and, when appropriate, the accruals are adjusted. Our determination of the appropriate level of warranty accrual is based upon estimates. Should product failure rates differ from our estimates, actual costs could vary significantly from our expectations.

*Intangible assets, goodwill and other long-lived assets.* We review intangible assets and other long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. Factors we consider important, which could indicate an impairment, include significant under performance relative to expected historical or projected future operating results, significant changes in the manner of our use of the asset or the strategy for our overall business and significant and negative industry or economic trends. When we determine that the carrying value of the asset may not be



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recoverable based upon the existence of one or more of the above indicators of impairment, we compare the undiscounted cash flows to the carrying value of the asset. If an impairment is possible and indicated, the asset is written down to its estimated fair value. Intangible assets, such as purchased technology, are generally recorded in connection with a business acquisition. The fair value initially assigned to intangible assets is determined based on estimates and judgment regarding expectations for the success and life cycle of products and technology acquired. If actual product acceptance differs significantly from the estimates, we may be required to record an impairment charge to write down the asset to its estimated fair value.

We assess goodwill for impairment at least annually, or more frequently when events and circumstances occur indicating that the recorded goodwill at the reporting unit level may be impaired. Reporting units are defined as operating segments or one level below an operating segment, referred to as a component. We have determined that our reporting units are components of our one operating segment. We allocate goodwill to reporting units at the time of acquisition and base that allocation on which reporting units will benefit from the acquired assets and liabilities. If the book value of a reporting unit exceeds its fair value, the implied fair value of goodwill is compared with the carrying amount of goodwill. If the carrying amount of goodwill exceeds the implied fair value, an impairment loss is recorded in an amount equal to that excess. The fair value of a reporting unit is estimated using the discounted cash flow approach, and is dependent on estimates and judgments related to future cash flows and discount rates. If actual cash flows differ significantly from the estimates used by management, we may be required to record an impairment charge to write down the goodwill to its estimated fair value.

*In-process research and development.* We value tangible and intangible assets acquired through our business acquisitions, including in-process research and development ( IPR&D ), at fair value. We determine IPR&D through established valuation techniques for various projects for the development of new products and technologies and expense IPR&D when technical feasibility is not reached. The value of IPR&D is determined using the income approach, which discounts expected future cash flows from projects under development to their net present value. Each project is analyzed and estimates and judgments are made to determine the technological innovations included, the utilization of core technology, the complexity, cost and time to complete development, any alternative future use or current technological feasibility and the stage of completion. If we acquire other companies with IPR&D in the future, we will value the IPR&D through established valuation techniques and will incur future IPR&D charges if those products under development have not reached technical feasibility.

*Income taxes.* We evaluate the realizability of our net deferred tax assets and assess the need for a valuation allowance on a quarterly basis. The future benefit to be derived from our deferred tax assets is dependent upon our ability to generate sufficient future taxable income to realize the assets. We record a valuation allowance to reduce our net deferred tax assets to the amount that may be more likely than not to be realized. To the extent we established a valuation allowance, an expense is recorded within the provision for income taxes line on the statement of operations. During the year ended December 31, 2002, we established a full valuation allowance for our net deferred tax assets. During the fourth quarter of 2004, after examining a number of factors, including historical results and near term earnings projections, we determined that it was more likely than not that we would realize all of our net deferred tax assets, except for those relating to certain state tax credits. An adjustment to the valuation allowance was recorded as a reduction to income tax expense. In future periods, if we were to determine that it was more likely than not that we would not be able to realize the recorded amount of our remaining net deferred tax assets, an adjustment to the valuation allowance would be recorded as an increase to income tax expense in the period such determination was made.



**Table of Contents****Results of Operations**

The following table sets forth, for the periods indicated, the percentage of total net sales of certain line items included in our consolidated statement of operations data:

	<b>Year Ended December 31</b>		
	<b>2005</b>	<b>2004</b>	<b>2003</b>
Net sales	100.0%	100.0%	100.0%
Cost of sales	60.6	60.5	65.0
Gross profit	39.4	39.5	35.0
Research and development	11.0	10.3	14.1
Selling, general and administrative	18.3	15.7	20.7
Amortization of acquired intangible assets	2.7	2.6	4.4
Restructuring and asset impairment charges	0.0	0.1	0.5
Income from litigation settlement	0.6		
Income (loss) from operations	8.0	10.8	(4.7)
Interest income, net	1.2	0.3	0.3
Other income, net		1.0	0.3
Income (loss) before income taxes	9.2	12.1	(4.1)
Provision (benefit) for income taxes	2.4	(0.5)	0.8
Net income (loss)	6.8%	12.6%	(4.9)%

***Year Ended 2005 Compared to 2004 and 2003****Net Sales*

	<b>Year Ended December 31,</b>			<b>% Change in 2005</b>	<b>% Change in 2004</b>
	<b>2005</b>	<b>2004</b>	<b>2003</b>		
Net sales	\$509.3	\$555.1	\$337.3	(8.2)	64.6

Net sales decreased \$45.8 million during the year ended December 31, 2005 mainly due to a decrease in worldwide demand from our semiconductor capital equipment manufacturer customers, which decreased \$58.8 million or 16.1% compared to the same period for the prior year. Primarily offsetting this decrease was a net sales increase of \$9.4 million or 9.5% for other non-semiconductor manufacturing applications and a net sales increase of \$6.3 million or 12.9% for semiconductor device manufacturer customers compared to the same period for the prior year. International net sales were approximately \$188.5 million for the year ended December 31, 2005 or 37.0% of net sales compared to \$187.8 million for the same period of 2004 or 33.8% of net sales.

Net sales increased \$217.8 million during the year ended December 31, 2004 primarily driven by stronger worldwide demand for our products from our semiconductor capital equipment manufacturer and semiconductor device manufacturer customers, which increased \$193.2 million or 83.5% compared to the same period for the prior year. International net sales were approximately \$138.1 million for the year ended December 31, 2003 or 41.0% of net sales.

*Gross Profit*

	Year Ended December 31,			% Points Change in 2005	% Points Change in 2004
	2005	2004	2003		
Gross profit as a percentage of sales	39.4%	39.5%	35.0%	(0.1)	4.5

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Gross profit as a percentage of net sales decreased slightly during the year ended December 31, 2005 compared to the same period in 2004 mainly due to overhead costs representing a higher percentage of lower sales, partially offset by lower material and labor costs as a percentage of sales, which reflected the net effect of a gradual transition to lower cost material and manufacturing sources.

Gross profit as a percentage of net sales increased 4.5 percentage points during the year ended December 31, 2004 compared to the same period in 2003. Of the 4.5 increase in percentage points, 3.4 percentage points of gross margin improvement were mainly related to overhead costs becoming a lower percentage of a higher sales volume. The additional 1.1 percentage points of gross margin improvement primarily reflected the net effect of a gradual transition to lower cost material and manufacturing sources, offset by unfavorable changes in warranty cost and product mix.

*Research and Development*

	Year Ended December 31,			% Change in 2005	% Change in 2004
	2005	2004	2003		
Research and development expenses	\$55.9	\$57.0	\$47.7	(1.9)	19.6

Our research and development is primarily focused on developing and improving our instruments, components, subsystems and process control solutions to improve process performance and productivity.

We have hundreds of products and our research and development efforts primarily consist of a large number of projects related to these products, none of which is individually material to us. Current projects typically have a duration of 12 to 30 months depending upon whether the product is an enhancement of existing technology or a new product. Our current initiatives include projects to enhance the performance characteristics of older products, to develop new products and to integrate various technologies into subsystems. These projects support in large part the transition in the semiconductor industry to larger wafer sizes and smaller integrated circuit geometries, which require more advanced process control technology. Research and development expenses consist primarily of salaries and related expenses for personnel engaged in research and development, fees paid to consultants, material costs for prototypes and other expenses related to the design, development, testing and enhancement of our products.

Research and development expenses decreased \$1.1 million for the year ended December 31, 2005 compared to the same period for 2004 primarily due to lower project material and other related costs. Staffing levels during 2005 were consistent with staffing levels during 2004.

Research and development expenses increased \$9.3 million for the year ended December 31, 2004 compared to the same period for 2003 primarily due to increased compensation expense of \$5.9 million as a result of higher staffing levels, restored compensation levels, salary increases and incentive compensation, \$2.1 million of higher project material expenses, mainly related to our power and reactive gas products, and \$1.3 million of increased consulting costs. At December 31, 2004, we had 383 research and development employees as compared to 326 research and development employees at December 31, 2003.

We believe that the continued investment in research and development and ongoing development of new products are essential to the expansion of our markets, and expect to continue to make significant investment in research and development activities. We are subject to risks if products are not developed in a timely manner, due to rapidly changing customer requirements and competitive threats from other companies and technologies. Our success primarily depends on our products being designed into new generations of equipment for the semiconductor industry. We develop products that are technologically advanced so that they are positioned to be chosen for use in each successive generation of semiconductor capital equipment. If our products are not chosen to be designed into our customers' products, our net sales may be reduced during the lifespan of those products.

**Table of Contents***Selling, General and Administrative*

	Year Ended December 31,			% Change in 2005	% Change in 2004
	2005	2004	2003		
Selling, general and administrative expenses	\$93.0	\$87.3	\$69.9	6.6	24.9

Selling, general and administrative expenses increased \$5.7 million during the year ended December 31, 2005 compared to the same period in the prior year mainly due to higher costs of \$3.9 million primarily for IT related services and for our ERP implementation, increased foreign currency losses of \$1.5 million, higher professional fees of \$2.2 million principally related to higher audit costs and fees for compliance with the Sarbanes Oxley Act of 2002 ( Sarbanes Oxley ), partially offset by decreased legal fees of \$2.6 million mainly related to litigation which had been subsequently resolved. We anticipate that the costs relating to our ERP implementation, primarily depreciation, will continue to increase in 2006, but to a lesser extent than in 2005.

Selling, general and administrative expenses increased \$17.4 million for the year ended December 31, 2004 compared to the same period in the prior year. The increase was due primarily to increased compensation expense of \$8.4 million, as a result of restored compensation levels, salary increases, incentive compensation and higher sales commissions, \$2.8 million in higher legal fees related mainly to our patent infringement litigation against Advanced Energy, \$2.0 million in increased consulting fees primarily for IT related services, and \$2.0 million in increased professional fees primarily related to compliance with Sarbanes Oxley.

*Amortization of Acquired Intangible Assets*

	Year Ended December 31,			% Change in 2005	% Change in 2004
	2005	2004	2003		
Amortization of acquired intangible assets	\$13.9	\$14.8	\$14.7	(6.1)	

Amortization expense for the years ended December 31, 2005, 2004 and 2003, respectively, represents amortization of identifiable intangible assets resulting from our completed acquisitions. The decrease during the year ended December 31, 2005 compared to the same period in the prior year was due to certain identifiable intangible assets becoming fully amortized during 2005.

Amortization expense for the year ended December 31, 2004 was consistent with amortization expense for the year ended December 31, 2003. We did not acquire any material identifiable intangible assets in 2005, 2004 or 2003.

*Restructuring, Asset Impairment and Other Charges*

	Year Ended December 31,		
	2005	2004	2003
Restructuring, asset impairment and other charges	\$0.1	\$0.4	\$1.6

As a result of our various acquisitions from 2000 through 2002 and the downturn in the semiconductor capital equipment market which began in 2000, we had redundant activities and excess manufacturing capacity and office space. Therefore in 2002, and continuing through the first quarter of 2004, we implemented restructuring activities to

rationalize manufacturing operations and reduce operating expenses. As a result, in 2002 we took a restructuring charge of \$2.7 million which consisted of \$1.2 million related to exiting leased facilities, \$0.6 million of severance costs related to a workforce reduction and an asset impairment charge of \$0.9 million.

During 2003, we recorded restructuring, asset impairment and other charges of \$1.6 million related to our restructuring activities. The charges consisted of \$0.4 million of severance costs related to workforce reductions, \$1.1 million of lease costs, professional fees and other costs related to facility consolidations and an asset impairment charge of \$0.1 million.

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During 2004, we completed our restructuring activities related to the consolidation of operations from acquired companies when we exited an additional leased facility and recorded a restructuring charge of \$0.4 million.

During 2005, we initiated a restructuring plan related to our Berlin, Germany location. This consolidation of activities included the reduction of 16 employees. The total restructuring charge related to this consolidation was \$0.5 million, which consisted of \$0.3 million related to the repayment of a government grant and \$0.2 million in severance costs.

Also during 2005, we terminated a lease related to a facility previously exited. At the date the lease was terminated, we had an accrual of approximately \$0.8 million related to this facility. After making the lease settlement payment and payments for other contractual obligations, the remaining balance of approximately \$0.3 million was reversed as there was no remaining obligation.

A summary of the restructuring charges, asset impairments and other charges during 2003, 2004 and 2005, and the related accrual balance is outlined as follows:

	<b>Workforce Reductions</b>	<b>Other</b>	<b>Facility Consolidations</b>	<b>Total</b>
<b>(In thousands)</b>				
Reserve balance as of December 31, 2002	\$ 326	\$	\$1,164	\$ 1,490
Restructuring provision in 2003	356	92	1,145	1,593
Charges utilized in 2003	(483)	(92)	(478)	(1,053)
Reserve balance as of December 31, 2003	199		1,831	2,030
Restructuring provision in 2004			437	437
Charges utilized in 2004	(110)		(736)	(846)
Reserve balance as of December 31, 2004	89		1,532	1,621
Restructuring provision in 2005	199	251	(365)	85
Charges utilized in 2005	(204)		(852)	(1,056)
Reserve balance as of December 31, 2005	\$ 84	\$251	\$ 315	\$ 650

The remaining facilities consolidation obligation at December 31, 2005 will be paid over the remaining lease term which ends in 2007. These payments will be made out of current working capital. The accrual for workforce reductions and lease payments is recorded in Other accrued expenses and Other liabilities in our consolidated balance sheet.

*Income from Litigation Settlement*

During the fourth quarter of 2005, we executed a settlement agreement with Advanced Energy Industries, Inc. ( Advanced Energy ) in connection with the patent infringement suit we had brought against Advanced Energy in federal district court in Delaware. Pursuant to the settlement agreement, Advanced Energy paid us \$3.0 million in cash in October 2005.

*Interest Income, Net*

<b>Year Ended December 31,</b>			<b>% Change in 2005</b>	<b>% Change in 2004</b>
<b>2005</b>	<b>2004</b>	<b>2003</b>		

Interest income, net	\$6.5	\$1.9	\$1.1	237.6	81.2
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Net interest income increased \$4.5 million during the year ended December 31, 2005 compared to the same period in the prior year, mainly related to higher interest rates on higher average investment balances in those periods.

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Net interest income increased \$0.8 million during the year ended December 31, 2004 compared to the same period in the prior year, mainly related to higher average investment balances.

*Other Income, Net*

	<b>Year Ended December 31,</b>		
	<b>2005</b>	<b>2004</b>	<b>2003</b>
Other income, net		\$5.4	\$0.9

During 2001, we sold certain assets for proceeds of approximately \$9.0 million, including a note receivable of approximately \$3.9 million and warrants of \$0.2 million. During 2002, due to the downturn in the semiconductor industry and its result on the acquirer's operations, and the acquirer's inability to raise financing, we considered the value of the note and warrants to be impaired. Accordingly, during 2002, we recorded a charge of \$4.1 million to other expense for our estimate of the impairment on the note receivable and warrants. During the second quarter of 2004, we received \$5.0 million and recorded a gain to other income related to the collection of the note receivable and accrued interest and the cancellation of the warrants.

During 2003, we recorded a gain of \$0.9 million from the early repayment of premiums related to a split dollar life insurance policy covering our Chairman and CEO.

*Provision (Benefit) for Income Taxes*

	<b>Year Ended December 31,</b>		
	<b>2005</b>	<b>2004</b>	<b>2003</b>
Provision (benefit) for income taxes	\$12.4	\$(2.6)	\$2.7

We recorded a provision for income taxes of \$12.4 million for the year ended December 31, 2005, as compared to a tax benefit of \$2.6 million for the year ended December 31, 2004. As a result of incurring significant operating losses since 2001, during 2002 we determined that it was more likely than not that our deferred tax assets may not have been realizable, and since the fourth quarter of 2002 had established a full valuation allowance for our net deferred tax assets. During the fourth quarter of 2004, after examining a number of factors, including historical results and near term earnings projections, we determined that it was more likely than not that we would realize all of our net deferred tax assets, except for those related to certain state tax credits. An adjustment was made to reduce the valuation allowance to reflect the amount of the realizable net deferred tax assets at December 31, 2004. The provision for income taxes in 2005 is comprised of federal, state and foreign income taxes and an increase in the valuation allowance from an increase in state tax credit carryovers for which we determined that it is more likely than not that they will not be realized.

Our effective tax rate for the year ended December 31, 2005 and December 31, 2004 was 26.5% and (3.9)%, respectively. The effective tax rate in 2005 is less than the statutory tax rate primarily due to a tax benefit recorded as the result of the completion of the Internal Revenue Service ( IRS ) examination (see below), the benefit from U.S. research and development credits and the profits of our international subsidiaries being taxed at rates lower than the U.S. statutory tax rate. The effective tax rate for 2004 is lower than the 2005 rate due to the fact that during the fourth quarter of 2004, after examining a number of factors, including historical results and near term earnings projections, we determined that it was more likely than not that we would realize all of our net deferred tax assets, except for those related to certain state tax credits. An adjustment was made to reduce a previously recorded valuation



allowance to reflect the amount of the realizable net deferred tax assets at December 31, 2004. The benefit for income taxes in 2004 is comprised of tax expense from foreign operations and state taxes, offset by a deferred tax benefit of approximately \$10.2 million. The provision for income taxes in 2003 was comprised of tax expense from foreign operations and state taxes.

During 2005, the IRS completed its examination of our federal tax returns for the tax years 1999 through 2002. As a result of this examination, during the year ended December 31, 2005, we recorded a benefit to income tax expense of \$1.9 million and a \$0.6 million reduction of goodwill related to a previous acquisition.

**Table of Contents****Liquidity and Capital Resources**

Cash, cash equivalents and short-term marketable securities totaled \$292.6 million at December 31, 2005 compared to \$235.9 million at December 31, 2004. This increase is mainly due to an increase of \$64.2 million of cash generated from operations during 2005. The primary driver in our current and anticipated future cash flows is and will continue to be cash generated from operations, consisting mainly of our net income and changes in operating assets and liabilities. In periods when our sales are growing, higher sales to customers will result in increased trade receivables, and inventories will generally increase as we build products for future sales. This may result in lower cash generated from operations. Conversely, in periods when our sales are declining, our trade accounts receivable and inventory balances will generally decrease, resulting in increased cash from operations.

Net cash provided by operating activities of \$64.2 million for the year ended December 31, 2005, resulted mainly from net income of \$34.6 million, non-cash charges of \$26.2 million for depreciation and amortization and an increase in operating liabilities of \$7.7 million, offset by an increase in operating assets of \$6.2 million. The increase in operating liabilities is primarily the result of a \$6.4 million increase in accounts payable and a \$1.4 million increase in taxes payable. The increase in operating assets is primarily the result of a \$4.7 million increase in accounts receivable and a \$1.8 million increase in inventories as a result of increased production volumes in late 2005 to support higher revenues expected in the first quarter of 2006. Net cash provided by operating activities of \$66.4 million for the year ended December 31, 2004 resulted primarily from net income of \$69.8 million, an increase in operating liabilities of \$16.8 million, non-cash charges of \$27.8 million for depreciation and amortization, offset by an increase in operating assets of \$32.4 million, a deferred tax benefit of \$10.2 million and a \$5.0 million gain related to the collection of a previously written off note receivable. The increase in operating assets consisted mainly of an increase in accounts receivable of \$15.2 million due to increased shipments resulting in increased sales of \$29.1 million in the fourth quarter of 2004 as compared to the fourth quarter of 2003 and an increase in inventory of \$15.9 million as a result of increased production volumes in 2004 to support higher revenues. The increase in operating liabilities consisted primarily of an increase in accounts payable and accrued expenses of \$7.2 million resulting from increased accrued compensation, warranty reserves, accrued professional fees and non-income tax related tax accruals and a \$9.6 million increase in income taxes payable.

Net cash provided by investing activities of \$20.0 million for the year ended December 31, 2005 resulted primarily from the net maturities and sales of \$29.2 million of available for sale investments offset by the purchase of property, plant and equipment of \$10.3 million for investments in manufacturing equipment and for the consolidation of our IT infrastructure. Net cash used in investing activities of \$44.2 million for the year ended December 31, 2004 resulted primarily from the net purchases of \$34.1 million of available for sale investments mainly from the net proceeds received from our stock offering, and the purchase of property, plant and equipment of \$18.3 million for investments in manufacturing equipment and for the consolidation of our IT infrastructure, partially offset by the \$5.0 million proceeds received from the collection of a note receivable previously written off.

Net cash provided by financing activities of \$0.9 million for the year ended December 31, 2005 consisted primarily of \$6.1 million in proceeds from the exercise of stock options and purchases under our employee stock purchase plan, partially offset by \$2.0 million in principal payments on long-term debt and net payments of \$2.7 million on short-term borrowings. Net cash provided by financing activities of \$39.7 million for the year ended December 31, 2004 consisted primarily of \$32.5 million in net proceeds received from our common stock offering during 2004, \$6.0 million in proceeds from the exercise of stock options and purchases under the employee stock purchase plan, net proceeds of \$3.7 million from short-term borrowings, offset by \$2.6 million of principal payments on long-term debt.

On August 1, 2005, we renewed an unsecured short-term LIBOR based loan agreement with a bank to be utilized primarily by our Japanese subsidiary for short-term liquidity purposes. The credit line, which expires on July 31, 2006, provides for us to borrow in multiple currencies of up to an equivalent of \$35.0 million U.S. dollars. At December 31, 2005, we had outstanding borrowings of \$11.0 million U.S. dollars, payable on demand, at an interest rate of 1.31%, with \$24.0 million available for future borrowings.



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Our Japanese subsidiary also has credit lines and short-term borrowing arrangements with a financial institution, which provide for aggregate borrowings as of December 31, 2005 of up to \$12.7 million, which generally expire and are renewed in three month intervals. At December 31, 2005, total borrowings outstanding under these arrangements totaled \$5.9 million, at interest rates ranging from 1.21% to 1.24%, with \$6.8 million available for future borrowings.

We have provided financial guarantees for certain unsecured borrowings and have standby letters of credit and performance bonds, some of which do not have fixed expiration dates. At December 31, 2005, our maximum exposure as a result of these standby letters of credit and performance bonds was approximately \$1.0 million.

Future payments due under debt, lease and purchase commitment obligations as of December 31, 2005 (in thousands) are as follows:

Contractual Obligations	Total	Payment Due by Period			
		Less than 1 Year	1-3 Years	3-5 Years	After 5 Years
Debt Obligations	\$ 23,633	\$ 18,395	\$ 238	\$	\$ 5,000
Interest on Debt	1,803	259	343	344	857
Operating Lease Obligations	20,034	5,760	7,039	3,102	4,133
Purchase Obligations(1)	100,768	80,909	11,027	8,832	
Capital Leases	1,405	491	914		
Interest in Capital Leases	114	71	43		
Other Long-Term Liabilities Reflected on the Registrant's Balance Sheet under GAAP	3,505		339	178	2,988
Total	\$ 151,262	\$ 105,885	\$ 19,943	\$ 12,456	\$ 12,978

- (1) The majority of the outstanding inventory purchase commitments of approximately \$69.8 million at December 31, 2005 are to be purchased within the next 12 months. Additionally, approximately \$26.0 million represents a commitment, as of December 31, 2005, to a third party engaged to provide certain computer equipment, IT network services and IT support. This contract is for a period of approximately six years that began in September 2004 and has a significant penalty for early termination. The actual timing of payments and amounts may vary based on equipment deployment dates. However, the amount noted represents our expected obligation based on anticipated deployment.

We believe that our working capital, together with the cash anticipated to be generated from operations, will be sufficient to satisfy our estimated working capital and planned capital expenditure requirements through at least the next 12 months.

During the fourth quarter of 2005, we executed a settlement agreement with Advanced Energy in connection with the patent infringement suit we had brought against Advanced Energy in federal district court in Delaware. Pursuant to the settlement agreement, Advanced Energy paid us \$3.0 million in cash in October 2005. See Item 3. Legal Proceedings.

On January 3, 2006, we completed our acquisition of Ion Systems, Inc, a leading provider of electrostatic management solutions located in Alameda, California, pursuant to an Agreement and Plan of Merger dated November 25, 2005. Ion Systems' ionization technology controls electrostatic charge to reduce process contamination and improve yields, which complements the Company's process monitoring and control technologies. The aggregate purchase price consisted of \$73.1 million in cash and \$0.8 million in acquisition related costs.

Additionally, on January 3, 2006, we completed our acquisition of Umetrics, AB, a leader in multivariate data analysis and modeling software located in Umea, Sweden, pursuant to a Sale and Purchase Agreement dated December 15, 2005. Umetrics' multivariate data analysis and modeling software converts process data

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into useable information for yield improvement, when linked with the Company's open and modular platform of process sensors and data collection, integration, data storage, and visualization capabilities. The purchase price consisted of \$30.1 million in cash and \$0.3 million in acquisition related costs.

To the extent permitted by Massachusetts law, our Restated Articles of Organization, as amended, require us to indemnify any of our current or former officers or directors or any person who has served or is serving in any capacity with respect to any of our employee benefit plans. Because no claim for indemnification has been pursued by any person covered by the relevant provisions of our Restated Articles of Organization, we believe that the estimated exposure for these indemnification obligations is currently minimal. Accordingly, we have no liabilities recorded for these requirements as of December 31, 2005.

We also enter into agreements in the ordinary course of business which include indemnification provisions. Pursuant to these agreements, we indemnify, hold harmless and agree to reimburse the indemnified party, generally our customers, for losses suffered or incurred by the indemnified party in connection with certain patent or other intellectual property infringement claims, and, in some instances, other claims, by any third party with respect to our products. The terms of these indemnification obligations are generally perpetual after execution of the agreements. The maximum potential amount of future payments we could be required to make under these indemnification agreements is, in some instances, unlimited. We have never incurred costs to defend lawsuits or settle claims related to these indemnification obligations. As a result, we believe the estimated fair value of these obligations is minimal. Accordingly, we have no liabilities recorded for these obligations as of December 31, 2005.

When, as part of an acquisition, we acquire all of the stock or all of the assets and liabilities of another company, we assume liability for certain events or occurrences that took place prior to the date of acquisition. The maximum potential amount of future payments we could be required to make for such obligations is undeterminable at this time. Other than obligations recorded as liabilities at the time of the acquisitions, historically we have not made significant payments for these indemnifications. Accordingly, no liabilities have been recorded for these obligations.

In conjunction with certain asset sales, we may provide routine indemnifications whose terms range in duration and often are not explicitly defined. Where appropriate, an obligation for such indemnifications is recorded as a liability. Because the amounts of liability under these types of indemnifications are not explicitly stated, the overall maximum amount of the obligation under such indemnifications cannot be reasonably estimated. Other than obligations recorded as liabilities at the time of the asset sale, historically we have not made significant payments for these indemnifications.

**Derivatives**

We conduct our operations globally. Consequently, the results of our operations are exposed to movements in foreign currency exchange rates. We hedge a portion of our forecasted foreign currency denominated intercompany sales of inventory, over a maximum period of 15 months, using forward foreign exchange contracts (forward exchange contracts) primarily related to Japanese and European currencies. These derivatives are designated as cash-flow hedges, and changes in their fair value are carried in accumulated other comprehensive income in our consolidated statements of stockholder's equity until the hedged transaction affects earnings. When the hedged transaction affects earnings, the appropriate gain or loss from the derivative designated as a hedge of the transaction is reclassified from accumulated other comprehensive income to cost of sales in the consolidated statements of operations. As of December 31, 2005, the amount that will be reclassified from accumulated other comprehensive income to cost of sales over the next twelve months is an unrealized gain of \$0.8 million, net of taxes. The ineffective portions of the derivatives are recorded in cost of sales and were immaterial in 2005, 2004 and 2003, respectively.

We also hedge certain intercompany and other payables with forward exchange contracts. Typically, as these derivatives hedge existing amounts that are denominated in foreign currencies, the derivatives do not qualify for hedge accounting. The foreign exchange gain or loss on these derivatives was immaterial in 2005, 2004 and 2003.

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Realized and unrealized gains and losses on forward exchange contracts that do not qualify for hedge accounting are recognized immediately in earnings. The cash flows resulting from forward exchange contracts that qualify for hedge accounting are classified in our consolidated statements of cash flows as part of cash flows from operating activities. Cash flows resulting from forward exchange contracts that do not qualify for hedge accounting are classified in our statements of cash flows as investing activities. We do not hold or issue derivative financial instruments for trading purposes.

We had forward exchange contracts with notional amounts totaling \$35.3 million outstanding at December 31, 2005, of which, \$28.5 million were outstanding to exchange Japanese yen for U.S. dollars. We had forward exchange contracts with notional amounts totaling \$26.3 million outstanding at December 31, 2004 of which \$21.6 million were outstanding to exchange Japanese yen for U.S. dollars. There were forward exchange contracts with notional amounts totaling \$41.0 million outstanding at December 31, 2003 of which \$32.5 million were outstanding to exchange Japanese yen for U.S. dollars.

Gains and losses on forward exchange contracts that qualify for hedge accounting are classified in cost of goods sold and totaled a gain of \$0.8 million for the year ended December 31, 2005 and loss of \$1.7 million and \$1.4 million for the years ended December 31, 2004 and 2003, respectively.

**Off-Balance Sheet Arrangements**

We do not have any financial partnerships with unconsolidated entities, such as entities often referred to as structured finance, special purpose entities or variable interest entities which are often established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. Accordingly, we are not exposed to any financing, liquidity, market or credit risk that could arise if we had such relationships.

**Recently Issued Accounting Pronouncements**

In May 2005, the FASB issued Statement of Financial Accounting Standards No. 154, Accounting Changes and Error Corrections, a replacement of APB Opinion No. 20, Accounting Changes and FASB Statement No. 3, Reporting Accounting Changes in Interim Financial Statements ( SFAS 154 ). SFAS 154 provides guidance on the accounting for and reporting of accounting changes and error corrections. It establishes, unless impracticable, retrospective application as the required method for reporting a change in accounting principle in the absence of explicit transition requirements specific to the newly adopted accounting principle. SFAS 154 also provides guidance for determining whether retrospective application of a change in accounting principle is impracticable and for reporting a change when retrospective application is impracticable. The provisions of this Statement are effective for accounting changes and corrections of errors made in fiscal periods beginning after December 15, 2005. The adoption of the provisions of SFAS 154 is not expected to have a material impact on our financial position or results of operations.

In November 2004, the FASB issued Statement of Financial Accounting Standards No. 151, Inventory Costs ( SFAS 151 ). SFAS 151 amends ARB No. 43, Chapter 4, Inventory Pricing. This statement clarifies the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material, and requires those items be recognized as current period charges regardless of whether they meet the criterion of so abnormal. In addition, this statement requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. SFAS 151 is effective for inventory costs incurred during fiscal years beginning after June 15, 2005. We are currently assessing the potential impact of SFAS 151.

In December 2004, the FASB issued Statement of Financial Accounting Standards No. 123R, Share-Based Payment ( SFAS 123R ). SFAS 123R replaces SFAS 123 and supersedes APB 25. SFAS 123R focuses primarily on the accounting for transactions in which an entity obtains employee services in share-based payment transactions. SFAS 123R requires companies to recognize in the statement of operations the cost of employee services received in exchange for awards of equity instruments based on the grant-date fair value of those awards (with limited exceptions). This statement is effective as of the first annual reporting period that begins after June 15, 2005. Accordingly, we will adopt SFAS 123R in the first quarter of fiscal

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2006 and expect to use the modified-prospective transition method and will not restate prior periods for the adoption of SFAS 123R. Although we are currently evaluating the provisions of SFAS 123R and its implications on our employee benefit plans, we believe that the adoption of this standard, based on the terms of our options outstanding at December 31, 2005, will have a material effect on net income in 2006.

**Item 7A. *Quantitative and Qualitative Disclosures about Market Risk***  
**Market Risk and Sensitivity Analysis**

Our primary exposures to market risks include fluctuations in interest rates on our investment portfolio, short and long term debt as well as fluctuations in foreign currency exchange rates.

***Foreign Exchange Rate Risk***

We enter into forward exchange contracts to reduce currency exposure arising from intercompany sales of inventory.

There were forward exchange contracts with notional amounts totaling \$35.3 million and \$26.3 million outstanding at December 31, 2005 and 2004, respectively. Of such forward exchange contracts, \$28.5 million and \$21.6 million, respectively, were outstanding to exchange Japanese yen for U.S. dollars with the remaining amounts relating to contracts to exchange the British pound and Euro for U.S. dollars. The potential fair value loss for a hypothetical 10% adverse change in the forward currency exchange rate on our forward exchange contracts at December 31, 2005 and 2004 would be \$3.4 million and \$3.1 million, respectively. The potential losses in 2005 and 2004 were estimated by calculating the fair value of the forward exchange contracts at December 31, 2005 and 2004 and comparing that with those calculated using the hypothetical forward currency exchange rates.

At December 31, 2005 we had \$59.4 million in loans outstanding between subsidiaries that were subject to foreign exchange exposure. At December 31, 2005 a hypothetical 10% adverse change in foreign exchange rates would result in a net transaction loss of \$6.6 million that would be recorded in current earnings. Subsequent to December 31, 2005, we initiated a plan to convert approximately \$10.0 million of these loans to equity which will reduce the loan balance to approximately \$49.4 million. We may enter into forward currency exchange contracts to further reduce our foreign exchange exposure related to these remaining loans.

At December 31, 2005, we had \$17.0 million related to short-term borrowings and current portion of long-term debt denominated in Japanese yen. The carrying value of these short-term borrowings approximates fair value due to their short period to maturity. Assuming a hypothetical 10% adverse change in the Japanese yen to U.S. dollar year end exchange rate, the fair value of these short-term borrowings would increase by \$1.9 million. The potential increase in fair value was estimated by calculating the fair value of the short-term borrowings at December 31, 2005 and comparing that with the fair value using the hypothetical year end exchange rate.

At December 31, 2004, we had \$22.4 million related to short-term borrowings and current portion of long-term debt denominated in Japanese yen. The carrying value of these short-term borrowings approximates fair value due to their short period to maturity. Assuming a hypothetical 10% adverse change in the Japanese yen to U.S. dollar year end exchange rate, the fair value of these short-term borrowings would increase by \$2.5 million. The potential increase in fair value was estimated by calculating the fair value of the short-term borrowings at December 31, 2004 and comparing that with the fair value using the hypothetical year end exchange rate.

***Interest Rate Risk***

Due to its short-term duration, the fair value of our cash and investment portfolio at December 31, 2005 and 2004 approximated its carrying value. Interest rate risk was estimated as the potential decrease in fair



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value resulting from a hypothetical 10% increase in interest rates for securities contained in the investment portfolio. The resulting hypothetical fair value was not materially different from the year-end carrying values.

Our total long-term debt outstanding, including the current portion, at December 31, 2005 and 2004, was \$6.7 million and \$8.7 million, respectively, and consisted mainly of a mortgage note and industrial development revenue bond. The interest rates on these debt instruments are primarily variable and range from 3.0% to 5.6% at December 31, 2005 and 1.8% to 4.0% at December 31, 2004. Due to the immaterial amounts of the outstanding debt, a hypothetical change of 10% in interest rates would not have a material effect on our near-term financial condition or results of operations.

From time to time, MKS has outstanding short-term borrowings with variable interest rates, primarily denominated in Japanese yen. At December 31, 2005 and 2004, we had \$17.0 million and \$22.4 million, respectively, outstanding related to these short-term borrowings at interest rates ranging from 1.21% to 1.31%. Due to the short-term nature and amount of this short-term debt, a hypothetical change of 10% in interest rates would not have a material effect on our near-term financial condition or results of operations.

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**Item 8. *Financial Statements and Supplementary Data***

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Shareholders of  
MKS Instruments, Inc.:

We have completed integrated audits of MKS Instruments, Inc.'s 2005 and 2004 consolidated financial statements and of its internal control over financial reporting as of December 31, 2005, and an audit of its 2003 consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Our opinions, based on our audits, are presented below.

**Consolidated financial statements and financial statement schedule**

In our opinion, the consolidated financial statements listed in the index appearing under Item 15(a)(1) present fairly, in all material respects, the financial position of MKS Instruments, Inc. and its subsidiaries at December 31, 2005 and 2004, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2005 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the index appearing under Item 15(a)(2) presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. These financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit of financial statements includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

**Internal control over financial reporting**

Also, in our opinion, management's assessment, included in Management's Annual Report on Internal Control over Financial Reporting appearing under Item 9A, that the Company maintained effective internal control over financial reporting as of December 31, 2005 based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), is fairly stated, in all material respects, based on those criteria. Furthermore, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2005, based on criteria established in Internal Control – Integrated Framework issued by the COSO. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express opinions on management's assessment and on the effectiveness of the Company's internal control over financial reporting based on our audit. We conducted our audit of internal control over financial reporting in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. An audit of internal control over financial reporting includes obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we consider necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinions.

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

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

PricewaterhouseCoopers LLP  
Boston, Massachusetts  
March 14, 2006

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**MKS INSTRUMENTS, INC.  
CONSOLIDATED BALANCE SHEETS**

	December 31	
	2005	2004
	(In thousands, except share data)	
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$220,573	\$138,389
Short-term investments	72,046	97,511
Trade accounts receivable, net of allowances of \$3,178 and \$3,238 at December 31, 2005 and 2004, respectively	82,610	82,315
Inventories	98,242	99,633
Deferred income taxes	15,165	12,129
Other current assets	10,511	9,908
Total current assets	499,147	439,885
Property, plant and equipment, net	78,726	80,917
Long-term investments	857	4,775
Goodwill, net	255,243	255,740
Acquired intangible assets, net	27,422	41,604
Deferred income taxes		2,184
Other assets	2,345	3,572
Total assets	\$863,740	\$828,677
<b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
Current liabilities:		
Short-term borrowings	\$ 16,966	\$ 22,400
Current portion of long-term debt	1,429	2,069
Current portion of capital lease obligations	491	40
Accounts payable	27,955	23,338
Accrued compensation	13,583	13,767
Income taxes payable	9,564	9,133
Other accrued expenses	19,099	21,438
Total current liabilities	89,087	92,185
Long-term debt	5,238	6,667
Long-term portion of capital lease obligations	914	80
Deferred income taxes	2,153	
Other liabilities	3,505	3,111
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred Stock, \$0.01 par value, 2,000,000 shares authorized; none issued and outstanding		

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Common Stock, no par value, 200,000,000 shares authorized;  
54,397,267 and 53,839,098 shares issued and outstanding at  
December 31, 2005 and 2004, respectively

	113	113
Additional paid-in capital	639,152	631,760
Retained earnings	116,642	82,077
Accumulated other comprehensive income	6,936	12,684
 Total stockholders' equity	 762,843	 726,634
 Total liabilities and stockholders' equity	 \$863,740	 \$828,677

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

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**MKS INSTRUMENTS, INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

Year Ended December 31

	2005	2004	2003
<b>(In thousands, except share data)</b>			
Net sales	\$509,294	\$555,080	\$337,291
Cost of sales	308,860	335,709	219,182
Gross profit	200,434	219,371	118,109
Research and development	55,916	56,973	47,650
Selling, general and administrative	93,021	87,284	69,891
Amortization of acquired intangible assets	13,864	14,764	14,692
Restructuring and asset impairment charges	85	437	1,593
Income from litigation settlement	3,000		
Income (loss) from operations	40,548	59,913	(15,717)
Interest expense	810	510	689
Interest income	7,269	2,423	1,745
Other income, net		5,402	927
Income (loss) before income taxes	47,007	67,228	(13,734)
Provision (benefit) for income taxes	12,442	(2,611)	2,651
Net income (loss)	\$ 34,565	\$ 69,839	\$ (16,385)
Net income (loss) per share:			
Basic	\$ 0.64	\$ 1.30	\$ (0.32)
Diluted	\$ 0.63	\$ 1.28	\$ (0.32)
Weighted average common shares outstanding:			
Basic	54,067	53,519	51,581
Diluted	54,633	54,656	51,581

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

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**MKS INSTRUMENTS, INC.**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY**

**For the Year Ended December 31, 2005, 2004 and 2003**

	Common Stock		Additional	Retained	Accumulated Other Comprehensive Income	Comprehensive Income (loss)	Total Stockholders Equity
	Shares	Amount	Capital	Earnings	(Loss)	(loss)	
(In thousands, except share data)							
<b>Balance at December 31, 2002</b>	51,359,753	\$ 113	\$579,175	\$ 28,623	\$ 2,779		\$610,690
Issuance of common stock from exercise of stock options and Employee Stock Purchase Plan	680,266		8,603				8,603
Other			132				132
Comprehensive loss (net of tax):							
Net loss				(16,385)		\$(16,385)	(16,385)
Other comprehensive income:							
Changes in value of financial instruments designated as cash flow hedges and unrealized gain (loss) on investment					(1,780)	(1,780)	(1,780)
Foreign currency translation adjustment					7,050	7,050	7,050
Comprehensive loss						(11,115)	
<b>Balance at December 31, 2003</b>	52,040,019	113	587,910	12,238	8,049		608,310
Issuance of common stock from exercise of stock options and Employee Stock Purchase Plan	484,793		6,030				6,030
Issuance of common stock through public offering, net of issuance costs of \$399	1,314,286		32,549				32,549

Tax benefit from exercise of stock options							5,271	5,271
Comprehensive income (net of tax):								
Net income							69,839	69,839
Other comprehensive income:								
Changes in value of financial instruments designated as cash flow hedges and unrealized gain (loss) on investment							973	973
Foreign currency translation adjustment							3,662	3,662
Comprehensive income								74,474
<b>Balance at December 31, 2004</b>	53,839,098	113	631,760	82,077	12,684			726,634
Issuance of common stock from exercise of stock options and Employee Stock Purchase Plan	558,169		6,058					6,058
Tax benefit from exercise of stock options			1,102					1,102
Other			232					232
Comprehensive income (net of tax):								
Net income							34,565	34,565
Other comprehensive income:								
Changes in value of financial instruments designated as cash flow hedges and unrealized gain (loss) on investment							1,663	1,663
Foreign currency translation adjustment							(7,411)	(7,411)
Comprehensive income								\$ 28,817
	54,397,267	\$ 113	\$ 639,152	\$ 116,642	\$ 6,936			\$ 762,843



**Balance at  
December 31, 2005**

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

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**MKS INSTRUMENTS, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

Year Ended December 31

	2005	2004	2003
(In thousands)			
<b>Cash flows from operating activities:</b>			
Net income (loss)	\$ 34,565	\$ 69,839	\$(16,385)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	26,215	27,838	28,198
Deferred taxes	303	(10,229)	716
Gain on collection of note receivable		(5,042)	
Other	1,569	(426)	151
Changes in operating assets and liabilities, net of effects of businesses acquired:			
Trade accounts receivable	(4,702)	(15,197)	(17,426)
Inventories	(1,829)	(15,919)	(6,656)
Other current assets	307	(1,244)	1,328
Accrued expenses	(2)	10,790	169
Accounts payable	6,362	(3,632)	9,720
Income taxes payable	1,372	9,621	
<b>Net cash provided by (used in) operating activities</b>	<b>64,160</b>	<b>66,399</b>	<b>(185)</b>
<b>Cash flows from investing activities:</b>			
Purchases of short-term and long-term available-for-sale investments	(215,551)	(218,478)	(93,999)
Maturities and sales of short-term and long-term available-for-sale investments	244,736	184,422	80,046
Purchases of property, plant and equipment	(10,281)	(18,270)	(6,348)
Proceeds from sale of assets	241	1,619	
Business combinations, net of cash acquired			(2,150)
Proceeds from collection of note receivable		5,042	
Other	901	1,422	1,100
<b>Net cash provided by (used in) investing activities</b>	<b>20,046</b>	<b>(44,243)</b>	<b>(21,351)</b>
<b>Cash flows from financing activities:</b>			
Proceeds from short-term borrowings	79,005	67,844	69,791
Payments on short-term borrowings	(81,729)	(64,127)	(67,619)
Payments on long-term debt	(2,036)	(2,539)	(5,029)
Principal payments on capital lease obligations	(377)	(39)	(456)
Proceeds from exercise of stock options and employee stock purchase plan	6,058	6,030	8,603
Proceeds from the sale of common stock, net		32,549	

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Net cash provided by financing activities	921	39,718	5,290
Effect of exchange rate changes on cash and cash equivalents	(2,943)	1,855	2,086
Increase (decrease) in cash and cash equivalents	82,184	63,729	(14,160)
Cash and cash equivalents at beginning of period	138,389	74,660	88,820
Cash and cash equivalents at end of period	\$ 220,573	\$ 138,389	\$ 74,660
<b>Supplemental disclosure of cash flow information:</b>			
Cash paid during the period for:			
Interest	\$ 784	\$ 447	\$ 664
Income taxes	\$ 10,213	\$ 4,923	\$ 512
<b>Non-cash financing activities:</b>			
Equipment capital leases	\$ 1,666	\$	\$

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

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**MKS INSTRUMENTS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**(Tables in thousands, except share and per share data)**

**1) Description of Business**

MKS Instruments, Inc. was founded in 1961 and is a leading worldwide provider of instruments, components, subsystems and process control solutions that measure, control, power and monitor critical parameters of semiconductor and other advanced manufacturing processes. MKS is managed as one operating segment which is organized around three product groups: Instruments and Control Systems, Power and Reactive Gas Products and Vacuum Products. MKS products are derived from its core competencies in pressure measurement and control, materials delivery, gas and thin-film composition analysis, electrostatic charge control, control and information management, power and reactive gas generation and vacuum technology.

**2) Summary of Significant Accounting Policies****Basis of Presentation**

The consolidated financial statements include the accounts of MKS Instruments, Inc. and its wholly owned subsidiaries (collectively, the Company). All significant intercompany accounts and transactions have been eliminated in consolidation.

**Net Income Per Share**

Basic earnings per share is based on the weighted average number of common shares outstanding, and diluted earnings per share is based on the weighted average number of common shares outstanding and all dilutive potential common equivalent shares outstanding. The dilutive effect of options is determined under the treasury stock method using the average market price for the period. Common equivalent shares are included in the per share calculations when the effect of their inclusion would be dilutive.

The following is a reconciliation of basic to diluted net income per share:

	<b>For the Year Ended December 31,</b>		
	<b>2005</b>	<b>2004</b>	<b>2003</b>
Net income (loss)	\$ 34,565	\$ 69,839	\$ (16,385)
Shares used in net income (loss) per common share basic	54,067,000	53,519,000	51,581,000
Effect of dilutive securities:			
Stock options	566,000	1,137,000	
Shares used in net income (loss) per common share diluted	54,633,000	54,656,000	51,581,000
Net income (loss) per common share basic	\$ 0.64	\$ 1.30	\$ (0.32)
Net income (loss) per common share diluted	\$ 0.63	\$ 1.28	\$ (0.32)

Options outstanding of 5,957,682, 5,513,054 and 8,897,899 during the years ended December 31, 2005, 2004 and 2003, respectively, are excluded from the calculation of diluted net income (loss) per common share because their inclusion would be anti-dilutive.

**Stock-Based Compensation**

The Company has several stock-based employee compensation plans. The Company accounts for stock-based awards to employees using the intrinsic value method as prescribed by Accounting Principles Board

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**MKS INSTRUMENTS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)**  
**(Tables in thousands, except share and per share data)**

( APB ) Opinion No. 25, Accounting for Stock Issued to Employees, and related interpretations. Accordingly, no compensation expense is recorded for options issued to employees in fixed amounts with fixed exercise prices at least equal to the fair market value of the Company's common stock at the date of grant. The Company has adopted the provisions of SFAS No. 123, Accounting for Stock-Based Compensation, as amended by SFAS No. 148, Accounting for Stock-Based Compensation-Transition and Disclosure, ( SFAS 123 ) through disclosure only.

The following table illustrates the effect on net income and net income per share if the Company had applied the fair value recognition provisions of SFAS No. 123 to stock-based employee awards:

	2005	2004	2003
Net income (loss) as reported	\$ 34,565	\$ 69,839	\$(16,385)
Add: Stock-based employee compensation expense included in reported net income (loss), net of tax			
Deduct: Total stock-based employee compensation expense determined under the fair-value-based method for all awards, net of tax	(24,321)	(15,933)	(21,820)
Pro forma net income (loss)	\$ 10,244	\$ 53,906	\$(38,205)
Basic and diluted net income (loss) per share:			
Basic as reported	\$ 0.64	\$ 1.30	\$ (0.32)
Basic Pro forma	\$ 0.19	\$ 1.01	\$ (0.74)
Diluted as reported	\$ 0.63	\$ 1.28	\$ (0.32)
Diluted Pro forma	\$ 0.19	\$ 0.99	\$ (0.74)

There is no tax benefit included in the stock-based employee compensation expense determined under the fair-value-based method for the year ended December 31, 2003, as the Company had a full valuation allowance for its net deferred tax assets at December 31, 2003. For the years ended December 31, 2005 and 2004, stock-based employee compensation expense included a tax benefit.

The weighted average grant date fair value of options granted during 2005, 2004 and 2003 was \$8.27, \$11.24 and \$15.91 per option, respectively. The fair value of options at the date of grant was estimated using the Black-Scholes option-pricing model with the following weighted average assumptions:

	2005	2004	2003
Expected life (years)	5.0	5.0	5.0
Interest rate	4.0%	3.6%	3.3%
Volatility	51.0%	74.0%	78.0%
Dividend yield	0.0%	0.0%	0.0%

The weighted average fair value of employee stock purchase rights granted in 2005, 2004 and 2003 was \$4.18, \$7.05 and \$7.08, respectively. The fair value of the employees' purchase rights was estimated using the Black-Scholes option-pricing model with the following weighted average assumptions:

2005	2004	2003
------	------	------

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Expected life (years)	0.5	0.5	0.5
Interest rate	2.7%	1.3%	1.2%
Volatility	34.0%	73.0%	78.0%
Dividend yield	0.0%	0.0%	0.0%

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**MKS INSTRUMENTS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)**  
**(Tables in thousands, except share and per share data)**

In December 2004, the Financial Accounting Standards Board ( FASB ) issued SFAS No. 123R, Share-Based Payment ( SFAS 123R ). SFAS 123R replaces SFAS 123 and supersedes APB 25. SFAS 123R focuses primarily on the accounting for transactions in which an entity obtains employee services in share-based payment transactions. SFAS 123R requires companies to recognize in the statement of operations the cost of employee services received in exchange for awards of equity instruments based on the grant-date fair value of those awards. SFAS 123R is effective for the Company as of the first annual period that begins after June 15, 2005. Accordingly, the Company will adopt SFAS 123R in its first quarter of fiscal 2006. The Company expects to use the modified-prospective transition method and will not restate prior periods for the adoption of SFAS 123R. Although the Company is currently evaluating the provisions of SFAS 123R and its implications on its employee benefit plans, it believes that the adoption of this standard, based on the terms of the options outstanding at December 31, 2005, will have a material effect on the Company's net income for the year ending December 31, 2006.

On January 7, 2005, the Company accelerated the vesting of outstanding stock options granted to employees and officers with an exercise price of \$23.00 or greater. As a result of this action, options to purchase approximately 1.6 million shares of the Company's common stock became exercisable on January 7, 2005. No compensation expense was recorded in the Company's consolidated statement of operations for the year ended December 31, 2005 related to this action as these options had no intrinsic value on January 7, 2005. For purposes of the SFAS 123 pro forma calculation above, the expense related to the options that were accelerated was \$16,886,000, net of tax, for the year ended December 31, 2005. The reason that the Company accelerated the vesting of the identified stock options was to reduce the Company's compensation expense in periods subsequent to the adoption of SFAS 123R.

**Foreign Exchange**

The functional currency of the majority of the Company's foreign subsidiaries is the applicable local currency. For those subsidiaries, assets and liabilities are translated to U.S. dollars at year-end exchange rates. Income and expense accounts are translated at the average exchange rates prevailing during the year. The resulting translation adjustments are included in accumulated other comprehensive income in consolidated stockholders' equity. Foreign exchange transaction gains and losses, which arise from transaction activity and are reflected in operations, were immaterial in 2005, 2004 and 2003.

**Revenue Recognition**

Revenue from product sales is recorded upon transfer of title and risk of loss to the customer provided that there is evidence of an arrangement, the sales price is fixed or determinable, and collection of the related receivable is reasonably assured. In most transactions, the Company has no obligations to customers after the date products are shipped other than pursuant to warranty obligations. In some instances, the Company provides installation and training to customers after the product has been shipped. In accordance with the Emerging Issues Task Force ( EITF ) 00-21 Accounting For Revenue Arrangements With Multiple Deliverables, the Company defers the fair value related to any undelivered elements until the undelivered element is delivered. Fair value is the price charged when the element is sold separately. The Company provides for the estimated costs to fulfill customer warranty obligations upon the recognition of the related revenue. Shipping and handling fees, if any, billed to customers are recognized as revenue. The related shipping and handling costs are recognized in cost of sales. Accounts receivable allowances include sales returns and bad debt allowances. The Company monitors and tracks the amount of product returns and reduces revenue at the time of shipment for the estimated amount of such future returns, based on historical experience. The Company makes estimates evaluating its allowance for doubtful accounts. The Company continuously monitors collections and payments from its customers and maintains a provision for estimated



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credit losses based upon its historical experience and any specific customer collection issues that it has identified.

**Cash and Cash Equivalents and Investments**

All highly liquid investments with a maturity date of three months or less at the date of purchase are considered to be cash equivalents.

The fair value of short-term available-for-sale investments with maturities or estimated lives of less than one year consists of the following:

	<b>December 31,</b>	
	<b>2005</b>	<b>2004</b>
Federal Government and Government Agency Obligations	\$15,336	\$60,445
Commercial Paper and Corporate Obligations	56,710	37,066
	<b>\$72,046</b>	<b>\$97,511</b>

The fair value of long-term available-for-sale investments with maturities or estimated lives of one to five years consists of the following:

	<b>December 31,</b>	
	<b>2005</b>	<b>2004</b>
Commercial Paper and Corporate Obligations	\$857	\$3,989
Mutual Funds		786
	<b>\$857</b>	<b>\$4,775</b>

The appropriate classification of investments in securities is determined at the time of purchase. Debt securities that the Company does not have the intent and ability to hold to maturity are classified as available-for-sale and are carried at fair value. Unrealized gains and losses on securities classified as available-for-sale are included in accumulated other comprehensive income in consolidated stockholders' equity. Gross unrealized gains and gross unrealized losses on available-for-sale investments were not material at December 31, 2005 and 2004. At December 31, 2005, the fair value of available-for-sale investments with gross unrealized losses was \$16,993,000. Realized gains (losses) on securities were immaterial in 2005, 2004 and 2003. The cost of securities sold is based on the specific identification method.

**Inventories**

The Company values its inventory at the lower of cost (first-in, first-out method) or market. The Company regularly reviews inventory quantities on hand and records a provision to write down excess and obsolete inventory to its estimated net realizable value, if less than cost, based primarily on its estimated forecast of product demand.

**Property, Plant and Equipment**

Property, plant and equipment are stated at cost. Equipment acquired under capital leases is recorded at the present value of the minimum lease payments required during the lease period. Expenditures for major renewals and betterments that extend the useful lives of property, plant and equipment are capitalized. Expenditures for

maintenance and repairs are charged to expense as incurred. When assets are sold or otherwise disposed of, the cost and related accumulated depreciation are eliminated from the accounts and any resulting gain or loss is recognized in earnings.

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Depreciation is provided on the straight-line method over the estimated useful lives of twenty to thirty-one and one-half years for buildings and three to seven years for machinery and equipment and furniture and fixtures and office equipment, which includes ERP software. Leasehold improvements are amortized over the shorter of the lease term or the estimated useful life of the leased asset.

**Intangible Assets**

Intangible assets resulting from the acquisitions of entities accounted for using the purchase method of accounting are estimated by management based on the fair value of assets acquired. These include acquired customer lists, technology, patents, trade name and covenants not to compete. Intangible assets are amortized from three to eight years on a straight-line basis which represents the estimated periods of benefit.

**Goodwill**

Goodwill is the amount by which the cost of acquired net assets exceeded the fair value of those net assets on the date of acquisition. The Company assesses goodwill for impairment on an annual basis during the fourth quarter of each fiscal year, or more frequently when events and circumstances occur indicating that the recorded goodwill may be impaired. If the book value of a reporting unit exceeds its fair value, the implied fair value of goodwill is compared with the carrying amount of goodwill. If the carrying amount of goodwill exceeds the implied fair value, an impairment loss is recorded equal to that excess.

**Impairment of Long-Lived Assets**

The Company evaluates the recoverability of its long-lived assets which include acquired amortizable intangible assets, in accordance with Statement of Financial Accounting Standards No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets ( SFAS 144 ). SFAS 144 requires recognition of impairment of long-lived assets in the event the net book value of such assets exceeds the future undiscounted cash flows attributable to such assets. If an impairment is indicated, the assets are written down to their estimated fair value.

**Research and Development**

Research and development costs are expensed as incurred and consist mainly of compensation related expenses and project materials. The Company's research and development efforts include numerous projects which generally have a duration of 12 to 30 months.

**In-Process Research and Development**

The Company values tangible and intangible assets acquired through its business acquisitions at fair value including in-process research and development ( IPR&D ). The Company determines IPR&D through established valuation techniques for various projects for the development of new products and technologies and expenses IPR&D when technical feasibility is not reached.

**Advertising Costs**

Advertising costs are expensed as incurred. Advertising costs were immaterial in 2005, 2004 and 2003.

**Income Taxes**

The Company records income taxes using the asset and liability method. Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective income tax bases, and

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operating loss and tax credit carryforwards. The Company evaluates the realizability of its net deferred tax assets and assesses the need for a valuation allowance on a quarterly basis. The future benefit to be derived from its deferred tax assets is dependent upon its ability to generate sufficient future taxable income to realize the assets. The Company records a valuation allowance to reduce its net deferred tax assets to the amount that is more likely than not to be realized. To the extent the Company establishes a valuation allowance, an expense will be recorded within the provision for income taxes line on the statement of operations. During the year ended December 31, 2002 the Company established a full valuation allowance for its net deferred tax assets. In periods subsequent to establishing a valuation allowance, if the Company were to determine that it would be able to realize its net deferred tax assets in excess of their net recorded amount, an adjustment to the valuation allowance would be recorded as a reduction to income tax expense in the period such determination was made. During the fourth quarter of 2004, after examining a number of factors, including historical results and near term earnings projections, the Company determined that it was more likely than not that it would realize all of its net deferred tax assets, except for those related to certain state tax credits and adjusted the valuation allowance at December 31, 2004.

On October 22, 2004, the American Jobs Creation Act of 2004 (the Act ) was signed into law. The Act contains a provision allowing U.S. multinational companies a one-time incentive to repatriate foreign earnings at an effective tax rate of 5.25%. During 2005, the Company conducted an extensive study of the new provision and concluded that no opportunities existed from which the Company could benefit from repatriation of its undistributed foreign earnings. Through December 31, 2005, the Company has not provided deferred U.S. income taxes on the undistributed earnings of its foreign subsidiaries because such earnings were intended to be permanently reinvested outside the U.S. Determination of the potential deferred income tax liability on these undistributed earnings is not practicable because such liability, if any, is dependent on circumstances existing if and when remittance occurs. At December 31, 2005, the Company had \$80,173,000 of undistributed earnings in its foreign subsidiaries.

**New Accounting Pronouncements**

In May 2005, the FASB issued Statement of Financial Accounting Standards No. 154, Accounting Changes and Error Corrections, a replacement of APB Opinion No. 20, Accounting Changes and FASB Statement No. 3, Reporting Accounting Changes in Interim Financial Statements ( SFAS 154 ). SFAS 154 provides guidance on the accounting for and reporting of accounting changes and error corrections. It establishes, unless impracticable, retrospective application as the required method for reporting a change in accounting principle in the absence of explicit transition requirements specific to the newly adopted accounting principle. SFAS 154 also provides guidance for determining whether retrospective application of a change in accounting principle is impracticable and for reporting a change when retrospective application is impracticable. The provisions of this Statement are effective for accounting changes and corrections of errors made in fiscal periods beginning after December 15, 2005. The adoption of the provisions of SFAS 154 is not expected to have a material impact on the Company's financial position or results of operations.

In November 2004, the FASB issued Statement of Financial Accounting Standards No. 151, Inventory Costs ( SFAS 151 ). SFAS 151 amends ARB No. 43, Chapter 4, Inventory Pricing. This statement clarifies the accounting for abnormal amounts of idle facility expense, freight, handling costs and wasted material, and requires those items be recognized as current period charges regardless of whether they meet the criterion of so abnormal. In addition, this statement requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. SFAS 151 is effective for inventory costs incurred during fiscal years beginning after June 15, 2005. The Company is currently assessing the potential impact of SFAS 151.

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**Use of Estimates**

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an on-going basis, management evaluates its estimates and judgments, including those related to revenue recognition, inventory, intangible assets, goodwill, and other long-lived assets, in-process research and development, merger expenses, income taxes and investments. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

**Reclassifications**

Certain prior year amounts have been reclassified to be consistent with the current year classifications.

**3) Financial Instruments and Risk Management****Foreign Exchange Risk Management**

The Company hedges a portion of its forecasted foreign currency denominated intercompany sales of inventory, over a maximum period of fifteen months, using forward exchange contracts primarily related to Japanese and European currencies. These derivatives are designated as cash-flow hedges, and changes in their fair value are carried in accumulated other comprehensive income until the hedged transaction affects earnings. When the hedged transaction affects earnings, the appropriate gain or loss from the derivative designated as a hedge of the transaction is reclassified from accumulated other comprehensive income to cost of sales. As of December 31, 2005, the amount that will be reclassified from accumulated other comprehensive income to cost of sales over the next twelve months is an unrealized gain of \$829,000, net of taxes. The ineffective portion of the derivatives is recorded in cost of sales and was immaterial in 2005, 2004 and 2003.

The Company hedges certain intercompany and other payables with forward foreign exchange contracts ( forward exchange contracts ). Since these derivatives hedge existing amounts that are denominated in foreign currencies, the derivatives do not qualify for hedge accounting under SFAS No. 133. The foreign exchange gain or loss on these derivatives was immaterial in 2005, 2004 and 2003.

Realized and unrealized gains and losses on forward exchange contracts that do not qualify for hedge accounting are recognized immediately in earnings. The cash flows resulting from forward exchange contracts that qualify for hedge accounting are classified in the consolidated statement of cash flows as part of cash flows from operating activities. Cash flows resulting from forward exchange contracts that do not qualify for hedge accounting are classified in the consolidated statement of cash flows as investing activities. The Company does not hold or issue derivative financial instruments for trading purposes.

There were forward exchange contracts with notional amounts totaling \$35,299,000 outstanding at December 31, 2005. Of such forward exchange contracts, \$28,461,000 were outstanding to exchange Japanese yen for US dollars. There were forward exchange contracts with notional amounts totaling \$26,301,000 outstanding at December 31, 2004. Of such forward exchange contracts, \$21,550,000 were outstanding to exchange Japanese yen for US dollars. There were forward exchange contracts with notional amounts totaling \$41,018,000 outstanding at December 31, 2003 of which \$32,488,000 were outstanding to exchange Japanese yen for U.S. dollars.

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Gains and losses on forward exchange contracts that qualify for hedge accounting are classified in cost of goods sold and totaled a gain of \$812,000 for the year ended December 31, 2005 and a loss of \$1,666,000 and \$1,411,000 for the years ended December 31, 2004 and 2003, respectively.

The fair values of forward exchange contracts at December 31, 2005 and 2004, determined by applying period end currency exchange rates to the notional contract amounts, amounted to an unrealized gain of \$1,237,000 and an unrealized loss of \$1,479,000, respectively.

**Concentrations of Credit Risk**

The Company's significant concentrations of credit risk consist principally of cash and cash equivalents, investments, forward exchange contracts and trade accounts receivable. The Company maintains cash and cash equivalents with financial institutions including some banks with which it has borrowings. The Company maintains investments primarily in U.S. Treasury and government agency securities and corporate debt securities, rated AA or higher. The Company enters into forward currency contracts with high credit-quality financial institutions in order to minimize credit risk exposure. The Company's customers are primarily concentrated in the semiconductor industry, and a limited number of customers account for a significant portion of the Company's revenues. The Company regularly monitors the creditworthiness of its customers and believes it has adequately provided for potential credit loss exposures. Credit is extended for all customers based primarily on financial condition and collateral is not required.

**Fair Value of Financial Instruments**

The fair value of the term loans, including the current portion, approximates its carrying value given its variable rate interest provisions. The fair value of marketable securities is based on quoted market prices. The fair value of mortgage notes is based on borrowing rates for similar instruments and, therefore, approximates its carrying value. For all other balance sheet financial instruments, the carrying amount approximates fair value because of the short period to maturity of these instruments.

**4) Inventories**

Inventories consist of the following:

	<b>December 31,</b>	
	<b>2005</b>	<b>2004</b>
Raw material	\$48,235	\$46,479
Work in process	18,283	18,330
Finished goods	31,724	34,824
	<b>\$98,242</b>	<b>\$99,633</b>

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**5) Property, Plant and Equipment**

Property, plant and equipment consist of the following:

	<b>December 31,</b>	
	<b>2005</b>	<b>2004</b>
Land	\$ 11,291	\$ 11,820
Buildings	62,963	62,608
Machinery and equipment	79,839	77,196
Furniture and fixtures and office equipment	36,692	29,984
Leasehold improvements	6,966	5,413
Construction in progress	1,681	8,507
	199,432	195,528
Less: accumulated depreciation and amortization	120,706	114,611
	<b>\$ 78,726</b>	<b>\$ 80,917</b>

Depreciation and amortization of property, plant and equipment totaled \$12,351,000, \$13,074,000 and \$13,508,000 for the years ended December 31, 2005, 2004 and 2003, respectively.

**6) Debt****Credit Agreements and Short-Term Borrowings**

On August 1, 2005, the Company renewed an unsecured short-term LIBOR based loan agreement with a bank to be utilized primarily by its Japanese subsidiary for short-term liquidity purposes. The credit line, which expires on July 31, 2006, provides for the Company to borrow in multiple currencies of up to an equivalent of \$35,000,000 U.S. dollars. At December 31, 2005, the Company had outstanding borrowings of \$11,028,000 U.S. dollars, payable on demand, at an interest rate of 1.31%.

Additionally, the Company's Japanese subsidiary has lines of credit and short-term borrowing arrangements with one financial institution which provide for aggregate borrowings as of December 31, 2005 of up to \$12,725,000, which generally expire and are renewed at three month intervals. At December 31, 2005 and 2004, total borrowings outstanding under these arrangements were \$5,938,000 and \$7,790,000, respectively, at interest rates ranging from 1.21% to 1.24% at December 31, 2005 and 1.24% at December 31, 2004.

**Long-Term Debt**

Long-term debt consists of the following:

	<b>December 31,</b>	
	<b>2005</b>	<b>2004</b>
Term loans	\$	\$ 640
Mortgage notes	6,667	8,096
Total long-term debt	6,667	8,736
Less: current portion	1,429	2,069

Long-term debt less current portion	\$5,238	\$6,667
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In connection with an acquisition in 2002, the Company assumed a long-term debt agreement with the County of Monroe Industrial Development Agency (COMIDA) for a manufacturing facility located in



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Rochester, New York. The terms are the same as that of the underlying Industrial Development Revenue Bond which calls for payments of interest only through July 1, 2014, at which time the Bond is repayable in a lump sum of \$5,000,000. Interest is reset annually based on bond remarketing, with an option by the Company to elect a fixed rate, subject to a maximum rate of 13% per annum. At December 31, 2005 the interest rate was 3%. The bond is collateralized by the building. The remaining principal balance outstanding at December 31, 2005 was \$5,000,000. The net book value of the building at December 31, 2005 was approximately \$10,075,000.

On March 6, 2000, the Company entered into a mortgage note payable with a bank to borrow \$10,000,000 to finance the purchase of land and a building. Principal and interest of \$119,000 is being paid in monthly installments with final payments due in March 2007. The remaining principal as of December 31, 2005 was \$1,667,000 with a variable interest rate of 5.55%. The net book value of the land and building, including improvements, at December 31, 2005 was approximately \$17,474,000.

In connection with the purchase of Telvac Engineering, Ltd., the Company issued term loans of \$752,000. Principal payments of \$61,000 were due on an annual basis through December 1, 2004 and the remaining principal was paid in full in 2005.

The Company had an outstanding term loan from a foreign bank, with principal due on April 2, 2004. This loan was paid in full in 2004.

Aggregate maturities of long-term debt over the next five years are as follows:

**Aggregate Maturities**

Year ending December 31,	
2006	\$1,429
2007	238
2008	
2009	
2010	
Thereafter	5,000
	<b>\$6,667</b>

**7) Commitments and Contingencies**

On April 3, 2003, Advanced Energy Industries, Inc. ( Advanced Energy ) filed suit against MKS in federal district court in Colorado ( Colorado Action ), seeking a declaratory judgment that Advanced Energy's Xstream product does not infringe three patents held by MKS's subsidiary, Applied Science and Technology, Inc. ( ASTeX ). On May 14, 2003, MKS brought suit in federal district court in Delaware against Advanced Energy for infringement of five ASTeX patents, including the three patents at issue in the Colorado Action. MKS sought injunctive relief and damages for Advanced Energy's infringement. On December 24, 2003, the Colorado court transferred Advanced Energy's Colorado Action to Delaware. In connection with the jury trial, the parties agreed to present the jury with representative claims from three of the five ASTeX patents. On July 23, 2004, the jury found that Advanced Energy infringed all three patents. On October 3, 2005, MKS and Advanced Energy entered into a settlement agreement, pursuant to which Advanced Energy paid MKS \$3,000,000 in cash in October 2005. The settlement agreement also provided that Advanced Energy would not make, use, sell or offer to sell its Rapid, Rapid FE, Rapid OE and Xstream products (or related products) in the United States or any other country in which MKS held a relevant patent or had pending a patent application on the date of the settlement agreement, during the life of any such patent.



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(or resulting patent, in the case of patent applications). On October 6, 2005, the federal district court in Delaware issued a final judgment of infringement and an injunction prohibiting Advanced Energy from making, using, selling, offering to sell, or importing into the United States such products.

On November 3, 1999, On-Line Technologies, Inc. ( On-Line ), which MKS acquired in 2001, brought suit in federal district court in Connecticut against Perkin-Elmer, Inc. and certain other defendants for infringement of On-Line s patent related to its FTIR spectrometer product and related claims. The suit sought injunctive relief and damages for infringement. Perkin-Elmer, Inc. filed a counterclaim seeking invalidity of the patent, costs and attorneys fees. In June 2002, the defendants filed a motion for summary judgment. In April 2003, the court granted the motion and dismissed the case. MKS appealed this decision to the federal circuit court of appeals. On October 13, 2004, the federal circuit court of appeals reversed the lower court s dismissal of certain claims in the case. Accordingly, the case has been remanded to the United States District Court in Connecticut for further proceedings on the merits of the remaining claims. On March 11, 2005, Perkin-Elmer, Inc. submitted to the court a stipulation that it infringed a specified claim of On-Line s patent and filed a motion for summary judgment that such patent claim is invalid. On April 6, 2005, MKS filed a reply to the summary judgment motion. The parties are awaiting the court s response to the motion.

The Company is subject to other legal proceedings and claims, which have arisen in the ordinary course of business. In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on the Company s results of operations, financial condition or cash flows.

The Company leases certain of its facilities and machinery and equipment under capital and operating leases expiring in various years through 2010 and thereafter. Generally, the facility leases require the Company to pay maintenance, insurance and real estate taxes. Rental expense under operating leases totaled \$7,439,000, \$8,344,000 and \$7,253,000, for the years ended December 31, 2005, 2004 and 2003, respectively.

Minimum lease payments under operating leases are as follows:

	Operating Leases	Capital Leases
Year ending December 31,		
2006	\$ 5,760	\$ 562
2007	4,364	684
2008	2,674	273
2009	1,862	
2010	1,240	
Thereafter	4,134	
Total minimum lease payments	\$20,034	1,519
Less: amounts representing interest		114
Present value of minimum lease payments		1,405
Less: current portion		491
Long-term portion		\$ 914

As of December 31, 2005, the Company has entered into non-cancelable purchase commitments for certain inventory components and other equipment and services used in its normal operations. The majority of these purchase

commitments covered by these arrangements are for periods of less than one year and aggregate to approximately \$69,835,000. Additionally, the Company has engaged a third party to provide certain computer equipment, IT network services and IT support. This contract is for a period of approximately six years beginning in September 2004 and has a significant penalty for early termination. The

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obligation of approximately \$26,000,000, excluding capital lease and interest payments of \$1,519,000, will be paid over the term of the arrangement. Average annual payments are expected to be approximately \$5,200,000.

To the extent permitted by Massachusetts law, the Company's Restated Articles of Organization, as amended, require the Company to indemnify any of its current or former officers or directors or any person who has served or is serving in any capacity with respect to any of the Company's employee benefit plans. Because no claim for indemnification has been pursued by any person covered by the relevant provisions of the Company's Restated Articles of Organization, the Company believes that the estimated exposure for these indemnification obligations is currently minimal. Accordingly, the Company has no liabilities recorded for these requirements as of December 31, 2005.

The Company also enters into agreements in the ordinary course of business which include indemnification provisions. Pursuant to these agreements, the Company indemnifies, holds harmless and agrees to reimburse the indemnified party, generally its customers, for losses suffered or incurred by the indemnified party in connection with certain patent or other intellectual property infringement claims, and, in some instances, other claims, by any third party with respect to the Company's products. The term of these indemnification obligations is generally perpetual after execution of the agreement. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in some instances, unlimited. The Company has never incurred costs to defend lawsuits or settle claims related to these indemnification obligations. As a result, the Company believes the estimated fair value of these obligations is minimal. Accordingly, the Company has no liabilities recorded for these obligations as of December 31, 2005.

When, as part of an acquisition, the Company acquires all of the stock or all of the assets and liabilities of another company, the Company assumes liability for certain events or occurrences that took place prior to the date of acquisition. The maximum potential amount of future payments the Company could be required to make for such obligations is undeterminable at this time. Other than obligations recorded as liabilities at the time of the acquisitions, historically the Company has not made significant payments for these indemnifications. Accordingly, no liabilities have been recorded for these obligations.

In conjunction with certain asset sales, the Company may provide routine indemnifications whose terms range in duration and often are not explicitly defined. Where appropriate, an obligation for such indemnifications is recorded as a liability. Because the amounts of liability under these types of indemnifications are not explicitly stated, the overall maximum amount of the obligation under such indemnifications cannot be reasonably estimated. Other than obligations recorded as liabilities at the time of the asset sale, historically the Company has not made significant payments for these indemnifications.

**8) Stockholders' Equity****Issuance of Common Stock**

On January 21, 2004, the Company issued 1,142,857 shares of its common stock at \$26.25 per share through a public offering. Proceeds of the offering, net of underwriters discount and offering expenses, were \$28,251,000. On January 23, 2004, the underwriters exercised their over-allotment option and therefore, the Company issued an additional 171,429 shares of its common stock, which generated net proceeds of \$4,298,000.

**Stock Purchase Plans**

The Company's Third Amended and Restated 1999 Employee Stock Purchase Plan (the "Purchase Plan") authorizes the issuance of up to an aggregate of 1,250,000 shares of Common Stock to participating

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employees. Offerings under the Purchase Plan commence on June 1 and December 1 and terminate, respectively, on November 30 and May 31. Under the Purchase Plan, eligible employees may purchase shares of Common Stock through payroll deductions of up to 10% of their compensation. The price at which an employee's option is exercised is the lower of (1) 85% of the closing price of the Common Stock on the Nasdaq National Market on the day that each offering commences or (2) 85% of the closing price on the day that each offering terminates. During 2005 and 2004 the Company issued 113,525 and 100,867 shares, respectively, of Common Stock to employees who participated in the Purchase Plan at exercise prices of \$14.19 and \$14.27 in 2005 and \$19.86 and \$14.44 in 2004. As of December 31, 2005 there were 592,087 shares reserved for future issuance under the Purchase Plan.

The Company's Second Amended and Restated International Employee Stock Purchase Plan (the Foreign Purchase Plan) authorizes the issuance of up to an aggregate of 250,000 shares of Common Stock to participating employees. Offerings under the Foreign Purchase Plan commence on June 1 and December 1 and terminate, respectively, on November 30 and May 31. Under the Foreign Purchase Plan, eligible employees may purchase shares of Common Stock through payroll deductions of up to 10% of their compensation. The price at which an employee's option is exercised is the lower of (1) 85% of the closing price of the Common Stock on the Nasdaq National Market on the day that each offering commences or (2) 85% of the closing price on the day that each offering terminates. During 2005 and 2004, the Company issued 24,933 and 21,786 shares of Common Stock to employees who participated in the Foreign Purchase Plan at exercise prices of \$14.19 and \$14.27 and \$19.86 and \$14.44 per share, respectively. As of December 31, 2005 there were 138,456 shares reserved for future issuance under the Foreign Purchase Plan.

**Stock Option Plans**

The Company's 2004 Stock Incentive Plan (the 2004 Plan) was adopted by the board of directors on March 4, 2004 and approved by the stockholders on May 13, 2004. As of December 31, 2005, there were 2,691,955 shares authorized for issuance under the 2004 Plan, which amount shall increase each year by an amount equal to 5% of the total outstanding shares of the Company's common stock outstanding on January 1 of such year, provided that the maximum aggregate number of shares of common stock which may be issued under the 2004 Plan is 15,000,000 shares (subject to adjustment for certain changes in MKS' capitalization). The Company may grant options, restricted stock awards, stock appreciation rights and other stock-based awards to employees, officers, directors, consultants and advisors under the 2004 Plan. As of December 31, 2005 there were 2,599,955 shares available for future grant under the 2004 Plan.

The Company's Second Restated 1995 Stock Incentive Plan (the 1995 Plan) authorized, as of December 31, 2005, 15,000,000 shares of common stock for issuance thereunder. Pursuant to the terms of the 1995 Plan, the number of shares available for issuance under the 1995 Plan was increased annually by an amount equal to 5% of the total outstanding shares of the Company's common stock outstanding on January 1 of such year, provided that the maximum aggregate number of common stock which could be issued under the 1995 Plan was 15,000,000 shares (subject to adjustment for certain changes in MKS' capitalization). Pursuant to the 1995 Plan, the Company could grant options, restricted stock or other stock-based awards to employees, officers, directors, consultants and advisors. The 1995 Plan expired in November 2005 and no further awards may be granted under the 1995 Plan, although there are still outstanding options available for exercise under this plan.

The Company's 1997 Director Stock Plan (the 1997 Director Plan) provides for (i) the initial grant of options to purchase 20,000 shares of common stock to each person who first becomes an outside director and (ii) annual grants of options to purchase 12,000 shares of common stock on the date of the annual meeting of stockholders. In December 2004, the board of directors amended the 1997 Director Plan to allow for all options granted on or after May 17, 2000 to be exercisable within the three year period from the date of the

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director's termination as director. On March 4, 2004, the board of directors approved, and on May 13, 2004, the stockholders approved, an increase in the number of shares available for issuance under the 1997 Director Plan from 300,000 shares to 750,000 shares. As of December 31, 2005 there were 415,500 shares available for future grant under the 1997 Director Plan.

On January 7, 2005, the Company accelerated the vesting of outstanding options with an exercise price of \$23.00 or greater. As a result of this action, options to purchase approximately 1.6 million shares became exercisable on January 7, 2005. No compensation expense was recorded in 2005 related to this action as these options had no intrinsic value on January 7, 2005. Under the recently issued SFAS 123R, the Company will be required to apply the expense recognition provisions under SFAS 123R beginning in the first quarter of 2006. The reason that the Company accelerated the vesting of the identified stock options was to reduce the Company's compensation charge in periods subsequent to the adoption of SFAS 123R.

The Company has granted options to employees under the 2004 Plan, 1995 Plan and the 1993 Stock Option Plan and to directors under the 1997 Director Plan and the 1996 Director Stock Option Plan (collectively, the Plans). The Plans are administered by the compensation committee of the Company's board of directors.

At December 31, 2005, 3,015,455 shares of the Company's common stock were available for future grants under the Plans. Stock options are granted at an exercise price equal to 100% of the fair value of the Company's common stock. Generally, stock options granted to employees under the Plans between 2001 and 2005 vest 25% after one year and 6.25% per quarter thereafter and expire 10 years after the grant date. Generally, stock options granted under the Plans prior to 2000 vest 20% after one year and 5% per quarter thereafter, and expire 10 years after the grant date. Generally, options granted to directors vest at the earliest of (1) the next annual meeting, (2) 13 months from date of grant, or (3) the effective date of an acquisition.

The following table presents the activity for options under the Plans:

	<b>Year Ended December 31,</b>					
	<b>2005</b>		<b>2004</b>		<b>2003</b>	
	<b>Options</b>	<b>Weighted Average Exercise Price</b>	<b>Options</b>	<b>Weighted Average Exercise Price</b>	<b>Options</b>	<b>Weighted Average Exercise Price</b>
Outstanding beginning of period	10,023,717	\$20.25	8,897,899	\$20.69	8,284,693	\$19.33
Granted	316,500	\$16.93	2,227,830	\$17.87	1,603,552	\$24.64
Exercised	(382,211)	\$10.70	(362,140)	\$10.66	(565,134)	\$11.52
Forfeited or Expired	(498,735)	\$23.34	(739,872)	\$23.30	(425,212)	\$21.27
Outstanding end of period	9,459,271	\$20.36	10,023,717	\$20.25	8,897,899	\$20.69
Exercisable at end of period	7,750,739	\$21.45	5,763,521	\$20.42	4,880,231	\$19.73





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The following table summarizes information with respect to options outstanding and exercisable under the Plans at December 31, 2005:

	Options Outstanding			Options Exercisable	
	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (In Years)	Number of Shares	Weighted Average Exercise Price
\$4.43 - \$8.92	583,412	\$ 5.81	1.91	583,412	\$ 5.81
\$10.86 - \$19.00	4,216,259	\$15.84	7.24	2,540,950	\$16.20
\$19.18 - \$29.50	3,701,450	\$24.77	6.54	3,668,227	\$24.80
\$29.93 - \$61.50	958,150	\$32.05	6.14	958,150	\$32.05
	9,459,271	\$20.36	6.53	7,750,739	\$21.45

**Accumulated Other Comprehensive Income**

The balance of accumulated other comprehensive income (loss) was comprised of the following:

	Cumulative Translation Adjustments	Financial Instruments Designated as Cash Flow Hedges	Unrealized Gain (Loss) on Investments	Accumulated Other Comprehensive Income (Loss)
Balance at December 31, 2003	\$10,043	\$(1,950)	\$ (44)	\$ 8,049
Foreign currency translation adjustment, net of taxes of \$0	3,662			3,662
Changes in value of financial instruments designated as cash flow hedges, net of taxes of \$(244)		847		847
Change in unrealized gain (loss) on investments, net of tax of \$(36)			126	126
Balance at December 31, 2004	13,705	(1,103)	82	12,684
Foreign currency translation adjustment, net of taxes of \$0	(7,411)			(7,411)
Changes in value of financial instruments designated as cash flow hedges, net of taxes of \$(1,019)		1,697		1,697
Change in unrealized gain (loss) on investments, net of tax benefit of \$21			(34)	(34)

Balance at December 31, 2005	\$ 6,294	\$ 594	\$ 48	\$ 6,936
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**9) Income Taxes**

A reconciliation of the Company's 2005, 2004 and 2003 effective tax rate to the U.S. federal statutory rate follows:

	<b>2005</b>	<b>2004</b>	<b>2003</b>
U.S. Federal income tax statutory rate	35.0%	35.0%	(35.0)%
Federal and state tax credits	(4.7)	(3.5)	(2.6)
State income taxes, net of federal benefit	1.7	0.7	2.3
Effect of foreign operations taxed at various rates	(5.3)	(6.9)	(11.1)
Foreign sales corporation and qualified production activity tax benefit	(2.0)	(0.5)	(0.6)
Deferred tax asset valuation allowance	1.3	(30.7)	67.3
Other	0.5	2.0	(1.0)
	26.5%	(3.9)%	19.3%

The components of income before income taxes and the related provision (benefit) for income taxes consist of the following:

	<b>Year Ended December 31,</b>		
	<b>2005</b>	<b>2004</b>	<b>2003</b>
<b>Income (loss) before income taxes:</b>			
United States	\$ 14,872	\$ 37,098	\$(23,737)
Foreign	32,135	30,130	10,003
	47,007	67,228	(13,734)
<b>Current taxes:</b>			
United States Federal	1,958	841	
State	1,259	716	477
Foreign	8,922	6,061	1,458
	12,139	7,618	1,935
<b>Deferred taxes:</b>			
United States Federal	856	(9,141)	
State and Foreign	(553)	(1,088)	716
	303	(10,229)	716
Provision (benefit) for income taxes	\$ 12,442	\$ (2,611)	\$ 2,651



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At December 31, 2005 and 2004 the significant components of the deferred tax assets and deferred tax liabilities were as follows:

	2005	2004
<b>Deferred tax assets:</b>		
Net operating losses and credits	\$ 5,709	\$ 11,563
Inventory and warranty reserves	12,447	11,304
Accounts receivable and other accruals	3,938	4,018
Depreciation and amortization	5,665	5,442
Other	2,077	2,458
<b>Total deferred tax assets</b>	<b>29,836</b>	<b>34,785</b>
<b>Deferred tax liabilities:</b>		
Acquired intangible assets	(13,192)	(17,066)
Other	(135)	(536)
<b>Total deferred tax liabilities</b>	<b>(13,327)</b>	<b>(17,602)</b>
Valuation allowance	(3,497)	(2,870)
<b>Net deferred tax assets</b>	<b>\$ 13,012</b>	<b>\$ 14,313</b>

At December 31, 2005, the Company had federal net operating loss carryforwards of \$836,000, the utilization of which are limited by the change in ownership rules under Section 382 of the Internal Revenue Code ( Section 382 ). The Company also had federal general business, foreign tax and minimum tax credit carryforwards ( credit carryforwards ) of \$576,000, \$289,000 and \$1,053,000, respectively. The federal net operating losses, foreign tax and general business credit carryforwards begin to expire in 2021, 2013 and 2025, respectively. Under the provisions of Section 382, certain substantial changes in the Company s ownership may result in a limitation on the amount of net operating loss and credit carryforwards that can be used in future periods.

Although the Company believes that its tax positions are consistent with applicable U.S. federal and state and international laws, certain tax reserves are maintained at December 31, 2005 should these positions be challenged by the applicable tax authority and additional tax assessed on audit. During 2005, the Internal Revenue Service ( IRS ) completed its examination of the Company s tax returns for the tax years 1999 through 2002. As a result of this examination, during the year ended December 31, 2005, the Company recorded a reduction in this reserve of \$1,621,000, a benefit to income tax expense of \$1,901,000 and a \$576,000 reduction of goodwill related to a previous acquisition.

The change in the valuation allowance of \$627,000 for the year ended December 31, 2005 resulted from an increase in state tax credit carryovers for which the Company determined that it is more likely than not that they will not be realized.

The Company incurred significant operating losses in fiscal 2003, 2002 and 2001. At December 31, 2003 a \$22,293,000 valuation allowance was maintained against the Company s net deferred tax assets. This valuation allowance was maintained because the Company determined that it was more likely than not that all of the deferred tax assets may not be realized.

During the year ended December 31, 2004, after examining a number of factors, including historical results and near term earnings projections, the Company determined that it was more likely than not that it would realize all of its net deferred tax assets, except for those related to certain state tax credits.

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As a result of this analysis the Company reduced its valuation allowance by \$20,063,000 at December 31, 2004 resulting in a net deferred tax asset of \$14,313,000. Of the total tax benefit from the reversal of the valuation allowance, \$3,850,000 was recorded as a reduction of goodwill and \$5,271,000 was recorded to additional paid-in capital for the tax benefit from the exercise of stock options during both the current and prior years. The remaining valuation allowance of \$2,870,000 at December 31, 2005 relates to state tax credits for which it is more likely than not that they will not be realized.

Beginning in 2001, we were granted a tax holiday for our manufacturing operations in Israel. This tax holiday resulted in income tax savings of \$1,190,000, \$2,547,000 and \$247,000 for the years ended December 31, 2005, 2004 and 2003, respectively. The tax holiday period expires at the end of 2010.

On October 22, 2004, the American Jobs Creation Act of 2004 (the Act) was signed into law. The Act contains a provision allowing U.S. multinational companies a one-time incentive to repatriate foreign earnings at an effective tax rate of 5.25%. During 2005, the Company conducted an extensive study of the new provision and concluded that no opportunities existed from which the Company could benefit from repatriation of its undistributed foreign earnings. Through December 31, 2005, the Company has not provided deferred income taxes on the undistributed earnings of its foreign subsidiaries because such earnings were intended to be permanently reinvested outside the U.S. Determination of the potential deferred income tax liability on these undistributed earnings is not practicable because such liability, if any, is dependent on circumstances existing if and when remittance occurs. At December 31, 2005 the Company had \$80,173,000 of undistributed earnings in its foreign subsidiaries.

**10) Employee Benefit Plans**

The Company has a 401(k) profit-sharing plan for U.S. employees meeting certain requirements in which eligible employees may contribute between 1% and 20% of their annual compensation to this plan, and, with respect to employees who are age 50 and older, certain specified additional amounts, limited by an annual maximum amount determined by the Internal Revenue Service. The Company, at its discretion, may provide a matching contribution which will generally match up to the first 2% of each participant's compensation, plus 25% of the next 4% of compensation. At the discretion of the board of directors, the Company may also make additional contributions for the benefit of all eligible employees. The Company's contributions were \$1,655,000, \$1,685,000 and \$1,503,000 for 2005, 2004 and 2003, respectively.

The Company maintains a bonus plan which provides cash awards to key employees, at the discretion of the compensation committee of the board of directors, based upon operating results and employee performance. The bonus expense was \$2,402,000 in 2005, \$4,617,000 in 2004 and was immaterial in 2003.

The Company provides supplemental retirement benefits for certain of its officers and executive officers. This obligation was not material at December 31, 2005 and at December 31, 2004.

**11) Segment and Geographical Information and Significant Customer**

The Company operates in one segment for the development, manufacturing, sales and servicing of products that measure, control, power and monitor critical parameters of advanced manufacturing processes. The Company's chief decision-maker reviews consolidated operating results to make decisions about allocating resources and assessing performance for the entire Company.

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Information about the Company's operations in different geographic regions is presented in the tables below. Net sales to unaffiliated customers are based on the location in which the sale originated. Transfers between geographic areas are at negotiated transfer prices and have been eliminated from consolidated net sales.

	<b>Year Ended December 31,</b>		
	<b>2005</b>	<b>2004</b>	<b>2003</b>
<b>Geographic net sales</b>			
United States	\$320,816	\$367,233	\$199,118
Japan	79,820	85,571	59,664
Europe	52,687	46,868	43,339
Asia	55,971	55,408	35,170
	<b>\$509,294</b>	<b>\$555,080</b>	<b>\$337,291</b>

	<b>December 31,</b>	
	<b>2005</b>	<b>2004</b>
<b>Long-lived assets</b>		
United States	\$66,588	\$68,719
Japan	5,679	6,202
Europe	4,311	5,544
Asia	4,493	4,024
	<b>\$81,071</b>	<b>\$84,489</b>

The Company groups its products into three product groups. Net sales for these product groups are as follows:

	<b>December 31,</b>		
	<b>2005</b>	<b>2004</b>	<b>2003</b>
<b>Instruments and Control Systems</b>	\$233,279	\$253,422	\$163,410
<b>Power and Reactive Gas Products</b>	215,858	234,230	132,263
<b>Vacuum Products</b>	60,157	67,428	41,618
	<b>\$509,294</b>	<b>\$555,080</b>	<b>\$337,291</b>

The Company had one customer comprising 18%, 20% and 18% of net sales for the years ended December 31, 2005, 2004 and 2003, respectively. During the years ended December 31, 2005, 2004 and 2003, the Company



estimates that approximately 71%, 74% and 69% of its net sales, respectively, were to semiconductor capital equipment manufacturers and semiconductor device manufacturers.

**12) Acquisitions**

On September 30, 2003, the Company acquired Wenzel Instruments, a privately held developer of solid state MicroElectroMechanical System (MEMS) based vacuum sensor technology for advanced manufacturing processes. This acquisition expands our vacuum gauge product line offering to help meet current demand for process control sensors with higher accuracy and a faster response in a smaller footprint. The purchase price was \$2,150,000 and was accounted for under the purchase method of accounting. The purchase price was primarily allocated to the assets acquired based upon their estimated fair values, with the full purchase price being allocated to intangible assets as completed technology. This intangible asset is being amortized over its

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estimated useful life of 5 years. The results of operations are included in the Company's consolidated statement of income as of and since the date of the purchase.

Also, see Note 19) Subsequent Events Acquisitions.

**13) Sale of Assets**

In August 2001, the Company sold certain assets for proceeds of approximately \$9,000,000, consisting of approximately \$4,700,000 in cash, \$3,900,000 in a note receivable and \$200,000 of warrants. The note receivable had an annual interest rate of 9.0% and was scheduled to mature on August 7, 2004. The loss on the transaction was \$1,246,000 before taxes. During 2002, due to the downturn in the semiconductor industry and its result on the acquirer's operations, and the acquirer's inability to raise financing, the Company considered the value of the note and warrants to be impaired. Accordingly, during 2002, MKS recorded a charge of \$4,121,000 to other expense for the Company's estimate of the impairment on the note receivable and warrants. During 2004, the Company received \$5,042,000 related to the collection of the note receivable and accrued interest and the cancellation of the warrants. This amount was recorded as a gain and included in other income.

**14) Restructuring and Asset Impairment Charges**

As a result of the Company's various acquisitions from 2000 through 2002 and the downturn in the semiconductor capital equipment market which began in 2000, the Company had redundant activities and excess manufacturing capacity and office space. Therefore in 2002, and continuing through the first quarter of 2004, the Company implemented restructuring activities to rationalize manufacturing operations and reduce operating expenses. As a result of these actions, the Company recorded restructuring and asset impairment charges of \$2,726,000 in 2002. The charges consisted of \$631,000 of severance costs related to a workforce reduction, \$1,228,000 related to consolidation of leased facilities, and an asset impairment charge of \$867,000 primarily related to the impairment of an intangible asset from the discontinuance of certain product development activities. The fair value of the impaired intangible asset was determined using the expected present value of future cash flows. The workforce reduction was across all functional groups and consisted of 225 employees.

During 2003, the Company continued the consolidation it initiated in 2002 related to various acquisitions, and recorded restructuring, asset impairment and other charges of \$1,593,000. The charges in 2003 consisted of \$356,000 of severance costs related to workforce reductions, \$1,145,000 of lease cost, professional fees and other costs related to facility consolidations and an asset impairment charge of \$92,000. The workforce reduction was across all functional groups.

During 2004, the Company completed its enacted restructuring activities related to the consolidation of operations from acquired companies when it exited an additional leased facility and recorded a restructuring charge of \$437,000.

During 2005, the Company initiated a restructuring plan related to its Berlin, Germany location. This consolidation of activities included the reduction of 16 employees. The total restructuring charge related to this consolidation was \$454,000, which consisted of \$251,000 related to the repayment of a government grant and \$203,000 in severance costs.

Also during 2005, the Company terminated a lease related to a facility previously exited. Prior to the lease being terminated, the Company had an accrual of approximately \$784,000 related to this facility. After making the lease settlement payment and payments for other contractual obligations, the remaining balance of approximately \$278,000 was reversed as there was no remaining obligation.

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The following table sets forth the components of the restructuring activities initiated during 2005, 2004 and 2003, and the related accruals remaining at December 31, 2005:

	<b>Workforce Reductions</b>	<b>Other</b>	<b>Facility Consolidations</b>	<b>Total</b>
Reserve balance as of December 31, 2002	\$ 326	\$	\$1,164	\$ 1,490
Restructuring provision in 2003	356	92	1,145	1,593
Charges utilized in 2003	(483)	(92)	(478)	(1,053)
Reserve balance as of December 31, 2003	199		1,831	2,030
Restructuring provision in 2004			437	437
Charges utilized in 2004	(110)		(736)	(846)
Reserve balance as of December 31, 2004	89		1,532	1,621
Restructuring provision in 2005	199	251	(365)	85
Charges utilized in 2005	(204)		(852)	(1,056)
Reserve balance as of December 31, 2005	\$ 84	\$251	\$ 315	\$ 650

The remaining facilities consolidation charges will be paid over the remaining lease term, which ends in 2007. The accrual for severance costs and lease payments are recorded in Other accrued expenses and Other liabilities in the consolidated balance sheets.

**15) Goodwill and Intangible Assets**

The Company is required to perform an annual impairment test of its goodwill under the provisions of SFAS 142. SFAS 142 requires that companies identify and assess goodwill at the reporting unit level. Reporting units are defined as operating segments or one level below an operating segment, referred to as a component. The Company has determined that its reporting units are components of its operating segment. The Company allocates goodwill to reporting units at the time of acquisition and bases that allocation on which reporting units will benefit from the acquired assets and liabilities. The fair value of each reporting unit with goodwill is compared to its recorded book value. An excess of book value over fair value indicates that an impairment of goodwill exists. Fair value is based on a discounted cash flow analysis of expectations of future earnings for each of the reporting units with goodwill. The Company completed its annual impairment test for 2005 and 2004 and concluded that no impairment of goodwill existed as of October 31, 2005 or October 31, 2004, the annual goodwill measurement dates for 2005 and 2004, respectively.

The changes in the carrying amount of goodwill during the years ended December 31, 2005 and 2004 were as follows:

	<b>Year Ended</b>	
	<b>December 31, 2005</b>	<b>December 31, 2004</b>
Balance, beginning of year	\$255,740	\$259,924
Reduction for reversal of tax valuation allowance		(3,850)
	(497)	(334)

IRS settlement adjustment and foreign currency translation

Balance, end of year	\$255,243	\$255,740
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Components of the Company's acquired intangible assets are comprised of the following:

	<b>December 31, 2005</b>		<b>December 31, 2004</b>	
	<b>Gross Carrying Amount</b>	<b>Accumulated Amortization</b>	<b>Gross Carrying Amount</b>	<b>Accumulated Amortization</b>
Completed technology	\$72,421	\$(51,520)	\$72,738	\$(39,969)
Customer relationships	6,640	(4,481)	6,640	(3,581)
Patents, trademarks, tradenames and other	12,395	(8,032)	12,395	(6,619)
	\$91,456	\$(64,033)	\$91,773	\$(50,169)

Aggregate amortization expense related to acquired intangibles for the years ended December 31, 2005, 2004 and 2003 were \$13,864,000, \$14,764,000 and \$14,692,000, respectively. Estimated amortization expense related to acquired intangibles for each of the five succeeding years is as follows:

<b>Year</b>	<b>Amount</b>
2006	\$11,763
2007	11,129
2008	3,213
2009	1,205
2010	112

**16) Product Warranties**

The Company provides for the estimated costs to fulfill customer warranty obligations upon the recognition of the related revenue. While the Company engages in extensive product quality programs and processes, including actively monitoring and evaluating the quality of its component suppliers, the Company's warranty obligation is affected by product failure rates, utilization levels, material usage, and supplier warranties on parts delivered to the Company. Should actual product failure rates, utilization levels, material usage, or supplier warranties on parts differ from the Company's estimates, revisions to the estimated warranty liability would be required.

Product warranty activity for the years ended December 31, were as follows:

	<b>2005</b>	<b>2004</b>
Balance at beginning of year	\$ 7,601	\$ 5,804
Provisions for product warranties	8,392	8,256
Direct charges to the warranty liability	(8,227)	(6,459)
Balance at end of year	\$ 7,766	\$ 7,601



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**17) Other Accrued Expenses**

Other accrued expenses consist of:

	<b>December 31</b>	
	<b>2005</b>	<b>2004</b>
Product warranties	\$ 7,766	\$ 7,601
Accrued restructuring costs	550	625
Other	10,783	13,212
	<b>\$19,099</b>	<b>\$21,438</b>

**18) Related Party Transactions**

The Vice President and General Manager of the Company's Vacuum Products Group is the general partner of Aspen Industrial Park Partnership, LLLP (Aspen). The Company leases from Aspen certain facilities occupied by the Company's Vacuum Products Group in Boulder, Colorado. The Company paid Aspen \$835,000, \$1,111,000 and \$1,106,000 in 2005, 2004 and 2003, respectively, to lease such facilities.

Emerson Electric Co. (Emerson) was the beneficial owner of approximately 18% of the outstanding shares of the Company's common stock at December 31, 2005 and a representative of Emerson is a member of the Company's board of directors. During 2005, 2004 and 2003, the Company purchased materials and administrative services from Emerson and its subsidiaries totaling approximately \$800,000, \$1,854,000 and \$1,403,000, respectively. In addition, in accordance with the terms of a Shareholder's Agreement between the Company and Emerson, the Company paid the expenses of Emerson relating to the registration of shares in connection with a public offering of Common Stock that closed in January 2004. Such expenses were \$176,000.

In 2003, the Company recorded a gain of \$927,000 from the early repayment of premiums related to a split dollar life insurance policy covering the Chairman of the Company. This gain was recorded in other income in the consolidated statement of operations.

**19) Subsequent Events Acquisitions**

On January 3, 2006, the Company completed its acquisition of Ion Systems, Inc, a leading provider of electrostatic management solutions located in Alameda, California, pursuant to an Agreement and Plan of Merger dated November 25, 2005. Ion Systems' ionization technology controls electrostatic charge to reduce process contamination and improve yields, which complements the Company's process monitoring and control technologies. The aggregate purchase price consisted of \$73,129,000 in cash and \$774,000 in acquisition related costs.

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The following table summarizes the preliminary (unaudited) estimated fair value of the assets acquired and liabilities assumed at the date of the acquisition. The Company is in the process of finalizing the purchase price allocation and, accordingly, the allocation of the purchase price is subject to adjustment:

Current assets	\$ 14,728
Intangible assets	26,700
Other assets	3,377
Goodwill	51,606
<b>Total assets acquired</b>	<b>96,411</b>
Current liabilities	(12,777)
Deferred tax liability	(9,731)
<b>Total liabilities assumed</b>	<b>(22,508)</b>
<b>Total purchase price including acquisition costs</b>	<b>\$ 73,903</b>

Of the \$26,700,000 of acquired intangible assets, the following table reflects the preliminary allocation of the acquired intangible assets and related estimates of useful lives:

Customer relationships	\$ 12,600	8-year useful life
Current developed technology	10,300	6-year useful life
Tradenames	2,400	8-year useful life
Order backlog	1,000	Less than 6 months
In-process research and development	400	
	<b>\$ 26,700</b>	

On January 3, 2006, the Company completed its acquisition of Umetrics, AB, a leader in multivariate data analysis and modeling software located in Umea, Sweden, pursuant to a Sale and Purchase Agreement dated December 15, 2005. Umetrics' multivariate data analysis and modeling software converts process data into useable information for yield improvement when linked with the Company's open and modular platform of process sensors and data collection, integration, data storage, and visualization capabilities. The purchase price consisted of \$30,082,000 cash and \$332,000 in acquisition related costs.

The following table summarizes the preliminary (unaudited) estimated fair value of the assets acquired and liabilities assumed at the date of the acquisition. The Company is in the process of finalizing the purchase price allocation and, accordingly, the allocation of the purchase price is subject to adjustment:

Current assets	\$ 4,243
Intangible assets	7,450
Other assets	400
Goodwill	22,720
<b>Total assets acquired</b>	<b>34,813</b>



Current liabilities	(2,425)
Deferred tax liability	(1,974)
Total liabilities assumed	(4,399)
Total purchase price including acquisition costs	\$30,414

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**MKS INSTRUMENTS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)**  
**(Tables in thousands, except share and per share data)**

Of the \$7,450,000 of acquired intangible assets, the following table reflects the preliminary allocation of the acquired intangible assets and related estimates of useful lives:

Customer relationships	\$ 2,100	8-year useful life
Current developed technology	4,150	4-6-year useful life
Tradenames	800	8-year useful life
In-process research and development	400	
	<b>\$ 7,450</b>	

Ion's ionization technology and Umetrics' multivariate data analysis technology both complement our process control and monitoring technologies and will support the Company's mission to improve process performance and productivity. The results of these acquisitions will be included in the Company's consolidated operations beginning in January 2006.

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**MKS INSTRUMENTS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)**  
**(Tables in thousands, except share and per share data)**  
**MKS INSTRUMENTS, INC.**  
**SUPPLEMENTAL FINANCIAL DATA**

	<b>Quarter Ended</b>			
	<b>March 31</b>	<b>June 30</b>	<b>Sept. 30</b>	<b>Dec. 31</b>
<b>(Table in thousands, except per share data)</b>				
<b>(Unaudited)</b>				
<b>2005</b>				
<b>Statement of Operations Data</b>				
Net sales	\$ 127,407	\$ 130,193	\$ 122,520	\$ 129,174
Gross profit	49,362	51,786	47,657	51,629
Income from operations(1)	6,820	10,364	8,528	14,836
Net income(1,2)	5,458	9,778	7,224	12,105
Net income per share:				
Basic	\$ 0.10	\$ 0.18	\$ 0.13	\$ 0.22
Diluted	\$ 0.10	\$ 0.18	\$ 0.13	\$ 0.22
<b>2004</b>				
<b>Statement of Operations Data</b>				
Net sales	\$ 132,985	\$ 151,585	\$ 139,651	\$ 130,859
Gross profit	54,229	61,393	55,606	48,143
Income from operations	15,611	20,421	14,745	9,136
Net income(3)	12,706	20,868	12,150	24,115
Net income per share:				
Basic	\$ 0.24	\$ 0.39	\$ 0.23	\$ 0.45
Diluted	\$ 0.23	\$ 0.38	\$ 0.22	\$ 0.44

- (1) Income from operations and Net income for the quarter ended December 31, 2005, include income from a litigation settlement of \$3.0 million and \$1.9 million, net of tax, respectively.
- (2) Net income for the quarter ended June 30, 2005 includes a benefit of \$1.9 million in connection with closing an IRS audit.
- (3) Net income for the quarter ended June 30, 2004 includes a gain of \$5.0 million on the collection of a note receivable which had been written off in 2002. During the year ended December 31, 2003 and for the quarters ended March 31, June 30 and September 30, 2004, a valuation allowance against net deferred tax assets was maintained. Net income for those periods includes tax expense which is comprised primarily of state and foreign taxes. During the quarter ended December 31, 2004, the valuation allowance was reduced against the net deferred tax assets. Net income for the quarter ended December 31, 2004 includes a net benefit for income taxes of \$14.1 million, primarily from the benefit from the reduction of the valuation allowance.

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

None.

**Item 9A. Controls and Procedures**

**Effectiveness of Disclosure Controls and Procedures**

MKS management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2005. The term disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act ), means controls and other procedures of a

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company that are designed to ensure that information required to be disclosed by the company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2005, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

**Management's Annual Report on Internal Control over Financial Reporting**

The management of MKS is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the company's principal executive and principal financial officers and effected by the company's board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the company;

Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and

Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

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

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2005. In making this assessment, MKS' management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework.

Based on our assessment, management concluded that, as of December 31, 2005, our internal control over financial reporting was effective based on those criteria.

Our management's assessment of the effectiveness of our internal control over financial reporting as of December 31, 2005 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears on page 34.

**Changes in Internal Control over Financial Reporting**

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended December 31, 2005 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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**Item 9B. *Other Information***

None.

**PART III**

**Item 10. *Directors and Executive Officers of the Registrant***

The information required by this item is set forth under the captions Election of Directors, Executive Officers, Code of Ethics and Directors Audit Committee Financial Expert in our definitive proxy statement for the 2006 Annual Meeting of Stockholders, and is incorporated herein by reference.

We are also required under Item 405 of Regulation S-K to provide information concerning delinquent filers of reports under Section 16 of the Securities and Exchange Act of 1934, as amended. This information is listed under the caption Section 16(a) Beneficial Ownership Reporting Compliance in our definitive proxy statement for the 2006 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission no later than 120 days after the end of our fiscal year. This information is incorporated herein by reference.

**Item 11. *Executive Compensation***

The information required by this item is set forth under the caption Executive Officers Executive Compensation in our definitive proxy statement for the 2006 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission no later than 120 days after the end of our fiscal year. This information is incorporated herein by reference.

**Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

The information required by Item 403 of Regulation S-K is set forth under the caption Security Ownership of Certain Beneficial Owners and Management in our definitive proxy statement for the 2006 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission no later than 120 days after the end of our fiscal year. This information is incorporated herein by reference.

The information required by Item 201(d) of Regulation S-K is set forth under the caption Executive Officers Equity Compensation Plan Information in our definitive proxy statement for the 2006 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission no later than 120 days after the end of our fiscal year. This information is incorporated herein by reference.

**Item 13. *Certain Relationships and Related Transactions***

The information required by this item is set forth under the caption Executive Officers Certain Relationships and Related Transactions in our definitive proxy statement for the 2006 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission no later than 120 days after the end of our fiscal year. This information is incorporated herein by reference.

**Item 14. *Principal Accounting Fees and Services***

The information required by this item is set forth under the caption Independent Registered Public Accounting Firm in our definitive proxy statement for the 2006 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission no later than 120 days after the end of our fiscal year. This information is incorporated herein by reference.

**Table of Contents****PART IV****Item 15. Exhibits and Financial Statement Schedules**

(a) The following documents are filed as a part of this Report:

1. *Financial Statements*. The following Consolidated Financial Statements are included under Item 8 on this Annual Report on Form 10-K.

**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS****Financial Statements:**

<u>Report of Independent Registered Public Accounting Firm</u>	34
<u>Consolidated Balance Sheets at December 31, 2005 and 2004</u>	36
<u>Consolidated Statements of Operations for the years ended December 31, 2005, 2004 and 2003</u>	37
<u>Consolidated Statements of Stockholders' Equity for the years ended December 31, 2005, 2004 and 2003</u>	38
<u>Consolidated Statements of Cash Flows for the years ended December 31, 2005, 2004 and 2003</u>	39
<u>Notes to Consolidated Financial Statements</u>	40-64

2. *Financial Statement Schedules*

The following consolidated financial statement schedule is included in this Annual Report on Form 10-K of Item 15(d):

Schedule II Valuation and Qualifying Accounts

Schedules other than those listed above have been omitted since they are either not required or information is otherwise included.

3. *Exhibits*. The following exhibits are filed as part of this Annual Report on Form 10-K pursuant to Item 15(c).

<b>Exhibit No.</b>	<b>Title</b>
+3.1(1)	Restated Articles of Organization
+3.2(2)	Articles of Amendment, as filed with the Secretary of State of Massachusetts on May 18, 2001
+3.3(3)	Articles of Amendment, as filed with the Secretary of State of Massachusetts on May 16, 2002
+3.4(4)	Amended and Restated By-Laws
+4.1(4)	Specimen certificate representing the common stock
+10.1(5)*	Applied Science and Technology, Inc. 1993 Stock Option Plan, as amended
+10.2(6)*	Applied Science and Technology, Inc. 1994 Formula Stock Option Plan, as amended
+10.3(4)*	1996 Amended and Restated Director Stock Option Plan
+10.4(7)*	Second Amended and Restated 1997 Director Stock Option Plan, and forms of option agreements thereto

+10.5(8)*	2004 Stock Incentive Plan (the 2004 Plan )
+10.6(9)*	Form of Nonstatutory Stock Option Agreement to be granted under the 2004 Plan
+10.7(10)*	Form of Performance Stock Award under the 2004 Plan
+10.8(11)*	Form of Restricted Stock Award under the 2004 Plan
+10.9(12)*	Second Restated 1995 Stock Incentive Plan (the 1995 Plan )
+10.10(8)*	Form of Nonstatutory Stock Option Agreement under the 1995 Plan
+10.11(10)*	Form of Performance Stock Award under Registrant s 1995 Plan
+10.12(8)*	Third Restated 1999 Employee Stock Purchase Plan
+10.13(8)*	Second Restated International Employee Stock Purchase Plan
10.14*	2006 Management Incentive Bonus Program



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<b>Exhibit No.</b>	<b>Title</b>
+10.15(13)*	Employment Agreement dated as of July 1, 2005 between John Bertucci and the Registrant
+10.16(13)*	Employment Agreement dated July 1, 2005 between Leo Berlinghieri and the Registrant
+10.17(13)*	Employment Agreement dated as of July 1, 2005 between Ronald C. Weigner and the Registrant
+10.18(13)*	Amended and Restated Employment Agreement dated as of July 1, 2005 between William D. Stewart and the Registrant
+10.19(8)*	Employment Agreement dated as of July 30, 2004 between Robert Klimm and the Registrant
+10.20(8)*	Employment Agreement dated as of July 30, 2004 between John Smith and the Registrant
+10.21(14)*	Employment Agreement dated as of January 25, 2005 between Ron Hadar and the Registrant
+10.22(15)*	Employment Agreement dated as of April 25, 2005 between Gerald Colella and the Registrant
+10.23(16)*	Employment Agreement dated as of November 25, 2005 between Frank Schneider and the Registrant
+10.24(11)*	Summary of 2006 Compensatory Arrangements with Executive Officers
+10.25(7)*	Summary of Compensatory Arrangements with Non-Employee Directors
10.26	Lease Agreement dated as of June 25, 2005 by and between 5330 Sterling Drive LLC and the Registrant
10.27	Lease Agreement dated as of June 25, 2005 by and between Aspen Industrial Park Partnership LLLP and the Registrant
10.28	Optional Advanced Demand Grid Note dated August 3, 2004 in favor of HSBC Bank USA, and Amendment thereto dated as of July 29, 2005
+10.29(17)	Loan Agreement between ASTeX Realty Corp. and Citizens Bank of Massachusetts, dated March 6, 2000, along with Exhibit A thereto.
+10.30(18)	Shareholder Agreement dated as of January 31, 2002 among the Registrant and Emerson Electric Co.
+10.31(19)	Global Supply Agreement dated April 12, 2005 by and between the Registrant and Applied Materials, Inc.

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- +10.32(20) Settlement Agreement dated as of October 3, 2005 by and between the Registrant, Applied Science and Technology, Inc. and Advanced Energy, Inc.
- +10.33(21) Agreement and Plan of Merger dated as of November 25, 2005 among Ion Systems, Inc., the Registrant and TWCP, L.P.
- 21.1 Subsidiaries of the Registrant
- 23.1 Consent of PricewaterhouseCoopers LLP
- 31.1 Certification of Principal Executive Officer pursuant to Rule 13a-14(a)/Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended
- 31.2 Certification of Principal Financial Officer pursuant to Rule 13a-14(a)/Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended
- 32.1 Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

+ Previously filed

- \* Management contract or compensatory plan arrangement filed as an Exhibit to this Form 10-K pursuant to Item 15(c) of this report.
- (1) Incorporated by reference to the Registration Statement on Form S-4 (File No. 333-49738) filed with the Securities and Exchange Commission on November 13, 2000.
- (2) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2001.
- (3) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2002.
- (4) Incorporated by reference to the Registration Statement on Form S-1 filed with the Securities and Exchange Commission on January 28, 1999, as amended.

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- (5) Incorporated by reference to the Registration Statement on Form S-8 filed with the Securities and Exchange Commission on January 29, 2001.
- (6) Incorporated by reference to the Registration Statement on Form S-8 filed with the Securities and Exchange Commission on January 29, 2001.
- (7) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2004.
- (8) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2004.
- (9) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004.
- (10) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2005.
- (11) Incorporated by reference to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 17, 2006.
- (12) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2002.
- (13) Incorporated by reference to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 5, 2005.
- (14) Incorporated by reference to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on March 24, 2005.
- (15) Incorporated by reference to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on April 27, 2005.
- (16) Incorporated by reference to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 9, 2006.
- (17) Incorporated by reference to Applied Science and Technology, Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 25, 2000.
- (18) Incorporated by reference to the Registrant's Report on Form 8-K filed with the Securities and Exchange Commission on February 12, 2002.
- (19) Incorporated by reference to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on April 27, 2005.
- (20) Incorporated by reference to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on October 7, 2005.
- (21) Incorporated by reference to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on December 1, 2005.

(c) Exhibits

MKS hereby files as exhibits to our Annual Report on Form 10-K those exhibits listed in Item 15 above.

(d) Financial Statement Schedules

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**MKS INSTRUMENTS, INC.**  
**SCHEDULE II VALUATION AND QUALIFYING ACCOUNTS**

**Additions**

Description	Balance at Beginning of Year	Charged to Costs and Expenses	Charged to Other Accounts	Deductions & Write-offs	Balance at End of Year
(Dollars in thousands)					
Accounts receivable allowance					
Year ended December 31,					
2005	\$3,238	\$4,101	\$	\$4,161	\$3,178
2004	\$2,415	\$3,905	\$	\$3,082	\$3,238
2003	\$4,679	\$ 460	\$	\$2,724	\$2,415

**Table of Contents****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.

MKS Instruments, Inc.  
By: /s/ Leo Berlinghieri

Leo Berlinghieri  
*Chief Executive Officer, President and Director*  
*(Principal Executive Officer)*

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated.

<b>Signatures</b>	<b>Title</b>	<b>Date</b>
/s/ John R. Bertucci _____ John R. Bertucci	Executive Chairman of the Board of Directors	March 14, 2006
/s/ Leo Berlinghieri _____ Leo Berlinghieri	Chief Executive Officer, President and Director (Principal Executive Officer)	March 15, 2006
/s/ Ronald C. Weigner _____ Ronald C. Weigner	Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	March 13, 2006
/s/ Robert R. Anderson _____ Robert R. Anderson	Director	March 12, 2006
/s/ James G. Berges _____ James G. Berges	Director	March 13, 2006
/s/ Richard S. Chute _____ Richard S. Chute	Director	March 11, 2006
/s/ Hans-Jochen Kahl _____ Hans-Jochen Kahl	Director	March 13, 2005
/s/ Owen W. Robbins _____ Owen W. Robbins	Director	March 11, 2006

/s/ Louis P. Valente

Director

March 14, 2006

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Louis P. Valente