

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

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. 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

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.

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.

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.

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.

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,

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

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

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:

<u>Location</u>	<u>Sq. Ft.</u>	<u>Activity</u>	<u>Products Manufactured</u>	<u>Lease Expires</u>
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 & Development	Pressure Measurement and Control Products; Materials Delivery Products	(1)
Nogales, Mexico	36,700	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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<u>Location</u>	<u>Sq. Ft.</u>	<u>Activity</u>	<u>Products Manufactured</u>	<u>Lease Expires</u>
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.

Item 6. Selected Financial Data**Selected Consolidated Financial Data**

	Year Ended December 31				
	2005	2004	2003	2002	2001
	(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.

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.

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.

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:

	Year Ended December 31		
	2005	2004	2003
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

	Year Ended December 31,			% Change in 2005	% Change in 2004
	2005	2004	2003		
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:

	Workforce Reductions	Other	Facility Consolidations	Total
	(In thousands)			
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	<u>\$ 84</u>	<u>\$251</u>	<u>\$ 315</u>	<u>\$ 650</u>

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

	Year Ended December 31,			% Change in 2005	% Change in 2004
	2005	2004	2003		
Interest income, net	\$6.5	\$1.9	\$1.1	237.6	81.2

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

	Year Ended December 31,		
	2005	2004	2003
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

	Year Ended December 31,		
	2005	2004	2003
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.

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	Payment Due by Period				
	Total	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	<u>\$151,262</u>	<u>\$105,885</u>	<u>\$19,943</u>	<u>\$12,456</u>	<u>\$12,978</u>

- (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

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

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.

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

MKS INSTRUMENTS, INC.
CONSOLIDATED BALANCE SHEETS

	December 31	
	2005	2004
	(In thousands, except share data)	
ASSETS		
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	<u>499,147</u>	<u>439,885</u>
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	<u>\$863,740</u>	<u>\$828,677</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
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	<u>89,087</u>	<u>92,185</u>
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	—	—
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	<u>762,843</u>	<u>726,634</u>
Total liabilities and stockholders' equity	<u>\$863,740</u>	<u>\$828,677</u>

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

MKS INSTRUMENTS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31		
	2005	2004	2003
	(In thousands, except share data)		
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)	<u>\$ 34,565</u>	<u>\$ 69,839</u>	<u>\$ (16,385)</u>
Net income (loss) per share:			
Basic	<u>\$ 0.64</u>	<u>\$ 1.30</u>	<u>\$ (0.32)</u>
Diluted	<u>\$ 0.63</u>	<u>\$ 1.28</u>	<u>\$ (0.32)</u>
Weighted average common shares outstanding:			
Basic	<u>54,067</u>	<u>53,519</u>	<u>51,581</u>
Diluted	<u>54,633</u>	<u>54,656</u>	<u>51,581</u>

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

MKS INSTRUMENTS, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

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

	Common Stock		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Comprehensive Income (loss)	Total Stockholders' Equity
	Shares	Amount					
Balance at December 31, 2002	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						<u>(11,115)</u>	
Balance at December 31, 2003	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	69,839
Other comprehensive income:							
Changes in value of financial instruments designated as cash flow hedges and unrealized gain (loss) on investment					973	973	973
Foreign currency translation adjustment					3,662	3,662	3,662
Comprehensive income						<u>74,474</u>	
Balance at December 31, 2004	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	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	1,663
Foreign currency translation adjustment					(7,411)	(7,411)	(7,411)
Comprehensive income						<u>\$ 28,817</u>	
Balance at December 31, 2005	<u>54,397,267</u>	<u>\$113</u>	<u>\$639,152</u>	<u>\$116,642</u>	<u>\$ 6,936</u>		<u>\$762,843</u>

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

MKS INSTRUMENTS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31		
	2005	2004	2003
	(In thousands)		
Cash flows from operating activities:			
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	—
Net cash provided by (used in) operating activities	<u>64,160</u>	<u>66,399</u>	<u>(185)</u>
Cash flows from investing activities:			
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
Net cash provided by (used in) investing activities	<u>20,046</u>	<u>(44,243)</u>	<u>(21,351)</u>
Cash flows from financing activities:			
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	—
Net cash provided by financing activities	<u>921</u>	<u>39,718</u>	<u>5,290</u>
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	<u>\$ 220,573</u>	<u>\$ 138,389</u>	<u>\$ 74,660</u>
Supplemental disclosure of cash flow information:			
Cash paid during the period for:			
Interest	\$ 784	\$ 447	\$ 664
Income taxes	\$ 10,213	\$ 4,923	\$ 512
Non-cash financing activities:			
Equipment capital leases	\$ 1,666	\$ —	\$ —

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

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:

	For the Year Ended December 31,		
	2005	2004	2003
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

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)	<u>\$ 10,244</u>	<u>\$ 53,906</u>	<u>\$(38,205)</u>
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
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%

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

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

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:

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

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

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

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:

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

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5) Property, Plant and Equipment

Property, plant and equipment consist of the following:

	December 31,	
	2005	2004
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
	<u>199,432</u>	<u>195,528</u>
Less: accumulated depreciation and amortization	120,706	114,611
	<u>\$ 78,726</u>	<u>\$ 80,917</u>

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:

	December 31,	
	2005	2004
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	<u>\$5,238</u>	<u>\$6,667</u>

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:

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

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’ 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:

Year ending December 31,	Operating Leases	Capital Leases
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	<u>\$20,034</u>	1,519
Less: amounts representing interest		<u>114</u>
Present value of minimum lease payments		1,405
Less: current portion		<u>491</u>
Long-term portion		<u>\$ 914</u>

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:

	Year Ended December 31,					
	2005		2004		2003	
	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price
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	<u>9,459,271</u>	\$20.36	<u>10,023,717</u>	\$20.25	<u>8,897,899</u>	\$20.69
Exercisable at end of period	<u>7,750,739</u>	\$21.45	<u>5,763,521</u>	\$20.42	<u>4,880,231</u>	\$19.73

MKS INSTRUMENTS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
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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

MKS INSTRUMENTS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
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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:

	<u>2005</u>	<u>2004</u>	<u>2003</u>
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	<u>0.5</u>	<u>2.0</u>	<u>(1.0)</u>
	<u>26.5%</u>	<u>(3.9)%</u>	<u>19.3%</u>

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

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

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

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

	<u>2005</u>	<u>2004</u>
Deferred tax assets:		
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
Total deferred tax assets	<u>29,836</u>	<u>34,785</u>
Deferred tax liabilities:		
Acquired intangible assets	(13,192)	(17,066)
Other	(135)	(536)
Total deferred tax liabilities	<u>(13,327)</u>	<u>(17,602)</u>
Valuation allowance	(3,497)	(2,870)
Net deferred tax assets	<u>\$ 13,012</u>	<u>\$ 14,313</u>

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.

MKS INSTRUMENTS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Tables in thousands, except share and per share data)

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.

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

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.

	Year Ended December 31,		
	2005	2004	2003
Geographic net sales			
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
	<u>\$509,294</u>	<u>\$555,080</u>	<u>\$337,291</u>
		December 31,	
		2005	2004
Long — lived assets			
United States		\$66,588	\$68,719
Japan		5,679	6,202
Europe		4,311	5,544
Asia		4,493	4,024
		<u>\$81,071</u>	<u>\$84,489</u>

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

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

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

MKS INSTRUMENTS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Tables in thousands, except share and per share data)

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.

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

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:

	<u>Workforce Reductions</u>	<u>Other</u>	<u>Facility Consolidations</u>	<u>Total</u>
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	<u>\$ 84</u>	<u>\$251</u>	<u>\$ 315</u>	<u>\$ 650</u>

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:

	<u>Year Ended</u>	
	<u>December 31, 2005</u>	<u>December 31, 2004</u>
Balance, beginning of year	\$255,740	\$259,924
Reduction for reversal of tax valuation allowance	—	(3,850)
IRS settlement adjustment and foreign currency translation	(497)	(334)
Balance, end of year	<u>\$255,243</u>	<u>\$255,740</u>

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

Components of the Company's acquired intangible assets are comprised of the following:

	December 31, 2005		December 31, 2004	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
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)
	<u>\$91,456</u>	<u>\$(64,033)</u>	<u>\$91,773</u>	<u>\$(50,169)</u>

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:

Year	Amount
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:

	2005	2004
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	<u>\$ 7,766</u>	<u>\$ 7,601</u>

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

17) Other Accrued Expenses

Other accrued expenses consist of:

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

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.

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

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
Total assets acquired	96,411
Current liabilities	(12,777)
Deferred tax liability	(9,731)
Total liabilities assumed	(22,508)
Total purchase price including acquisition costs	<u>\$ 73,903</u>

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	
	<u>\$26,700</u>	

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
Total assets acquired	34,813
Current liabilities	(2,425)
Deferred tax liability	(1,974)
Total liabilities assumed	(4,399)
Total purchase price including acquisition costs	<u>\$30,414</u>

MKS INSTRUMENTS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
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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	
	<u>\$ 7,450</u>	

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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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
 (Tables in thousands, except share and per share data)

MKS INSTRUMENTS, INC.
SUPPLEMENTAL FINANCIAL DATA

	Quarter Ended			
	March 31	June 30	Sept. 30	Dec. 31
	(Table in thousands, except per share data) (Unaudited)			
2005				
Statement of Operations Data				
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
2004				
Statement of Operations Data				
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

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.

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.

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:

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

Exhibit No.	Title
+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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<u>Exhibit No.</u>	<u>Title</u>
+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.
+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

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

Description	Balance at Beginning of Year	Additions		Deductions & Write-offs	Balance at End of Year
		Charged to Costs and Expenses	Charged to Other Accounts		
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

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.

<u>Signatures</u>	<u>Title</u>	<u>Date</u>
<u>/s/ JOHN R. BERTUCCI</u> John R. Bertucci	Executive Chairman of the Board of Directors	March 14, 2006
<u>/s/ LEO BERLINGHIERI</u> Leo Berlinghieri	Chief Executive Officer, President and Director (Principal Executive Officer)	March 15, 2006
<u>/s/ RONALD C. WEIGNER</u> Ronald C. Weigner	Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	March 13, 2006
<u>/s/ ROBERT R. ANDERSON</u> Robert R. Anderson	Director	March 12, 2006
<u>/s/ JAMES G. BERGES</u> James G. Berges	Director	March 13, 2006
<u>/s/ RICHARD S. CHUTE</u> Richard S. Chute	Director	March 11, 2006
<u>/s/ HANS-JOCHEN KAHL</u> Hans-Jochen Kahl	Director	March 13, 2005
<u>/s/ OWEN W. ROBBINS</u> Owen W. Robbins	Director	March 11, 2006
<u>/s/ LOUIS P. VALENTE</u> Louis P. Valente	Director	March 14, 2006

Confidential Materials omitted and filed separately with the Securities and Exchange Commission. Asterisks denote omissions.

Summary of MKS Instruments, Inc.'s
2006 Management Incentive Bonus

The 2006 Management Incentive Bonus Plan consists of a Corporate Bonus, which is based on a 2006 corporate pro-forma pre-tax EPS target, and, for some participants, a Product Group Bonus, which is based on the 2006 earnings targets of certain respective product groups. With respect to Leo Berlinghieri, John Bertucci, Jerry Colella and Ron Weigner, the 2006 Management Incentive Plan consists solely of the Corporate Bonus. With respect to Ron Hadar, Robert Klimm and William Stewart, the 2006 Management Incentive Plan consists of the Corporate Bonus and the Product Group Bonus.

The following chart summarizes the individual target bonuses for each of the participants.

Participant - - - - -	Individual Target Bonus (% of annual base earnings) -----
Leo Berlinghieri	75%
John Bertucci	60%
Jerry Colella	50%
John Smith	50%
Ron Weigner	40%
Ron Hadar	40% (of which 70% is Corporate Bonus and 30% is Product Group Bonus)
Robert Klimm	40% (of which 70% is Corporate Bonus and 30% is Product Group Bonus)
William Stewart	40% (of which 70% is Corporate Bonus and 30% is Product Group Bonus)

Copies of the 2006 Corporate Bonus Plan and 2006 Group Bonus Plans are below.

2006 CORPORATE BONUS PLAN
PRO FORMA PRE-TAX EARNINGS PER SHARE (EPS) TABLE
(JANUARY 1 - DECEMBER 31)

THE PAYOUT OF YOUR CORPORATE BONUS WILL BE ACHIEVED ACCORDING TO THE SCHEDULE SHOWN IN THE CHART BELOW. FOR EXAMPLE, YOU WILL RECEIVE 50% OF YOUR TARGET CORPORATE BONUS IF OUR PRO FORMA PRE-TAX EPS REACHES \$**, AND 100% OF YOUR TARGET CORPORATE BONUS IF OUR PRO FORMA PRE-TAX EPS REACHES \$**. AT A PRO FORMA PRE-TAX EPS OF \$** OR MORE, YOU WOULD RECEIVE 200% OF YOUR TARGET CORPORATE BONUS,

Pro forma Pre-Tax EPS	% of Target Bonus Earned
<\$**	0.0%
\$**	15.0%
\$**	25.0%
\$**	35.0%
\$**	50.0%
\$**	75.0%
\$**	85.0%
\$**	100.0%
\$**	125.0%
\$**	150.0%
\$**	175.0%
>=\$**	200.0%

THIS INFORMATION IS EXTREMELY CONFIDENTIAL AND SHOULD BE TREATED AS SUCH. YOU SHOULD NOT DIVULGE THIS INFORMATION INSIDE OR OUTSIDE OF MKS INSTRUMENTS, INC.

PERSONAL AND CONFIDENTIAL
=====

2006 [APPLICABLE](1) GROUP BONUS PLAN

THE PAYOUT OF YOUR PRODUCT GROUP BONUS WILL BE CALCULATED BASED UPON ACTUAL [APPLICABLE] PRODUCT GROUP EARNINGS FOR 2006. THE CHART BELOW SHOWS THE CORRELATION BETWEEN ACTUAL [APPLICABLE PRODUCT GROUP] EARNINGS AND YOUR BONUS PAYOUT. FOR EXAMPLE, YOU WILL RECEIVE 50% OF YOUR TARGET PRODUCT GROUP BONUS IF THE [APPLICABLE] PRODUCT GROUP EARNS \$** MILLION IN 2006 AND 100% OF YOUR TARGET PRODUCT GROUP BONUS IF THE GROUP EARNS \$** MILLION. IF THE GROUP EARNS \$** MILLION OR MORE YOU WOULD RECEIVE 200% OF YOUR TARGET PRODUCT GROUP BONUS.

[applicable] product group earnings (\$mm) -----	Percent of [applicable] product group bonus paid -----
<\$**mm	0.0%
\$**mm	15.0%
\$**mm	25.0%
\$**mm	35.0%
\$**mm	50.0%
\$**mm	75.0%
\$**mm	85.0%
\$**mm	100.0%
\$**mm	125.0%
\$**mm	150.0%
\$**mm	175.0%
>=\$**mm	200.0%

THIS INFORMATION IS EXTREMELY CONFIDENTIAL AND SHOULD BE TREATED AS SUCH. YOU SHOULD NOT DIVULGE THIS INFORMATION INSIDE OR OUTSIDE OF MKS INSTRUMENTS, INC.

PERSONAL AND CONFIDENTIAL
=====

(1) The Group Bonus Plan portion of the 2006 Management Incentive Bonus Plan relates only to Ron Hadar (CIT products), Bob Klimm (ASTeX products) and Bill Stewart (Vacuum products).

Summary of Bonus Arrangement for Frank Schneider

Frank Schneider, who became the Company's VP and GM of Ion Products when the Company acquired Ion Systems, Inc. ("Ion") in January 2006, is entitled pursuant to the terms of the acquisition agreement to continue to receive a bonus under the Ion bonus plan. Mr. Schneider's bonus will equal up to a maximum of 50% of his base salary and will be paid as follows: 75% based on Ion's performance to its operating income goals for the fiscal year ending June 30, 2006, and 25% based on his performance to individual goals that were specified by the board of directors of Ion. The board of directors will evaluate Mr. Schneider's performance to the specific goals.

Ion's performance will be evaluated based on its achievement of its annual operating income goal. The operating income goal for Ion and its subsidiary for the year ending June 30, 2006 is \$**. Ion must achieve at least 80% of its annual operating income goal in order for the bonus to be paid. Below is the schedule of bonus payout percentages based on the percentage of annual operating income goal achieved.

% of Annual Operating Income Goal Achieved	Bonus Payout %
From 150% to 100%	Payouts in this range are matched percentage to percentage
99%	98%
98%	96%
97%	94%
96%	92%
95%	90%
94%	88%
93%	86%
92%	84%
91%	82%
90%	80%
89%	78%
88%	76%
87%	74%
86%	72%
85%	70%
84%	68%
83%	66%
82%	64%
81%	62%
80%	60%

The portion of the bonus related to Mr. Schneider's individual goals will have a maximum payout of 100%. Bonuses will be paid annually based on performance to his goals, and on Ion's performance for the entire fiscal year period. No bonus either based on individual goals or operating income will be paid if the operating income does not equal or exceed 80% of goal. There is no additional payout for performance above 150% of the quota. Mr. Schneider must be employed by MKS Instruments, Inc. on the date that bonuses are paid in order to receive his bonus.

LEASE AGREEMENT

This Lease Agreement is made as of the 25th day of June, 2005, by and between 5330 STERLING DRIVE LLC, a Colorado limited liability company ("Landlord"), and MKS INSTRUMENTS, INC., a Massachusetts corporation authorized to do business in Colorado ("Tenant").

PREMISES

Landlord and Tenant entered into a Lease Agreement for 5330 Sterling Drive, Boulder, Colorado on October 9, 1989 which has been extended and modified from time to time. As of the date of this Lease Agreement, Tenant is holding over on a month to month basis under the October 9, 1989 Lease Agreement as extended which expired by its terms on October 31, 2004. Landlord and Tenant desire to replace the October 9, 1989 Agreement, and its extensions and modifications, in their entirety and replace it with the within Lease Agreement.

I. LEASE OF LEASED PREMISES

A. Lease.

1. Landlord leases to Tenant and Tenant leases from Landlord the entire building located at 5330 Sterling Drive, Boulder, Colorado, situated on Lot 2, Aspen Industrial Park Subdivision, City of Boulder, Colorado. The entire building is hereafter referred to as the "Leased Premises," or the "Building."

2. The Leased Premises contain approximately 39,032 square feet of rentable floor area which Landlord and Tenant agree is the floor area on which the Rent and Operating Expenses set forth in Article III are based.

II. TERM

A. Commencement, Renewal and Termination of Lease.

The lease term shall commence at 12:01 a.m. on June 1, 2005, and, unless earlier terminated, as herein provided, the term of the Lease shall be for ten years from the commencement date. The sum of \$25,370.79 (included in monthly payments under the prior lease) shall be applied against the immediately succeeding monthly rents until this amount is exhausted.

B. Possession.

1. Possession shall be delivered on the commencement date of the Lease. Tenant's taking possession of the Leased Premises on commencement of the term shall constitute Tenant's acknowledgement that the Leased Premises are in good condition and that all provisions of the existing lease under which Tenant is holding over shall be deemed replaced by the applicable terms of this Lease Agreement.

C. Renewal.

1. If Tenant is in compliance with all terms and conditions of the Lease Agreement and upon not less than twelve (12) months notice prior to the end of the ten year lease term, Tenant provides written notice to Landlord of its desire to negotiate the terms and conditions of a new lease for the Leased Premises, then upon receipt of such notice, Landlord and Tenant agree to negotiate the terms and conditions of a new lease in good faith for a period of 45 days. If Landlord and Tenant are unable to agree on the terms and conditions of a new lease for the Leased Premises by the end of 45 days then Landlord's obligation hereunder will terminate.

D. Termination.

1. Tenant shall have the right to terminate the Lease at the end of the sixtieth month (60th) of the ten year lease term and if not so terminated then Tenant shall have the right to terminate the Lease at the end of the eighty-fourth month (84th) of the lease term provided Tenant notifies Landlord of its intent to terminate by written notice to Landlord twelve months prior to the designated termination date. As a condition of said termination, Tenant shall pay to Landlord on or before the termination date all of Landlord's unamortized leasing costs (using a 8% per annum amortization rate) including; leasing costs, reimbursement of tenant improvement payments (\$50,000) paid by Landlord, commissions (\$146,370), reasonable attorneys fees relating to the releasing of the Premises, plus three (3) months of Monthly Base Rent under the applicable rent schedule.

III. RENT AND OPERATING EXPENSES

A. Base Rent.

1. Base rent for the first five years of this Lease, shall be \$9.00 a square foot for 39,032 square feet (or \$351,288 per annum).

2. If Tenant does not terminate the Lease at the end of the first five years, then Base Rent for the sixth year will be \$9.25 per square foot (\$361,046 per annum), Base Rent for the seventh year will be \$9.50 per square foot (\$370,804 per annum), and Base Rent for the eighth year will be \$9.75 per square foot (\$380,562 per annum).

3. If Tenant does not terminate the Lease at the end of eighty four months, then Base Rent for the ninth year will be \$10.00 per square foot (\$390,320 per annum) and Base Rent for the tenth year will be \$10.25 per square foot (\$400,078 per annum).

4. Aggregate Base Rent for the full ten year term of the Lease is \$3,659,250.00.

5. All Base Rent payable hereunder shall be paid in equal monthly installments ("Monthly Base Rent"), without setoff or deduction, in advance, on or before the first day of each month during the term of this Lease at the address of the Landlord set forth in Article XXII, or such other address or addresses as Landlord may hereafter determine by notice to the Tenant.

6. Rent for any period during the term hereof which is for less than one (1) month, if any, shall be a prorated portion of the monthly installment herein, based on a thirty (30) day month.

B. Operating Expenses.

1. Tenant shall pay one hundred percent (100%) of the operating expenses paid or incurred by Landlord for the operation and/or maintenance of the Leased Premises.

2. The term Operating Expenses is defined as direct costs of operation and maintenance, as determined by standard practices, and shall include the following costs by way of illustration, but not be limited to: real property taxes and assessments for the Leased Premises and Lot 2; management fee equal to one percent (1%) of annual Base Rent; water and sewer charges; security systems and alarms; insurance premiums; utilities; janitorial services; snow removal; labor; window cleaning; air conditioning and heating maintenance; elevator maintenance; supplies; materials, equipment, and tools; including maintenance, costs, and upkeep of all landscaping, including Lot 2, parking areas, sidewalks, and all Building repairs except repair of the roof or structure.

3. Operating Expenses shall not include depreciation on the Building, loan payments, executive salaries or real estate brokers' commissions. All Operating Expenses over which Landlord has any control shall be reasonable and competitive with such costs and expenses in similar buildings in Boulder, Colorado.

C. Effect of Termination. Except as expressly provided to the contrary herein, in the event this Agreement is terminated by either party in accordance with the terms of this Agreement, no further Base Rent or operating costs shall be payable by Tenant with respect to any period beginning on the date of the later of (i) such termination and (ii) Tenant's vacancy of the Premises.

IV. TENANTS CONSTRUCTION

Tenant shall have the right to do all of its own construction, subject only to Landlord's reasonable approval of plans for either the initial premises, or future renovation work. Tenant shall not be charged any landlord supervisory, management, or review fees for any of Tenants initial, ongoing or future construction. All plans submitted by the Tenant for initial work, as well as subsequent renovations shall be approved or deemed approved within ten (10) business days by landlord. Landlord shall make any comment or request any change immediately after

submission of plans, further, Landlord shall notify Tenant of any item that Landlord will want restored.

IV. TENANT IMPROVEMENT ALLOWANCE

Landlord will provide Tenant with fifty thousand dollars (\$50,000) as an allowance for tenant improvements. Tenant shall have the right to apply Landlord's contribution towards both hard and soft costs such as design fees, engineering fees, furniture and relocation costs. Any unused portion of the fifty thousand dollar contribution can be used by Tenant for payment of rent.

V. CAPITAL ITEMS, LANDLORD REPAIRS

Landlord warrants for the ten (10) year term of the lease and any agreed upon extensions of the lease that the roof, structure and mechanical systems such as HVAC units, boilers (related to the building) shall have a useful life of at least the length of the lease. Should any or these items fail and need to be repaired or replaced during the term of the lease, the Landlord, at its sole cost and expense shall bear the cost to replace them.

VI. ADA & LIFE SAFETY

Landlord shall be responsible for the costs for compliance of the premises, base building, common areas, bathrooms, drinking fountains and elevators related to the Americans with Disabilities Act (ADA), and any and all other codes related to life safety.

VII. TAXES - PERSONAL PROPERTY RESPONSIBILITY

Tenant shall be responsible and pay for any and all taxes and/or assessments levied and/or assessed against any furniture, fixtures, equipment and items of a similar nature installed and/or located in or about the Leased Premises by Tenant.

VIII. USE

A. Permitted Uses.

Tenant shall use the Leased Premises for any manufacturing and office-warehouse use permitted by the City of Boulder on such Leased Premises.

B. Limitations on Use.

1. Tenant shall not do, bring, or keep anything in or about the Leased Premises that will cause a cancellation of any insurance covering the Leased Premises. If the rate of any insurance carried by Landlord is increased as a result of Tenant's use, upon timely notice by Landlord, Tenant shall pay to Landlord within 10 days before the date Landlord is obligated to pay a premium on the insurance, a sum equal to the difference between the original premium and the increased premium.

2. Tenant shall comply with all laws concerning the Leased Premises or Tenant's use of the Leased Premises. Landlord warrants conformance with all such laws at the commencement date of this Lease.

3. Tenant shall not use the Leased Premises in any manner that will constitute waste or nuisance in the Building, nor shall Tenant overload the floors or any part of the Leased Premises in a manner exceeding the floor loading restrictions of the Uniform Building Code as adopted by the City of Boulder.

IX. MAINTENANCE

A. Landlord's Maintenance.

Landlord, at its cost, shall maintain, in good condition, (i) the structural parts of the Building, which structural parts include only the foundations, bearing and exterior walls (including glass and doors), sub-flooring, and roof; (ii) the unexposed electrical, plumbing, and sewage systems, including, without limitation, the lighting fixtures installed by Landlord (but not including replacement of bulbs, tubes or ballasts) and including those portions of the systems lying outside the Leased Premises; and (iii) window frames, gutters, and roof drains on the Building, provided, however, if the maintenance or repairs are required in part or in whole by the neglect, fault or omission of any duty by the Tenant, its agents, servants, employees, and invitees, the Tenant shall, at Tenant's sole cost and expense, make such repairs and maintenance as are necessary to restore the Leased Premises to a good condition.

B. Tenant's Maintenance.

Except as provided in the previous subparagraph, Tenant, at its cost, shall maintain, in good condition, all portions of the Leased Premises, including, without limitation, all of Tenant's personal property, carpet, and flooring. Tenant shall be liable to any damage to the Building resulting from the acts or omissions of Tenant or its authorized representatives.

X. ALTERATIONS

A. Tenant shall not make any structural or exterior alterations to the Leased Premises without Landlord's consent. Tenant, at its cost, shall have the right to make non-structural alterations to the interior of the Leased Premises as part of its initial tenant finish that Tenant requires in order to conduct its business on the Leased Premises. Tenant shall submit reasonably detailed final plans and specifications and working drawings of the proposed Tenant finish fifteen (15) days before it intends to commence the alterations. Plans submitted will be objected to by Landlord within ten (10) days after submission and shall be deemed approved if there are no objections. The alterations shall be approved by all appropriate governmental agencies and all applicable permits and authorizations shall be obtained before commencement. Any alterations made shall remain on and be surrendered with the Leased Premises on expiration or termination of the term of this Lease, unless otherwise agreed in writing.

XI. MECHANIC'S LIENS

A. Tenant's Obligations.

Tenant shall pay all costs for construction done by it or caused to be done by it on the Leased Premises as permitted by this Lease. Tenant shall keep the Leased Premises, the Building, other improvements, and the Land free and clear of all mechanic's liens resulting from construction by or for Tenant. Tenant shall have the right to contest the correctness or validity of any such lien if, upon demand by Landlord, Tenant procures a bond in an amount equal to one and one-half times the amount of the claim of lien or makes some other financial arrangement acceptable to Landlord to protect Landlord's interests. Landlord shall require a bond, or other financial arrangement with Tenant, only at such time that the lien claimant commences a foreclosure action on the lien. Tenant shall be responsible for removing any filed liens affecting the property from the real estate records.

B. Tenant's Contractors.

Landlord shall have the right to require Tenant's contractor(s) to furnish to both Tenant and Landlord adequate lien waivers on work completed. Landlord reserves the right to post notices in Leased Premises that Landlord is not responsible for payment of work performed and that Landlord's interest is not subject to any lien.

XII. UTILITIES

Tenant shall pay all gas and electric utilities and services supplied to the Building, together with any taxes thereon. Tenant shall make all arrangements for and pay all costs of telephone services furnished to or used by it. The Building has separate meters in various locations which can be utilized if, during the term of the Lease, Tenant, with Landlord's approval, subleases any portion of the Building using a separate meter.

XIII. LIABILITY, INDEMNITY AND INSURANCE

A. Indemnity.

Each party will indemnify and hold the other Party harmless from and against any and all claims, losses, expenses, costs, judgments, and/or demands arising from the conduct of the indemnifying Party in or about the Leased Premises and/or on account of any operation or action by such Party and/or from and against all claims arising from any breach or default on the part of such Party or any act of negligence of such Party, its agents, contractors, servants, employees, licensees, or invitees, or any accident, injury or death of any person or damage to any property in or about the Leased Premises. Each Party's obligation to indemnify and hold the other Party harmless shall include the indemnified Party's reasonable attorney's fees, and shall be limited to the sum that exceeds the amount of insurance proceeds, if any, received by the indemnified Party.

B. Public Liability and Property Damage Insurance.

Tenant, at its costs, shall maintain general liability insurance, with liability limits of not less than \$1,000,000.00 for each occurrence of bodily injury and \$200,000.00 property damage, insuring against all liability of Tenant and its authorized representatives arising out of any connection with Tenant's use or occupancy of the Leased Premises. All general liability insurance shall ensure performance by Tenant of the indemnity provisions of this Article. Both parties shall be named as co-insureds, and the Tenant shall deliver certificates of insurance to the Landlord.

C. Tenant's Fire Insurance.

Tenant, at its cost, shall maintain on all of its personal property in, on or about the Leased Premises, a policy of standard fire and extended coverage insurance, to the extent it deems necessary and appropriate. Tenant understands that Landlord has no insurance covering Tenant's personal property.

D. Fire Insurance on Building and Other Improvements.

Landlord shall maintain on the Building and other improvements in which the Leased Premises are located a policy of standard fire and all risks coverage insurance to the extent of at least one hundred percent (100%) of full replacement value. The insurance policy shall be issued in the names of Landlord, and Landlord's lender, as their interests appear. The insurance policy shall also provide coverage for rental value insurance, including all operating expenses, for a period of one year. The insurance policy shall provide that all proceeds shall be made payable to Landlord. The cost of such insurance shall be passed on to Tenant as part of the Direct operating expenses for the Building pursuant to Article IV.

E. Waiver of Subrogation.

The parties release each other, and their respective authorized representatives, from any claims for damages to any person or to the Leased Premises, and to the fixtures, personal property, Tenant's improvements, and alterations of either Landlord or Tenant in or on the Leased Premises that are caused by or result from risks insured against under any insurance policies carried by the parties and in force at the time of such damage. Each party shall cause each insurance policy obtained by it to provide that the insurance company waives all rights of recovery by way of subrogation against either party in connection with any damage covered by any policy.

F. Other Insurance Requirements.

All the insurance required under this Lease shall be issued with insurance companies authorized to do business in the State of Colorado, and the Tenant will endeavor to notify the Landlord within thirty (30) days' written notice before any applicable policy termination.

XIV. PROTECTIVE COVENANTS

Tenant shall faithfully observe and comply with the covenants, conditions, and restrictions set forth in a Declaration of Covenants of Aspen Industrial Park Subdivision recorded with the Boulder County Clerk and Recorder on November 11, 1979 (the "Covenants") as Reception No. 363409, as amended. Tenant hereby acknowledges having received a copy of such Covenants with the execution of this Lease. Landlord reserves the right from time to time to make all reasonable modifications to said Covenants. The additions and modifications to those Covenants shall be binding upon Tenant upon delivery of a copy of them to Tenant. Landlord shall not be responsible to Tenant for the nonperformance of any of said Covenants by any other tenants within the Subdivision.

XV. DESTRUCTION

A. Risk Covered By Insurance.

1. If, during the term, the Leased Premises are totally or partially destroyed from a risk covered by the insurance described in Article XIII, rendering the Leased Premises totally or partially inaccessible or unusable, Landlord shall restore the Leased Premises and other improvements in which the Leased Premises are located to substantially the same condition as they were in immediately before destruction. Such destruction shall not terminate this Lease. If the existing laws do not permit the restoration, either party can terminate this Lease immediately by giving notice to the other party. Furthermore, if such restoration can not be accomplished within 90 days from the date of destruction, either party shall have the option to terminate this Lease immediately by giving notice to the other party.

2. If the projected cost of restoration exceeds the amount of proceeds received from the insurance required under Article XIII, Landlord can elect to terminate this Lease by giving notice to Tenant within fifteen (15) days after determining that projected restoration costs will exceed the insurance proceeds. In the case of destruction to the Leased Premises only, if Landlord elects to terminate this Lease, Tenant, within fifteen (15) days after receiving Landlord's notice to terminate, can elect to pay to Landlord, at the time Tenant notifies Landlord of its election, the difference between the amount of insurance proceeds and the cost of restoration, in which case Landlord shall restore the Leased Premises. Landlord shall give Tenant satisfactory evidence that all sums contributed by Tenant as provided in this paragraph have been expended by Landlord in paying the cost of restoration. If Landlord elects to terminate this Lease and Tenant does not elect to contribute toward the cost of restoration as provided in this paragraph, this Lease shall terminate immediately.

B. Risk Not Covered By Insurance.

1. If, during the term, the Leased Premises are totally or partially destroyed from a risk not covered by the insurance described in Article XIII, rendering the Leased Premises totally or partially inaccessible or unusable, Landlord shall restore the Leased Premises to substantially the same condition as they were in immediately before destruction. Such destruction shall not terminate this Lease. If the existing laws do not permit the restoration, either party can terminate

this Lease immediately by giving notice to the other party. Furthermore, if such restoration can not be accomplished within 90 days from the date of destruction, either party shall have the option to terminate this Lease immediately by giving notice to the other party.

2. If the projected cost of restoration exceeds ten percent (10%) of the projected value following restoration of the Leased Premises, Landlord can elect to terminate this Lease by giving notice to Tenant within fifteen (15) days after determining projected restoration costs and replacement value but no more than 45 days after defining event.

3. If Landlord elects to terminate this Lease, Tenant, within fifteen (15) days after receiving Landlord's notice to terminate, can elect to pay to Landlord, at the time Tenant notifies Landlord of its election, the difference between ten percent (10%) of the projected value of the Leased Premises following destruction and the actual costs of restoration, in which case Landlord shall restore the Leased Premises. Landlord shall give Tenant satisfactory evidence that all sums contributed by Tenant as provided in this paragraph have been expended by Landlord in paying the cost of restoration.

4. If Landlord elects to terminate this Lease and Tenant does not elect to perform the restoration or contribute toward the cost of restoration as provided in this paragraph, this Lease shall terminate.

C. Right to Terminate on Partial Destruction.

If there is destruction to the Leased Premises which exceeds thirty-three and one-third percent (33 1/3%) of the then replacement value of the Leased Premises Building and other improvements from any risk, Landlord can elect to terminate this Lease whether or not the Leased Premises are destroyed.

D. Abatement or Reduction of Rent and Operating Costs.

In the event of destruction of the Leased Premises, there shall be an abatement or reduction of rent and operating costs, between the date of destruction and the date of completion of restoration, based on the extent to which the destruction interferes with Tenant's use of the Leased Premises.

In the event the lease is terminated due to an event of destruction, rent and operating costs will cease as of date of termination.

XVI. CONDEMNATION

A. Total Taking.

If, during the term or during the period of time between the execution of the Lease and the date the term commences, there is any transfer by Landlord to any condemning governmental agency, either under threat of condemnation, during legal proceedings for condemnation, or by

exercise of the power of condemnation, and the Leased Premises are totally taken by such condemnation, this Lease shall terminate on the date of taking.

B. Partial Taking.

1. If any portion of the Leased Premises is taken by condemnation, this Lease shall remain in effect, except that Tenant can elect to terminate this Lease if the remaining portion is rendered unsuitable for Tenant's continued use of the Leased Premises. If Tenant elects to terminate this Lease Tenant must exercise its right to terminate by giving notice to Landlord within thirty (30) days after Landlord has given notice to Tenant of the nature and the extent of the taking. If Tenant does not terminate this Lease within the thirty-day period, this Lease shall continue in full force and effect, except that Base monthly rent shall be reduced pursuant to this Article.

2. Subject to the preceding paragraph, if the Building or other improvements which are a part of the Leased Premises is taken by condemnation, this Lease shall remain in full force and effect, except that if fifty percent (50%) or more of the Building or other improvements which are a part of the Leased Premises is taken by condemnation, Landlord shall have the election to terminate this Lease pursuant to this paragraph. If Landlord elects to terminate this Lease, it must terminate by giving notice to Tenant within thirty (30) days after the nature and the extent of the taking have been finally determined. If this Lease is not terminated within the thirty-day period, it shall continue in full force and effect, except Base monthly rent shall be reduced pursuant to this Article.

3. Nothing in this paragraph shall preclude Tenant from making an independent claim against the condemning authority for damages resulting from condemnation.

C. Effect on Rent.

If any portion of the Leased Premises is taken by condemnation and this Lease remains in full force and effect, on the date of taking the Base monthly rent shall be reduced by an amount that is in the same ratio to Base monthly rent as the total number of square feet in the Leased Premises taken bears to the total number of square feet in the Leased Premises immediately before the date of taking.

D. Distribution of Award.

Compensation, sums, or anything of value awarded, paid or received on a total or partial condemnation shall be distributed and paid to Landlord and Tenant based upon the relative loss between the parties with respect to the property that is so condemned and Tenant's capital improvements to the Leased Premises subsequent to the commencement date of this Lease. Nothing in this paragraph shall preclude Tenant from making its own independent claim for a condemnation award from the condemning authority.

XVII. ENVIRONMENTAL MATTERS

A. Definitions.

1. Hazardous Material. Hazardous Material means any substance:

(a) which is or becomes defined as a "hazardous material," "hazardous waste," "hazardous substance," "regulated substance," pollutant or contaminant under any federal, state or local statute, regulation, rule, order, or ordinance or amendments thereto, including petroleum and petroleum products; or

(b) the presence of which on the Leased Premises causes or threatens to cause a nuisance upon the Leased Premises or to adjacent properties or poses or threatens to pose a hazard to the health or safety of persons on or about the Leased Premises or requires investigation or remediation under any federal, state or local statute, regulation, rule, order, or ordinance or amendments thereto.

2. Environmental Requirements. Environmental Requirements means all applicable present and future statutes, regulations, rules, ordinances, codes, licenses, permits, orders, approvals, plans, authorization, concessions, franchises, and similar items, of all governmental agencies, departments, commissions, boards, bureaus, or instrumentalities, of the United States, states and political subdivisions thereof and all applicable judicial, administrative, and regulatory decrees, judgments, and orders relating to the protection of human health or the environment.

3. Environmental Damages. Environmental Damages means all claims, judgments, injuries, damages (including without limitation damages for diminution in the value of the Leased Premises and adjoining property and for the loss of business from the Leased Premises and adjoining property), losses, penalties, fines, liabilities (including strict liability), encumbrances, liens, costs, and expenses of investigation and defense of any claim, and of any good faith settlement of judgment, or whatever kind or nature, contingent or otherwise, matured or unmatured, foreseeable or unforeseeable, including without limitation reasonable attorney's fees and disbursements and consultants' fees, any of which are incurred at any time as a result of the existence of "Hazardous Material" upon, about, beneath the Leased Premises or migrating or threatening to migrate to or from the Leased Premises or the existence of a violation of "Environmental Requirements" pertaining to the Leased Premises.

B. Obligation to Indemnify Defend and Hold Harmless.

1. Landlord warrants that there are, and shall take all reasonable steps to ensure that there shall not be (with respect to Landlord and its employees, agents, invitees and other tenants) during the term of Tenant's lease, no existing hazardous materials or substances within the Leased Premises or Lot 2, other than those known and generated by Tenant under its prior lease, and will provide documentation for Tenant's review supporting this warranty.

2. Tenant, its successors, assigns and guarantors, agree to indemnify, defend, reimburse and hold harmless the following persons from and against any and all "Environmental Damages" arising from activities of Tenant or its employees, agents, or invitees which (a) result in the presence of "Hazardous Materials" upon, about or beneath the Leased Premises or migrating to or from the Leased Premises, or (b) result in the violation of any "Environmental Requirements" pertaining to the Leased Premises and the activities thereon:

- (a) Landlord;
- (b) directors, officers, shareholders, employees and partners of the Landlord only.

3. This obligation shall include, but not be limited to, the burden and expense of defending all claims, suits and administrative proceedings (with counsel reasonably approved by the indemnified parties), and conducting all negotiations of any description, and paying and discharging, when and as the same become due, any and all judgments, penalties or other sums due against such indemnified persons. Tenant, at its sole expense, may employ additional counsel of its choice to associate with counsel representing Landlord.

4. The obligations of Tenant in this section shall survive the expiration or termination of this Lease.

C. Notification.

If Tenant shall become aware of or receive notice or other communication concerning any actual, alleged, suspected or threatened violation of "Environmental Requirements," or liability of Tenant for "Environmental Damages" in connection with the Leased Premises or past or present activities of any person thereon, or that any representation set forth in this Agreement is not or is no longer accurate, then Tenant shall deliver to Landlord, within ten days of the receipt of such notice, or communication or correcting information by Tenant, a written description of such information or condition, together with copies of any documents evidencing same.

D. Negative Covenants.

1. No Hazardous Material on Leased Premises. Except in strict compliance with all Environmental Requirements, Tenant shall not cause, permit or suffer any "Hazardous Material" to be brought upon, treated, kept, stored, disposed of, discharged, released, produced, manufactured, generated, refined or used upon, about or beneath the Leased Premises or any portion thereof by Tenant, its agents, employees, contractors, tenants or invitees, or any other person without prior written consent of Landlord.

2. No Violations of Environmental Requirements. Tenant shall not cause, permit or suffer the existence or the commission by Tenant, its agents, employees, contractors, or invitees, or by any other person of a violation of any "Environmental Requirements" upon, about or beneath the Leased Premises or any portion thereof.

E. Right to Inspect.

Subject to the notice, accompaniment, and confidentiality provisions contained herein, Landlord shall have the right in its sole and absolute discretion, but not the duty, to enter and conduct an inspection of the Leased Premises giving Tenant a minimum of 24 hours advanced notice to determine whether Tenant is complying with the terms of this Lease, including but not limited to the compliance of the Leased Premises and the activities thereon with "Environmental Requirements" and the existence of "Environmental Damages." Tenant hereby grants to Landlord the right to enter the Leased Premises during normal business hours and to perform such tests on the Leased Premises as are reasonably necessary in the opinion of Landlord to conduct such reviews and investigations. Landlord shall use reasonable efforts to minimize interference with the business of Tenant but Landlord shall not be liable for any interference caused thereby. Tenant shall provide to Landlord copies of all manifests, permits, reports, test results, and analyses submitted to any environmental agency within ten (10) days of submittal.

F. Right to Remediate.

Should Tenant fail to perform or observe any of its obligations or agreements pertaining to "Hazardous Materials" or "Environmental Requirements," then Landlord shall have the right, but not the duty, without limitation upon any of the rights of Landlord pursuant to this Lease, to enter the Leased Premises personally or through its agents, consultants or contractors and perform the same. Tenant agrees to indemnify Landlord for the costs thereof and liabilities therefrom as set forth in section A above.

XVI. ASSIGNMENT/SUBLEASE

A. Prohibition.

Tenant shall not voluntarily assign or encumber its interest in this Lease or in the Leased Premises, or sublease all or any part of the Leased Premises, or allow any other person or entity (except Tenant's authorized representatives) to occupy or use all or any part of the Leased Premises, without first obtaining the Landlord's written consent, which shall not be unreasonably withheld, conditioned or delayed. Any assignment, encumbrance, or sublease without Landlord's consent shall be voidable and, at Landlord's election, shall constitute a default. No consent to any assignment, encumbrance or sublease shall constitute a further waiver of the provisions of this paragraph.

B. Assignment and Subletting.

Notwithstanding paragraph A above, Tenant shall have the right without Landlord's approval to sublet or assign the premises or any portion thereof to any successor of Tenant resulting from a merger or consolidation of Tenant and to any entity under the common control of Tenant. Further, Tenant shall have the right to sublet or assign part or all of the premises with Landlord's prior written consent, which shall not be unreasonably withheld or delayed, to unaffiliated third parties. Landlord shall not have the right of recapture. Tenant shall be able to retain 100% of any sublease profits after deduction of reasonable subleasing costs.

C. Involuntary Assignment.

No interest of Tenant in this Lease shall be assignable by operation of law by assignment for the benefit of creditors, by a writ of attachment or execution, or by any proceeding or action to which Tenant is a party in which a receiver is appointed with authority to take possession of the Leased Premises. Any of such actions shall constitute a default by Tenant and Landlord shall have the right to elect to terminate this Lease, in which case this Lease shall not be treated as an asset of Tenant.

XVII. DEFAULT

A. Tenant's Default.

The occurrence of any of the following shall constitute a default by Tenant:

1. Failure to pay rent when due, if the failure continues for five (5) business days after notice has been given to Tenant.

2. Failure to perform any other provision of this Lease if the failure to perform is not cured within thirty (30) days after notice has been given to Tenant. If the default cannot reasonably be cured within thirty days, Tenant shall not be in default of this Lease if Tenant commences to cure the default within the thirty day period and diligently and in good faith continues to cure the default.

Notices given under this paragraph shall specify the alleged default and the applicable Lease provisions, and shall demand that Tenant perform the provisions of this Lease or pay the rent that is in arrears, as the case may be, within the applicable period of time, or quit the Leased Premises. No such notice shall be deemed a forfeiture or a termination of this Lease unless Landlord so elects in the notice.

B. Landlord's Remedies.

Landlord shall have the following remedies if Tenant commits a default. These remedies are not exclusive; they are cumulative in addition to any remedies now or later allowed by law.

1. Tenant's Right to Possession Not Terminated. Landlord can continue this Lease in full force and effect, and the Lease will continue in effect as long as Landlord does not terminate Tenant's right to possession, and Landlord shall have the right to collect rent when due. During the period Tenant is in default, Landlord can enter the Leased Premises and relet them, or any part of them, to third parties for Tenant's account. Tenant shall be liable immediately to Landlord for all reasonable costs Landlord incurs in re-letting the Leased Premises, including, without limitation, broker's commissions, expenses of remodeling the Leased Premises required by the reletting, and like costs. Re-letting can be for a period shorter or longer than the remaining term of this Lease. Tenant shall pay to Landlord the rent due under this Lease on the dates the rent is due, less the rent Landlord receives from any re-letting. No act

by Landlord allowed by this paragraph shall terminate this Lease unless Landlord notifies Tenant that Landlord elects to terminate this Lease. After Tenant's default and for as long as Landlord does not terminate Tenant's right to possession of the Leased Premises, if Tenant obtains Landlord's consent, Tenant shall have the right to assign or sublet its interest in this Lease, but Tenant shall not be released from liability. Landlord's consent to a proposed assignment or subletting shall not be unreasonably withheld.

2. Termination of Tenant's Right to Possession. Landlord can terminate Tenant's right to possession of the Leased Premises at any time during default. No act by Landlord other than giving notice to Tenant shall terminate this Lease. Landlord's efforts to re-let the Leased Premises shall not constitute a termination of Tenant's right to possession. On termination, Landlord has the right to recover from Tenant: (a) the worth at the time of the award of the unpaid rent that had been earned at the time of the termination of lease; (b) the worth at the time of the award of the amount by which the unpaid rent that would have been earned after the date of the termination of this Lease until the time of the award exceeds the amount of the loss of rent that Tenant proves could have been reasonably avoided; (c) the worth at the time of the award of the amount by which the unpaid rent for the balance of the term after the time of the award exceeds the amount of loss of rent that Tenant proves could have been reasonably avoided; and (d) courts costs.

3. Landlord's Right to Cure. Landlord, at any time after Tenant commits a default, can cure the default at Tenant's cost. If Landlord at any time, by reason of Tenant's default, pays any sum or does any act that requires the payment of any sum, the sum paid by Landlord shall be due immediately from Tenant to Landlord at the time the sum is paid, and if paid at a later date shall bear interest at the rate of twelve percent (12%) per annum from the date the sum is paid by Landlord until Landlord is reimbursed by Tenant. The sum, together with interest on it, shall be additional rent.

C. Late Charges. Tenant hereby acknowledges that late payment by Tenant to Landlord of rent due will cause Landlord to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult to ascertain. The costs include, but are not limited to, processing and accounting charges, and late charge which may be imposed upon Landlord by terms of any mortgage or trust deed covering the Leased Premises. Accordingly, if any installment of rent or of a sum due from Tenant shall not be received by Landlord or Landlord's designee within fifteen (15) days after the amount is due, Tenant shall pay Landlord a late charge equal to five percent (5%) multiplied by the amount of past due rent. The parties agree that the late charges represent a fair and reasonable estimate of the cost that Landlord will incur by reason of the late payment by Tenant. Acceptance of such late charges by the Landlord shall in no event constitute a waiver of Tenant's default with respect to such overdue amount, nor prevent Landlord from exercising any of the other rights and remedies granted under of this Lease or by operation of law, including Landlord's right to collect interest on past due sums.

D. Interest on Unpaid Rent. Rent not paid when due shall bear interest at a rate of twelve percent (12%) per annum from the due date until paid.

E. Tenant's Right to Cure Landlord's Default. Landlord shall be in default of this Lease if it fails or refuses to perform any provision of this Lease that it is obligated to perform if the failure to perform is not cured within thirty (30) days after notice of the default has been given by Tenant to Landlord. If the default cannot reasonably be cured within thirty days, Landlord shall not be in default of this Lease if Landlord commences to cure the default within the thirty day period and diligently and in good faith continues to cure the default.

Tenant, at any time after Landlord commits a default, can cure the default at Landlord's cost. If Tenant, at any time, by reason of Landlord's default, pays any sum or does any act that requires the payment of any sum, the sum paid by Tenant shall be due immediately from Landlord to Tenant at the time the sum is paid, and if paid at a later date shall bear interest at the rate of twelve percent (12%) per annum from the date the sum is paid by Tenant until Tenant is reimbursed by Landlord. Tenant shall have the right to withhold from future rent due any sums Tenant has paid.

XVIII. SIGNS

All signs and advertising displayed in and about the Leased Premises, including signs and advertising displayed in, or visible through, windows shall be such only as to advertise the business carried on upon the Leased Premises, and Landlord shall control the character and size thereof. No sign or advertising shall be displayed prior to written consent by Landlord and no awning shall be installed or used on the exterior of the Building in which the Leased Premises are a part without prior written consent of Landlord. Tenant shall not install any exterior signs nor any interior signs intended to be displayed through exterior windows. Landlord shall install and maintain a main building directory and the expenses of such directory shall be passed on to Tenant as part of the Operating Expenses for the Building pursuant to Article IV, paragraph B.

XIX. LANDLORD'S ACCESS

Tenant shall permit Landlord, Landlord's mortgagees and their agents to enter the Leased Premises at reasonable times for the purpose of inspecting the same, of making repairs, additions, or alterations thereto or to the Building, and of showing the Leased Premises to prospective purchasers and lenders, and to prospective tenants during the last ninety (90) days of Tenant's lease term. At any time during the last ninety (90) days of Tenant's lease term Landlord may place signs upon the Leased Premises advertising the availability of the same. Landlord acknowledges that Tenant's business involves proprietary information, materials, and processes of a highly confidential nature. Accordingly, any entry into the Leased Premises by Landlord or anyone claiming by, through, or under Landlord, shall require at least twenty-four (24) hours' advance notice to Tenant with the names and business affiliations of those persons who desire to enter the Leased Premises. All persons entering the Leased Premises may be required to sign in and provide appropriate identification, and may be escorted by a representative of Tenant. Tenant shall have the right to deny entry to any individual based upon Tenant's reasonable belief that permitting entry by such individual could compromise Tenant's confidential or proprietary information. Landlord reserves the right of free access at all times to the roof of the Building. Tenant shall not use the roof for any purpose without the written consent of the Landlord.

XX. SUBORDINATION AND ESTOPPEL

A. Subordination Attornment.

Upon request of the Landlord, Tenant will, in writing, subordinate its rights hereunder to the lien of any first mortgage or first deed of trust to any bank, insurance company or other lending institution, now or hereafter in force against the Leased Premises upon any building hereafter placed upon the land of which the Leased Premises are a part, and to all advances made or hereafter to be made upon the security thereof.

In the event any proceedings are brought for foreclosure or in the event of the exercises of the power of sale under any mortgage or deed of trust made by the Landlord covering the Leased Premises, the Tenant shall attorn to the purchaser upon any such foreclosure of sale and recognize such purchases as the Landlord under this Lease.

The provisions of this Article to the contrary notwithstanding, and so long as Tenant is not in default hereunder and attorns to the purchaser, this Lease shall remain in full force and effect for the full term hereof, and tenant shall peacefully and quietly have, hold and enjoy the Leased Premises free from claims of Landlord, or those claiming under Landlord, subject to the provisions of this Lease.

B. Estoppel Certificates.

Each party, within ten (10) days after notice from the other party, shall execute and deliver to the other party, in recordable form, a certificate stating that this Lease is unmodified and in full force and effect or in full force and effect as modified, and stating the modifications. The certificate also shall state the amount of minimum monthly rent, the dates to which the rent has been paid in advance, and the amount of any security deposit or prepaid rent.

XXI. FINANCIAL STATEMENTS

A current financial statement of Tenant is publicly available through the Securities and Exchange Commission..

XXII. NOTICE

Any notice or communication that either party desires or is required to give to the other party shall be in writing and either served personally or sent prepaid by first class mail. All notices and demands by the Landlord to the Tenant shall be sent addressed to the Tenant, MKS Instruments, Inc., Attention, Ed Fisher, at 5330 Sterling Drive, Boulder, Colorado 80301-2351, and to MKS Instruments, Inc., Attention, Carl Wollenberg, at 90 Industrial Way, Wilmington, Massachusetts 01887, or to such other place as Tenant may from time to time designate in a notice to Landlord. All notices and communications by the Tenant to the Landlord shall be sent addressed to the Landlord: 5330 Sterling Drive LLC, ATTN: Christopher F. Stewart, 560 University Avenue, Boulder, Colorado 80302, or to such other place as Landlord may from time

to time designate in a notice to Tenant. Notice shall be deemed communicated within forty-eight (48) hours from the time of mailing if mailed as provided in this paragraph.

XXIII. WAIVER

No delay or omission in the exercise of any right or remedy of Landlord on any default of Tenant shall impair such a right or remedy or be construed as a waiver. The receipt and acceptance by Landlord of delinquent rent shall not constitute a waiver of any other default; it shall constitute only a waiver of timely payment for the particular rent payment involved. No act or conduct of Landlord, including, without limitation, the acceptance of the keys to the Leased Premises, shall constitute an acceptance of the surrender of the Leased Premises by Tenant before the expiration of the term. Only a notice from Landlord to Tenant shall constitute acceptance of the surrender of the Leased Premises and accomplish a termination of the Lease. Any waiver by Landlord of any default must be in writing and shall not be deemed a waiver of any other default concerning the same or any other provision of this Lease.

XXIV. SALE OF LEASED PREMISES

In the event of any sale of the Leased Premises, Landlord shall be and is hereby entirely freed and relieved of, all liability under any and all of its covenants and obligations contained in or derived from this Lease arising out of any act, occurrence or omission occurring after the consummation of such sale; and the purchaser, at such sale or any subsequent sale of the Leased Premises shall be deemed, without any further agreement between the parties or their successors in interest or between the parties and any such purchaser, to have assumed and agreed to carry out any and all of the covenants and obligations of the Landlord under this Lease.

XXV. ATTORNEY'S FEES

If either party commences an action against the other party arising out of or in connection with this Lease, the prevailing party shall be entitled to have and recover from the losing party reasonable attorneys fees and costs of suit.

XXVI. SURRENDER OF LEASED PREMISES AND HOLDING OVER

On expiration of the term, Tenant shall surrender to Landlord the Leased Premises and all Tenant's improvements and alterations in good condition (ordinary wear and tear excepted), except for alterations that Tenant is obligated to remove. Tenant shall perform all restoration made necessary by the removal of any alterations prior to the expiration of the term.

If Tenant, with Landlord's consent, remains in possession of the Leased Premises after expiration of the term, or after the date in any notice given by Landlord to Tenant terminating this Lease, such possession by Tenant shall be deemed to be a month-to-month tenancy terminable on thirty (30) days' notice given at any time by either party. During any such month-to-month tenancy, Tenant shall pay all rent required by this Lease, and all provisions of this Lease except those pertaining to term and rent shall apply to the month-to-month tenancy.

If Tenant shall remain in possession of the Leased Premises after the termination of this Lease, whether by expiration of the Lease term or otherwise, without any written agreement to such possession, then Tenant shall be deemed a month-to-month tenant and rent rate during such holdover tenancy shall be equivalent to double the monthly rent paid for the last month of tenancy under this Lease. No holding over by Tenant shall operate to renew or extend this Lease without the written consent of Landlord to such renewal or extension having been first obtained. Tenant shall indemnify Landlord against loss or liability resulting from the delay by Tenant in surrendering possession of the Leased Premises, including, without limitation, any claims made with regard to any succeeding occupancy bounded by such holdover period.

XXVII. ACTS OR OMISSIONS OF OTHERS

Neither Party, or its employees or agents, or any of them, shall be responsible or liable to the other Party or to the other Party's guests, invitees, employees, agents or any other person or entity, for any loss or damage that may be caused by the acts or omissions of other tenants, their guests or invitees, occupying any other part of the Leased Premises or by persons who are trespassers on or in the Leased Premises, or for any loss or damage caused by or resulting from the bursting, stoppage, backing up, or leaking of water, gas, electricity or sewers or caused in any other manner whatsoever, unless such loss or damage is caused by or results from the negligent acts of such Party, its agents or contractors.

XXIX. MISCELLANEOUS PROVISIONS

A. Authority of Parties.

1. Corporate Authority. If Tenant is a corporation, each individual executing this Lease on behalf of said corporation represents and warrants that he or she is duly authorized to execute and deliver this Lease on behalf of the corporation, in accordance with a duly adopted resolution of the board of directors of said corporation or in accordance with the bylaws of said corporation, and that this Lease is binding upon said corporation in accordance with its terms.

2. Limited Partnerships. If the Landlord herein is a limited partnership, it is understood and agreed that any claims by Tenant on Landlord shall be limited to the assets of the limited partnership, and furthermore, Tenant expressly waives any and all rights to proceed against the individual partners or the officers, directors or shareholders of any corporate partner, except to the extent of their interest in said limited partnership.

B. Name.

Tenant shall not use the name of the Building or of the development in which the Building is situated for any purpose other than as an address of the business to be conducted by the Tenant in the Leased Premises.

C. Construction of Terms.

Time shall be of the essence of each provision of this Lease. This Lease shall be

construed and interpreted in accordance with the laws of the State of Colorado. This Lease contains all the agreements of the parties and cannot be modified or amended except by a written agreement.

D. Representations.

Tenant declares that in entering into this Lease, it relied solely upon the statements contained in this Lease and fully understands that no agents or representatives of the Landlord have authority to in any manner change, add to, or detract from the terms of this Lease. Tenant acknowledges and agrees that it has not relied on any statements, representations, agreements, or warranties, except as are expressed herein.

E. Rights Under This Lease.

If any term, covenant, or provision of this Lease shall to any extent be invalid or unenforceable, the remainder of this Lease shall nevertheless be valid and enforceable. All of the rights given herein are cumulative and are given without any other rights or of remedies of Landlord.

It is understood and agreed that Tenant will only be bound by a written lease agreement that is properly executed by Tenant. No proposal, counter-proposal, letter or oral statement will be construed as a binding lease agreement or as a contract to enter into a lease agreement. All such correspondence is considered to be an exploration by both parties to determine if the basis for such an agreement exists between Tenant and Landlord.

Agreed and Accepted by:

5330 STERLING DRIVE LLC
a Colorado Limited Liability Company

MKS INSTRUMENTS, INC.
a Massachusetts Corporation

By: /s/ Christopher Stewart

By: /s/ Ronald C. Weigner

Christopher Stewart,
General Partner

Ronald C. Weigner,
CFO

Date: Aug. 29, 2005

Date: _____

LEASE AGREEMENT

This Lease Agreement is made as of the 25th day of June, 2005, by and between ASPEN INDUSTRIAL PARK PARTNERSHIP, LLLP, a Colorado limited liability limited partnership ("Landlord"), and MKS INSTRUMENTS, INC., a Massachusetts corporation authorized to do business in Colorado ("Tenant").

PREMISES

Landlord and Tenant entered into a Lease Agreement for 5360 Sterling Drive, Boulder, Colorado on August 9, 2000, which will expire by its terms on August 31, 2005. Landlord and Tenant desire to replace the August 9, 2000 Lease Agreement in its entirety and replace it with the within Lease Agreement.

I. LEASE OF LEASED PREMISES

A. Lease.

1. Landlord leases to Tenant and Tenant leases from Landlord the entire building located at 5360 Sterling Drive, Boulder, Colorado, situated on Lot 3, Aspen Industrial Park Subdivision, City of Boulder, Colorado. The entire building is hereafter referred to as the "Leased Premises," or the "Building."

2. The Leased Premises contain approximately 38,056 square feet of rentable floor area which Landlord and Tenant agree is the floor area on which the Rent and Operating Expenses set forth in Article III are based.

II. TERM

A. Commencement, Renewal and Termination of Lease.

The lease term shall commence at 12:01 a.m. on July 1, 2005, and, unless earlier terminated, as herein provided, the term of the Lease shall be for ten years from the commencement date. The sum of \$43,164.18 (included in monthly payments under the prior lease) shall be applied against the immediately succeeding monthly rents until this amount is exhausted.

B. Possession.

1. Possession shall be delivered on the commencement date of the Lease. Tenant's

taking possession of the Leased Premises on commencement of the term shall constitute Tenant's acknowledgement that the Leased Premises are in good condition and that all provisions of the existing lease under which Tenant is holding over shall be deemed replaced by the applicable terms of this Lease Agreement.

C. Renewal.

1. If Tenant is in compliance with all terms and conditions of the Lease Agreement and upon not less than twelve (12) months notice prior to the end of the ten year lease term, Tenant provides written notice to Landlord of its desire to negotiate the terms and conditions of a new lease for the Leased Premises, then upon receipt of such notice, Landlord and Tenant agree to negotiate the terms and conditions of a new lease in good faith for a period of 45 days. If Landlord and Tenant are unable to agree on the terms and conditions of a new lease for the Leased Premises by the end of 45 days then Landlord's obligation hereunder will terminate.

D. Termination.

1. Tenant shall have the right to terminate the Lease at the end of the sixtieth month (60th) of the ten year lease term and if not so terminated then Tenant shall have the right to terminate the Lease at the end of the eighty-fourth month (84th) of the lease term provided Tenant notifies Landlord of its intent to terminate by written notice to Landlord twelve months prior to the designated termination date. As a condition of said termination, Tenant shall pay to Landlord on or before the termination date all of Landlord's unamortized costs (using a 8% per annum amortization rate) including; leasing costs, reimbursement of tenant improvement payments (\$50,000) paid by Landlord, commissions (\$142,710), reasonable attorneys fees relating to the releasing of the Premises, plus three (3) months of Monthly Base Rent under the applicable rent schedule.

III. RENT AND OPERATING EXPENSES

A. Base Rent.

1. Base rent for the first five years of this Lease, shall be \$10.50 a square foot for 38,056 square feet, for a Base Rent of \$1,997,940 for the first five years.

2. If Tenant does not terminate the Lease at the end of the first five years, then Base Rent for the sixth year will be \$10.75 per square foot (\$409,102 per annum), Base Rent for the seventh year will be \$11.00 per square foot (\$418,616 per annum), and Base Rent for the eighth year will be \$11.25 per square foot (\$428,130 per annum).

3. If Tenant does not terminate the Lease at the end of eighty-four months, then Base Rent for the ninth year will be \$11.50 per square foot (\$437,644 per annum) and Base Rent for the tenth year will be \$11.75 per square foot (\$447,158 per annum).

4. Aggregate Base Rent for the full ten year term of the Lease is \$4,138,590.00.

5. All Base Rent payable hereunder shall be paid in equal monthly installments ("Monthly Base Rent"), without setoff or deduction, in advance, on or before the first day of each month during the term of this Lease at the address of the Landlord set forth in Article XXII, or such other address or addresses as Landlord may hereafter determine by notice to the Tenant.

6. Rent for any period during the term hereof which is for less than one (1) month, if any, shall be a prorated portion of the monthly installment herein, based on a thirty (30) day month.

B. Operating Expenses.

1. Tenant shall pay one hundred percent (100%) of the operating expenses paid or incurred by Landlord for the operation and/or maintenance of the Leased Premises.

2. The term Operating Expenses is defined as direct costs of operation and maintenance, as determined by standard practices, and shall include the following costs by way of illustration, but not be limited to: real property taxes and assessments for the Leased Premises and Lot 2; management fee equal to one percent (1%) of annual Base Rent; water and sewer charges; security systems and alarms; insurance premiums; utilities; janitorial services; snow removal; labor; window cleaning; air conditioning and heating maintenance; elevator maintenance; supplies; materials, equipment, and tools; including maintenance, costs, and upkeep of all landscaping, including Lot 3, parking areas, sidewalks, and all Building repairs except repair of the roof or structure.

3. Operating Expenses shall not include depreciation on the Building, loan payments, executive salaries or real estate brokers' commissions. All Operating Expenses over which Landlord has any control shall be reasonable and competitive with such costs and expenses in similar buildings in Boulder, Colorado.

C. Effect of Termination. Except as expressly provided to the contrary herein, in the event this Agreement is terminated by either party in accordance with the terms of this Agreement, no further Base Rent or operating costs shall be payable by Tenant with respect to any period beginning on the date of the later of (i) such termination and (ii) Tenant's vacancy of the Premises.

IV. TENANT'S CONSTRUCTION

Tenant shall have the right to do all of its own construction, subject only to Landlord's reasonable approval of plans for either the initial premises, or future renovation work. Tenant shall not be charged any landlord supervisory, management, or review fees for any of Tenants initial, ongoing or future construction. All plans submitted by the Tenant for initial work, as well as subsequent renovations shall be approved or deemed approved within ten (10) business days by landlord. Landlord shall make any comment or request any change immediately after submission of plans, further, Landlord shall notify Tenant of any item that Landlord will want restored.

IV. TENANT IMPROVEMENT ALLOWANCE

Landlord will provide Tenant with fifty thousand dollars (\$50,000) as an allowance for tenant improvements. Tenant shall have the right to apply Landlord's contribution towards both hard and soft costs such as design fees, engineering fees, furniture and relocation costs. Any unused portion of the fifty thousand dollar contribution can be used by Tenant for payment of rent.

V. CAPITAL ITEMS, LANDLORD REPAIRS

Landlord warrants for the ten (10) year term of the lease and any agreed upon extensions of the lease that the roof, structure and mechanical systems such as HVAC units, boilers (related to the building) shall have a useful life of at least the length of the lease. Should any or these items fail and need to be repaired or replaced during the term of the lease, the Landlord, at its sole cost and expense shall bear the cost to replace them.

VI. ADA & LIFE SAFETY

Landlord shall be responsible for the costs for compliance of the premises, base building, common areas, bathrooms, drinking fountains and elevators related to the Americans with Disabilities Act (ADA), and any and all other codes related to life safety.

VII. TAXES - PERSONAL PROPERTY RESPONSIBILITY

Tenant shall be responsible and pay for any and all taxes and/or assessments levied and/or assessed against any furniture, fixtures, equipment and items of a similar nature installed and/or located in or about the Leased Premises by Tenant.

VIII. USE

A. Permitted Uses.

Tenant shall use the Leased Premises for any manufacturing and office-warehouse use permitted by the City of Boulder on such Leased Premises.

B. Limitations on Use.

1. Tenant shall not do, bring, or keep anything in or about the Leased Premises that will cause a cancellation of any insurance covering the Leased Premises. If the rate of any insurance carried by Landlord is increased as a result of Tenant's use, upon timely notice by Landlord, Tenant shall pay to Landlord within 10 days before the date Landlord is obligated to pay a premium on the insurance, a sum equal to the difference between the original premium and the increased premium.

2. Tenant shall comply with all laws concerning the Leased Premises or Tenant's use of the Leased Premises. Landlord warrants conformance with all such laws at the commencement date of this Lease.

3. Tenant shall not use the Leased Premises in any manner that will constitute waste or nuisance in the Building, nor shall Tenant overload the floors or any part of the Leased Premises in a manner exceeding the floor loading restrictions of the Uniform Building Code as adopted by the City of Boulder.

IX. MAINTENANCE

A. Landlord's Maintenance.

Landlord, at its cost, shall maintain, in good condition, (i) the structural parts of the Building, which structural parts include only the foundations, bearing and exterior walls (including glass and doors), sub-flooring, and roof; (ii) the unexposed electrical, plumbing, and sewage systems, including, without limitation, the lighting fixtures installed by Landlord (but not including replacement of bulbs, tubes or ballasts) and including those portions of the systems lying outside the Leased Premises; and (iii) window frames, gutters, and roof drains on the Building, provided, however, if the maintenance or repairs are required in part or in whole by the neglect, fault or omission of any duty by the Tenant, its agents, servants, employees, and invitees, the Tenant shall, at Tenant's sole cost and expense, make such repairs and maintenance as are necessary to restore the Leased Premises to a good condition.

B. Tenant's Maintenance.

Except as provided in the previous subparagraph, Tenant, at its cost, shall maintain, in good condition, all portions of the Leased Premises, including, without limitation, all of Tenant's personal property, carpet, and flooring. Tenant shall be liable to any damage to the Building resulting from the acts or omissions of Tenant or its authorized representatives.

X. ALTERATIONS

A. Tenant shall not make any structural or exterior alterations to the Leased Premises without Landlord's consent. Tenant, at its cost, shall have the right to make non-structural alterations to the interior of the Leased Premises as part of its initial tenant finish that Tenant requires in order to conduct its business on the Leased Premises. Tenant shall submit reasonably detailed final plans and specifications and working drawings of the proposed Tenant finish fifteen (15) days before it intends to commence the alterations. Plans submitted will be objected to by Landlord within ten (10) days after submission and shall be deemed approved if there are no objections. The alterations shall be approved by all appropriate governmental agencies and all applicable permits and authorizations shall be obtained before commencement. Any alterations made shall remain on and be surrendered with the Leased Premises on expiration or termination of the term of this Lease, unless otherwise agreed in writing.

XI. MECHANIC'S LIENS

A. Tenant's Obligations.

Tenant shall pay all costs for construction done by it or caused to be done by it on the Leased Premises as permitted by this Lease. Tenant shall keep the Leased Premises, the Building, other improvements, and the Land free and clear of all mechanic's liens resulting from construction by or for Tenant. Tenant shall have the right to contest the correctness or validity of any such lien if, upon demand by Landlord, Tenant procures a bond in an amount equal to one and one-half times the amount of the claim of lien or makes some other financial arrangement acceptable to Landlord to protect Landlord's interests. Landlord shall require a bond, or other financial arrangement with Tenant, only at such time that the lien claimant commences a foreclosure action on the lien. Tenant shall be responsible for removing any filed liens affecting the property from the real estate records.

B. Tenant's Contractors.

Landlord shall have the right to require Tenant's contractor(s) to furnish to both Tenant and Landlord adequate lien waivers on work completed. Landlord reserves the right to post notices in Leased Premises that Landlord is not responsible for payment of work performed and that Landlord's interest is not subject to any lien.

XII. UTILITIES

Tenant shall pay all gas and electric utilities and services supplied to the Building, together with any taxes thereon. Tenant shall make all arrangements for and pay all costs of telephone services furnished to or used by it. The Building has separate meters in various locations which can be utilized if, during the term of the Lease, Tenant, with Landlord's approval, sublease any portion of the Building using a separate meter.

XIII. LIABILITY, INDEMNITY AND INSURANCE

A. Indemnity.

Each Party will indemnify and hold the other Party harmless from and against any and all claims, losses, expenses, costs, judgments, and/or demands arising from the conduct of the indemnifying Party in or about the Leased Premises and/or on account of any operation or action by such Party and/or from and against all claims arising from any breach or default on the part of such Party or any act of negligence of such Party, its agents, contractors, servants, employees, licensees, or invitees, or any accident, injury or death of any person or damage to any property in or about the Leased Premises. Each Party's obligation to indemnify and hold the other Party harmless shall include the indemnified Party's reasonable attorney's fees, and shall be limited to the sum that exceeds the amount of insurance proceeds, if any, received by the indemnified Party.

B. Public Liability and Property Damage Insurance.

Tenant, at its costs, shall maintain general liability insurance, with liability limits of not less than \$1,000,000.00 for each occurrence of bodily injury and \$200,000.00 property damage, insuring against all liability of Tenant and its authorized representatives arising out of any connection with Tenant's use or occupancy of the Leased Premises. All general liability insurance shall ensure performance by Tenant of the indemnity provisions of this Article. Both parties shall be named as co-insureds, and the Tenant shall deliver certificates of insurance to the Landlord.

C. Tenant's Fire Insurance.

Tenant, at its cost, shall maintain on all of its personal property in, on or about the Leased Premises, a policy of standard fire and extended coverage insurance, to the extent it deems necessary and appropriate. Tenant understands that Landlord has no insurance covering Tenant's personal property.

D. Fire Insurance on Building and Other Improvements.

Landlord shall maintain on the Building and other improvements in which the Leased Premises are located a policy of standard fire and all risks coverage insurance to the extent of at least one hundred percent (100%) of full replacement value. The insurance policy shall be issued in the names of Landlord, and Landlord's lender, as their interests appear. The insurance policy shall also provide coverage for rental value insurance, including all operating expenses, for a period of one year. The insurance policy shall provide that all proceeds shall be made payable to Landlord. The cost of such insurance shall be passed on to Tenant as part of the Direct operating expenses for the Building pursuant to Article IV.

E. Waiver of Subrogation.

The parties release each other, and their respective authorized representatives, from any claims for damages to any person or to the Leased Premises, and to the fixtures, personal property, Tenant's improvements, and alterations of either Landlord or Tenant in or on the Leased Premises that are caused by or result from risks insured against under any insurance policies carried by the parties and in force at the time of such damage. Each party shall cause each insurance policy obtained by it to provide that the insurance company waives all rights of recovery by way of subrogation against either party in connection with any damage covered by any policy.

F. Other Insurance Requirements.

All the insurance required under this Lease shall be issued with insurance companies authorized to do business in the State of Colorado, and the Tenant will endeavor to notify the Landlord within thirty (30) days' written notice before of any applicable policy terminations.

XIV. PROTECTIVE COVENANTS

Tenant shall faithfully observe and comply with the covenants, conditions, and restrictions set forth in a Declaration of Covenants of Aspen Industrial Park Subdivision recorded with the Boulder County Clerk and Recorder on November 11, 1979 (the "Covenants") as Reception No. 363409, as amended. Tenant hereby acknowledges having received a copy of such Covenants with the execution of this Lease. Landlord reserves the right from time to time to make all reasonable modifications to said Covenants. The additions and modifications to those Covenants shall be binding upon Tenant upon delivery of a copy of them to Tenant. Landlord shall not be responsible to Tenant for the nonperformance of any of said Covenants by any other tenants within the Subdivision.

XV. DESTRUCTION

A. Risk Covered By Insurance.

1. If, during the term, the Leased Premises are totally or partially destroyed from a risk covered by the insurance described in Article XIII, rendering the Leased Premises totally or partially inaccessible or unusable, Landlord shall restore the Leased Premises and other improvements in which the Leased Premises are located to substantially the same condition as they were in immediately before destruction. Such destruction shall not terminate this Lease. If the existing laws do not permit the restoration, either party can terminate this Lease immediately by giving notice to the other party. Furthermore, if such restoration can not be accomplished within 90 days from the date of destruction, either party shall have the option to terminate this Lease immediately by giving notice to the other party.

2. If the projected cost of restoration exceeds the amount of proceeds received from the insurance required under Article XIII, Landlord can elect to terminate this Lease by giving notice to Tenant within fifteen (15) days after determining that projected restoration costs will exceed the insurance proceeds. In the case of destruction to the Leased Premises only, if Landlord elects to terminate this Lease, Tenant, within fifteen (15) days after receiving Landlord's notice to terminate, can elect to pay to Landlord, at the time Tenant notifies Landlord of its election, the difference between the amount of insurance proceeds and the cost of restoration, in which case Landlord shall restore the Leased Premises. Landlord shall give Tenant satisfactory evidence that all sums contributed by Tenant as provided in this paragraph have been expended by Landlord in paying the cost of restoration. If Landlord elects to terminate this Lease and Tenant does not elect to contribute toward the cost of restoration as provided in this paragraph, this Lease shall terminate immediately.

B. Risk Not Covered By Insurance.

1. If, during the term, the Leased Premises are totally or partially destroyed from a risk not covered by the insurance described in Article XIII, rendering the Leased Premises totally or partially inaccessible or unusable, Landlord shall restore the Leased Premises to substantially the same condition as they were in immediately before destruction. Such destruction shall not terminate this Lease. If the existing laws do not permit the restoration, either party can terminate

this Lease immediately by giving notice to the other party. Furthermore, if such restoration can not be accomplished within 90 days from the date of destruction, either party shall have the option to terminate this Lease immediately by giving notice to the other party.

2. If the projected cost of restoration exceeds ten percent (10%) of the projected value following restoration of the Leased Premises, Landlord can elect to terminate this Lease by giving notice to Tenant within fifteen (15) days after determining projected restoration costs and replacement value but no more than 45 days after defining event.

3. If Landlord elects to terminate this Lease, Tenant, within fifteen (15) days after receiving Landlord's notice to terminate, can elect to pay to Landlord, at the time Tenant notifies Landlord of its election, the difference between ten percent (10%) of the projected value of the Leased Premises following destruction and the actual costs of restoration, in which case Landlord shall restore the Leased Premises. Landlord shall give Tenant satisfactory evidence that all sums contributed by Tenant as provided in this paragraph have been expended by Landlord in paying the cost of restoration.

4. If Landlord elects to terminate this Lease and Tenant does not elect to perform the restoration or contribute toward the cost of restoration as provided in this paragraph, this Lease shall terminate.

C. Right to Terminate on Partial Destruction.

If there is destruction to the Leased Premises which exceeds thirty-three and one-third percent (33 1/3%) of the then replacement value of the Leased Premises Building and other improvements from any risk, Landlord can elect to terminate this Lease whether or not the Leased Premises are destroyed.

D. Abatement or Reduction of Rent and Operating Costs.

In the event of destruction of the Leased Premises, there shall be an abatement or reduction of rent and operating costs, between the date of destruction and the date of completion of restoration, based on the extent to which the destruction interferes with Tenant's use of the Leased Premises.

In the event the lease is terminated due to an event of destruction, rent and operating costs will cease as of date of termination.

XVI. CONDEMNATION

A. Total Taking.

If, during the term or during the period of time between the execution of the Lease and the date the term commences, there is any transfer by Landlord to any condemning governmental agency, either under threat of condemnation, during legal proceedings for condemnation, or by

exercise of the power of condemnation, and the Leased Premises are totally taken by such condemnation, this Lease shall terminate on the date of taking.

B. Partial Taking.

1. If any portion of the Leased Premises is taken by condemnation, this Lease shall remain in effect, except that Tenant can elect to terminate this Lease if the remaining portion is rendered unsuitable for Tenant's continued use of the Leased Premises. If Tenant elects to terminate this Lease Tenant must exercise its right to terminate by giving notice to Landlord within thirty (30) days after Landlord has given notice to Tenant of the nature and the extent of the taking. If Tenant does not terminate this Lease within the thirty-day period, this Lease shall continue in full force and effect, except that Base monthly rent shall be reduced pursuant to this Article.

2. Subject to the preceding paragraph, if the Building or other improvements which are a part of the Leased Premises is taken by condemnation, this Lease shall remain in full force and effect, except that if fifty percent (50%) or more of the Building or other improvements which are a part of the Leased Premises is taken by condemnation, Landlord shall have the election to terminate this Lease pursuant to this paragraph. If Landlord elects to terminate this Lease, it must terminate by giving notice to Tenant within thirty (30) days after the nature and the extent of the taking have been finally determined. If this Lease is not terminated within the thirty-day period, it shall continue in full force and effect, except Base monthly rent shall be reduced pursuant to this Article.

3. Nothing in this paragraph shall preclude Tenant from making an independent claim against the condemning authority for damages resulting from condemnation.

C. Effect on Rent.

If any portion of the Leased Premises is taken by condemnation and this Lease remains in full force and effect, on the date of taking the Base monthly rent shall be reduced by an amount that is in the same ratio to Base monthly rent as the total number of square feet in the Leased Premises taken bears to the total number of square feet in the Leased Premises immediately before the date of taking.

D. Distribution of Award.

Compensation, sums, or anything of value awarded, paid or received on a total or partial condemnation shall be distributed and paid to Landlord and Tenant based upon the relative loss between the parties with respect to the property that is so condemned and Tenant's capital improvements to the Leased Premises subsequent to the commencement date of this Lease. Nothing in this paragraph shall preclude Tenant from making its own independent claim for a condemnation award from the condemning authority.

XVII. ENVIRONMENTAL MATTERS

A. Definitions.

1. Hazardous Material. Hazardous Material means any substance:

(a) which is or becomes defined as a "hazardous material," "hazardous waste," "hazardous substance," "regulated substance," pollutant or contaminant under any federal, state or local statute, regulation, rule, order, or ordinance or amendments thereto, including petroleum and petroleum products; or

(b) the presence of which on the Leased Premises causes or threatens to cause a nuisance upon the Leased Premises or to adjacent properties or poses or threatens to pose a hazard to the health or safety of persons on or about the Leased Premises or requires investigation or remediation under any federal, state or local statute, regulation, rule, order, or ordinance or amendments thereto.

2. Environmental Requirements. Environmental Requirements means all applicable present and future statutes, regulations, rules, ordinances, codes, licenses, permits, orders, approvals, plans, authorization, concessions, franchises, and similar items, of all governmental agencies, departments, commissions, boards, bureaus, or instrumentalities, of the United States, states and political subdivisions thereof and all applicable judicial, administrative, and regulatory decrees, judgments, and orders relating to the protection of human health or the environment.

3. Environmental Damages. Environmental Damages means all claims, judgments, injuries, damages (including without limitation damages for diminution in the value of the Leased Premises and adjoining property and for the loss of business from the Leased Premises and adjoining property), losses, penalties, fines, liabilities (including strict liability), encumbrances, liens, costs, and expenses of investigation and defense of any claim, and of any good faith settlement of judgment, or whatever kind or nature, contingent or otherwise, matured or unmatured, foreseeable or unforeseeable, including without limitation reasonable attorney's fees and disbursements and consultants' fees, any of which are incurred at any time as a result of the existence of "Hazardous Material" upon, about, beneath the Leased Premises or migrating or threatening to migrate to or from the Leased Premises or the existence of a violation of "Environmental Requirements" pertaining to the Leased Premises.

B. Obligation to Indemnify Defend and Hold Harmless.

1. Landlord warrants that there are, and shall take all reasonable steps to ensure that there shall not be (with respect to Landlord and its employees, agents, invitees and other tenants) during the term of Tenant's lease, no existing hazardous materials or substances within the Leased Premises or Lot 3, other than those known and generated by Tenant under its prior lease, and will provide documentation for Tenant's review supporting this warranty.

2. Tenant, its successors, assigns and guarantors, agree to indemnify, defend, reimburse and hold harmless the following persons from and against any and all "Environmental Damages" arising from activities of Tenant or its employees, agents, or invitees which (a) result in the presence of "Hazardous Materials" upon, about or beneath the Leased Premises or migrating to or from the Leased Premises, or (b) result in the violation of any "Environmental Requirements" pertaining to the Leased Premises and the activities thereon:

- (a) Landlord;
- (b) directors, officers, shareholders, employees and partners of the Landlord only.

3. This obligation shall include, but not be limited to, the burden and expense of defending all claims, suits and administrative proceedings (with counsel reasonably approved by the indemnified parties), and conducting all negotiations of any description, and paying and discharging, when and as the same become due, any and all judgments, penalties or other sums due against such indemnified persons. Tenant, at its sole expense, may employ additional counsel of its choice to associate with counsel representing Landlord.

4. The obligations of Tenant in this section shall survive the expiration or termination of this Lease.

C. Notification.

If Tenant shall become aware of or receive notice or other communication concerning any actual, alleged, suspected or threatened violation of "Environmental Requirements," or liability of Tenant for "Environmental Damages" in connection with the Leased Premises or past or present activities of any person thereon, or that any representation set forth in this Agreement is not or is no longer accurate, then Tenant shall deliver to Landlord, within ten days of the receipt of such notice, or communication or correcting information by Tenant, a written description of such information or condition, together with copies of any documents evidencing same.

D. Negative Covenants.

1. No Hazardous Material on Leased Premises. Except in strict compliance with all Environmental Requirements, Tenant shall not cause, permit or suffer any "Hazardous Material" to be brought upon, treated, kept, stored, disposed of, discharged, released, produced, manufactured, generated, refined or used upon, about or beneath the Leased Premises or any portion thereof by Tenant, its agents, employees, contractors, tenants or invitees, or any other person without prior written consent of Landlord.

2. No Violations of Environmental Requirements. Tenant shall not cause, permit or suffer the existence or the commission by Tenant, its agents, employees, contractors, or invitees, or by any other person of a violation of any "Environmental Requirements" upon, about or beneath the Leased Premises or any portion thereof.

E. Right to Inspect.

Subject to the notice, accompaniment, and confidentiality provisions contained herein, Landlord shall have the right in its sole and absolute discretion, but not the duty, to enter and conduct an inspection of the Leased Premises giving Tenant a minimum of 24 hours advanced notice to determine whether Tenant is complying with the terms of this Lease, including but not limited to the compliance of the Leased Premises and the activities thereon with "Environmental Requirements" and the existence of "Environmental Damages." Tenant hereby grants to Landlord the right to enter the Leased Premises during normal business hours and to perform such tests on the Leased Premises as are reasonably necessary in the opinion of Landlord to conduct such reviews and investigations. Landlord shall use reasonable efforts to minimize interference with the business of Tenant but Landlord shall not be liable for any interference caused thereby. Tenant shall provide to Landlord copies of all manifests, permits, reports, test results, and analyses submitted to any environmental agency within ten (10) days of submittal.

F. Right to Remediate.

Should Tenant fail to perform or observe any of its obligations or agreements pertaining to "Hazardous Materials" or "Environmental Requirements," then Landlord shall have the right, but not the duty, without limitation upon any of the rights of Landlord pursuant to this Lease, to enter the Leased Premises personally or through its agents, consultants or contractors and perform the same. Tenant agrees to indemnify Landlord for the costs thereof and liabilities therefrom as set forth in section A above.

XVI. ASSIGNMENT/SUBLEASE

A. Prohibition.

Tenant shall not voluntarily assign or encumber its interest in this Lease or in the Leased Premises, or sublease all or any part of the Leased Premises, or allow any other person or entity (except Tenant's authorized representatives) to occupy or use all or any part of the Leased Premises, without first obtaining the Landlord's written consent, which shall not be unreasonably withheld, conditioned or delayed. Any assignment, encumbrance, or sublease without Landlord's consent shall be voidable and, at Landlord's election, shall constitute a default. No consent to any assignment, encumbrance or sublease shall constitute a further waiver of the provisions of this paragraph.

B. Assignment and Subletting.

Notwithstanding paragraph A above, Tenant shall have the right without Landlord's approval to sublet or assign the premises or any portion thereof to any successor of Tenant resulting from a merger or consolidation of Tenant and to any entity under the common control of Tenant. Further, Tenant shall have the right to sublet or assign part or all of the premises with Landlord's prior written consent, which shall not be unreasonably withheld or delayed, to unaffiliated third parties. Landlord shall not have the right of recapture. Tenant shall be able to retain 100% of any sublease profits after deduction of reasonable subleasing costs.

C. Involuntary Assignment.

No interest of Tenant in this Lease shall be assignable by operation of law by assignment for the benefit of creditors, by a writ of attachment or execution, or by any proceeding or action to which Tenant is a party in which a receiver is appointed with authority to take possession of the Leased Premises. Any of such actions shall constitute a default by Tenant and Landlord shall have the right to elect to terminate this Lease, in which case this Lease shall not be treated as an asset of Tenant.

XVII. DEFAULT

A. Tenant's Default.

The occurrence of any of the following shall constitute a default by Tenant:

1. Failure to pay rent when due, if the failure continues for five (5) business days after notice has been given to Tenant.

2. Failure to perform any other provision of this Lease if the failure to perform is not cured within thirty (30) days after notice has been given to Tenant. If the default cannot reasonably be cured within thirty days, Tenant shall not be in default of this Lease if Tenant commences to cure the default within the thirty day period and diligently and in good faith continues to cure the default.

Notices given under this paragraph shall specify the alleged default and the applicable Lease provisions, and shall demand that Tenant perform the provisions of this Lease or pay the rent that is in arrears, as the case may be, within the applicable period of time, or quit the Leased Premises. No such notice shall be deemed a forfeiture or a termination of this Lease unless Landlord so elects in the notice.

B. Landlord's Remedies.

Landlord shall have the following remedies if Tenant commits a default. These remedies are not exclusive; they are cumulative in addition to any remedies now or later allowed by law.

1. Tenant's Right to Possession Not Terminated. Landlord can continue this Lease in full force and effect, and the Lease will continue in effect as long as Landlord does not terminate Tenant's right to possession, and Landlord shall have the right to collect rent when due. During the period Tenant is in default, Landlord can enter the Leased Premises and relet them, or any part of them, to third parties for Tenant's account. Tenant shall be liable immediately to Landlord for all reasonable costs Landlord incurs in re-letting the Leased Premises, including, without limitation, broker's commissions, expenses of remodeling the Leased Premises required by the reletting, and like costs. Re-letting can be for a period shorter or longer than the remaining term of this Lease. Tenant shall pay to Landlord the rent due under this Lease on the dates the rent is due, less the rent Landlord receives from any re-letting. No act

by Landlord allowed by this paragraph shall terminate this Lease unless Landlord notifies Tenant that Landlord elects to terminate this Lease. After Tenant's default and for as long as Landlord does not terminate Tenant's right to possession of the Leased Premises, if Tenant obtains Landlord's consent, Tenant shall have the right to assign or sublet its interest in this Lease, but Tenant shall not be released from liability. Landlord's consent to a proposed assignment or subletting shall not be unreasonably withheld.

2. Termination of Tenant's Right to Possession. Landlord can terminate Tenant's right to possession of the Leased Premises at any time during default. No act by Landlord other than giving notice to Tenant shall terminate this Lease. Landlord's efforts to re-let the Leased Premises shall not constitute a termination of Tenant's right to possession. On termination, Landlord has the right to recover from Tenant: (a) the worth at the time of the award of the unpaid rent that had been earned at the time of the termination of lease; (b) the worth at the time of the award of the amount by which the unpaid rent that would have been earned after the date of the termination of this Lease until the time of the award exceeds the amount of the loss of rent that Tenant proves could have been reasonably avoided; (c) the worth at the time of the award of the amount by which the unpaid rent for the balance of the term after the time of the award exceeds the amount of loss of rent that Tenant proves could have been reasonably avoided; and (d) courts costs.

3. Landlord's Right to Cure. Landlord, at any time after Tenant commits a default, can cure the default at Tenant's cost. If Landlord at any time, by reason of Tenant's default, pays any sum or does any act that requires the payment of any sum, the sum paid by Landlord shall be due immediately from Tenant to Landlord at the time the sum is paid, and if paid at a later date shall bear interest at the rate of twelve percent (12%) per annum from the date the sum is paid by Landlord until Landlord is reimbursed by Tenant. The sum, together with interest on it, shall be additional rent.

C. Late Charges. Tenant hereby acknowledges that late payment by Tenant to Landlord of rent due will cause Landlord to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult to ascertain. The costs include, but are not limited to, processing and accounting charges, and late charge which may be imposed upon Landlord by terms of any mortgage or trust deed covering the Leased Premises. Accordingly, if any installment of rent or of a sum due from Tenant shall not be received by Landlord or Landlord's designee within fifteen (15) days after the amount is due, Tenant shall pay Landlord a late charge equal to five percent (5%) multiplied by the amount of past due rent. The parties agree that the late charges represent a fair and reasonable estimate of the cost that Landlord will incur by reason of the late payment by Tenant. Acceptance of such late charges by the Landlord shall in no event constitute a waiver of Tenant's default with respect to such overdue amount, nor prevent Landlord from exercising any of the other rights and remedies granted under of this Lease or by operation of law, including Landlord's right to collect interest on past due sums.

D. Interest on Unpaid Rent. Rent not paid when due shall bear interest at a rate of twelve percent (12%) per annum from the due date until paid.

E. Tenant's Right to Cure Landlord's Default. Landlord shall be in default of this Lease if it fails or refuses to perform any provision of this Lease that it is obligated to perform if the failure to perform is not cured within thirty (30) days after notice of the default has been given by Tenant to Landlord. If the default cannot reasonably be cured within thirty days, Landlord shall not be in default of this Lease if Landlord commences to cure the default within the thirty day period and diligently and in good faith continues to cure the default.

Tenant, at any time after Landlord commits a default, can cure the default at Landlord's cost. If Tenant, at any time, by reason of Landlord's default, pays any sum or does any act that requires the payment of any sum, the sum paid by Tenant shall be due immediately from Landlord to Tenant at the time the sum is paid, and if paid at a later date shall bear interest at the rate of twelve percent (12%) per annum from the date the sum is paid by Tenant until Tenant is reimbursed by Landlord. Tenant shall have the right to withhold from future rent due any sums Tenant has paid.

XVIII. SIGNS

All signs and advertising displayed in and about the Leased Premises, including signs and advertising displayed in, or visible through, windows shall be such only as to advertise the business carried on upon the Leased Premises, and Landlord shall control the character and size thereof. No sign or advertising shall be displayed prior to written consent by Landlord and no awning shall be installed or used on the exterior of the Building in which the Leased Premises are a part without prior written consent of Landlord. Tenant shall not install any exterior signs nor any interior signs intended to be displayed through exterior windows. Landlord shall install and maintain a main building directory and the expenses of such directory shall be passed on to Tenant as part of the Operating Expenses for the Building pursuant to Article IV, paragraph B.

XIX. LANDLORD'S ACCESS

Tenant shall permit Landlord, Landlord's mortgagees and their agents to enter the Leased Premises at reasonable times for the purpose of inspecting the same, of making repairs, additions, or alterations thereto or to the Building, and of showing the Leased Premises to prospective purchasers and lenders, and to prospective tenants during the last ninety (90) days of Tenant's lease term. At any time during the last ninety (90) days of Tenant's lease term Landlord may place signs upon the Leased Premises advertising the availability of the same. Landlord acknowledges that Tenant's business involves proprietary information, materials, and processes of a highly confidential nature. Accordingly, any entry into the Leased Premises by Landlord or anyone claiming by, through, or under Landlord, shall require at least twenty-four (24) hours' advance notice to Tenant with the names and business affiliations of those persons who desire to enter the Leased Premises. All persons entering the Leased Premises may be required to sign in and provide appropriate identification, and may be escorted by a representative of Tenant. Tenant shall have the right to deny entry to any individual based upon Tenant's reasonable belief that permitting entry by such individual could compromise Tenant's confidential or proprietary information. Landlord reserves the right of free access at all times to the roof of the Building. Tenant shall not use the roof for any purpose without the written consent of the Landlord.

XX. SUBORDINATION AND ESTOPPEL

A. Subordination Attornment.

Upon request of the Landlord, Tenant will, in writing, subordinate its rights hereunder to the lien of any first mortgage or first deed of trust to any bank, insurance company or other lending institution, now or hereafter in force against the Leased Premises upon any building hereafter placed upon the land of which the Leased Premises are a part, and to all advances made or hereafter to be made upon the security thereof.

In the event any proceedings are brought for foreclosure or in the event of the exercises of the power of sale under any mortgage or deed of trust made by the Landlord covering the Leased Premises, the Tenant shall attorn to the purchaser upon any such foreclosure of sale and recognize such purchases as the Landlord under this Lease.

The provisions of this Article to the contrary notwithstanding, and so long as Tenant is not in default hereunder and attorns to the purchaser, this Lease shall remain in full force and effect for the full term hereof, and tenant shall peacefully and quietly have, hold and enjoy the Leased Premises free from claims of Landlord, or those claiming under Landlord, subject to the provisions of this Lease.

B. Estoppel Certificates.

Each party, within ten (10) days after notice from the other party, shall execute and deliver to the other party, in recordable form, a certificate stating that this Lease is unmodified and in full force and effect or in full force and effect as modified, and stating the modifications. The certificate also shall state the amount of minimum monthly rent, the dates to which the rent has been paid in advance, and the amount of any security deposit or prepaid rent.

XXI. FINANCIAL STATEMENTS

A current financial statement of Tenant is publicly available through the Securities and Exchange Commission..

XXII. NOTICE

Any notice or communication that either party desires or is required to give to the other party shall be in writing and either served personally or sent prepaid by first class mail. All notices and demands by the Landlord to the Tenant shall be sent addressed to the Tenant, MKS Instruments, Inc., Attention, Ed Fisher, at 5330 Sterling Drive, Boulder, Colorado 80301-2351, and to MKS Instruments, Inc., Attention, Carl Wollenberg, at 90 Industrial Way, Wilmington, Massachusetts 01887, or to such other place as Tenant may from time to time designate in a notice to Landlord. All notices and communications by the Tenant to the Landlord shall be sent addressed to the Landlord: Aspen Industrial Park Partnership, LLLP, ATTN: Christopher F. Stewart, 560 University Avenue, Boulder, Colorado 80302, or to such other place as Landlord

may from time to time designate in a notice to Tenant. Notice shall be deemed communicated within forty-eight (48) hours from the time of mailing if mailed as provided in this paragraph.

XXIII. WAIVER

No delay or omission in the exercise of any right or remedy of Landlord on any default of Tenant shall impair such a right or remedy or be construed as a waiver. The receipt and acceptance by Landlord of delinquent rent shall not constitute a waiver of any other default; it shall constitute only a waiver of timely payment for the particular rent payment involved. No act or conduct of Landlord, including, without limitation, the acceptance of the keys to the Leased Premises, shall constitute an acceptance of the surrender of the Leased Premises by Tenant before the expiration of the term. Only a notice from Landlord to Tenant shall constitute acceptance of the surrender of the Leased Premises and accomplish a termination of the Lease. Any waiver by Landlord of any default must be in writing and shall not be deemed a waiver of any other default concerning the same or any other provision of this Lease.

XXIV. SALE OF LEASED PREMISES

In the event of any sale of the Leased Premises, Landlord shall be and is hereby entirely freed and relieved of, all liability under any and all of its covenants and obligations contained in or derived from this Lease arising out of any act, occurrence or omission occurring after the consummation of such sale; and the purchaser, at such sale or any subsequent sale of the Leased Premises shall be deemed, without any further agreement between the parties or their successors in interest or between the parties and any such purchaser, to have assumed and agreed to carry out any and all of the covenants and obligations of the Landlord under this Lease.

XXV. ATTORNEY'S FEES

If either party commences an action against the other party arising out of or in connection with this Lease, the prevailing party shall be entitled to have and recover from the losing party reasonable attorneys fees and costs of suit.

XXVI. SURRENDER OF LEASED PREMISES AND HOLDING OVER

On expiration of the term, Tenant shall surrender to Landlord the Leased Premises and all Tenant's improvements and alterations in good condition (ordinary wear and tear excepted), except for alterations that Tenant is obligated to remove. Tenant shall perform all restoration made necessary by the removal of any alterations prior to the expiration of the term.

If Tenant, with Landlord's consent, remains in possession of the Leased Premises after expiration of the term, or after the date in any notice given by Landlord to Tenant terminating this Lease, such possession by Tenant shall be deemed to be a month-to-month tenancy terminable on thirty (30) days' notice given at any time by either party. During any such month-to-month tenancy, Tenant shall pay all rent required by this Lease, and all provisions of this Lease except those pertaining to term and rent shall apply to the month-to-month tenancy.

If Tenant shall remain in possession of the Leased Premises after the termination of this Lease, whether by expiration of the Lease term or otherwise, without any written agreement to such possession, then Tenant shall be deemed a month-to-month tenant and rent rate during such holdover tenancy shall be equivalent to double the monthly rent paid for the last month of tenancy under this Lease. No holding over by Tenant shall operate to renew or extend this Lease without the written consent of Landlord to such renewal or extension having been first obtained. Tenant shall indemnify Landlord against loss or liability resulting from the delay by Tenant in surrendering possession of the Leased Premises, including, without limitation, any claims made with regard to any succeeding occupancy bounded by such holdover period.

XXVII. ACTS OR OMISSIONS OF OTHERS

Neither Party, or its employees or agents, or any of them, shall be responsible or liable to the other Party or to the other Party's guests, invitees, employees, agents or any other person or entity, for any loss or damage that may be caused by the acts or omissions of other tenants, their guests or invitees, occupying any other part of the Leased Premises or by persons who are trespassers on or in the Leased Premises, or for any loss or damage caused by or resulting from the bursting, stoppage, backing up, or leaking of water, gas, electricity or sewers or caused in any other manner whatsoever, unless such loss or damage is caused by or results from the negligent acts of such Party, its agents or contractors.

XXIX. MISCELLANEOUS PROVISIONS

A. Authority of Parties.

1. Corporate Authority. If Tenant is a corporation, each individual executing this Lease on behalf of said corporation represents and warrants that he or she is duly authorized to execute and deliver this Lease on behalf of the corporation, in accordance with a duly adopted resolution of the board of directors of said corporation or in accordance with the bylaws of said corporation, and that this Lease is binding upon said corporation in accordance with its terms.

2. Limited Partnerships. If the Landlord herein is a limited partnership, it is understood and agreed that any claims by Tenant on Landlord shall be limited to the assets of the limited partnership, and furthermore, Tenant expressly waives any and all rights to proceed against the individual partners or the officers, directors or shareholders of any corporate partner, except to the extent of their interest in said limited partnership.

B. Name.

Tenant shall not use the name of the Building or of the development in which the Building is situated for any purpose other than as an address of the business to be conducted by the Tenant in the Leased Premises.

C. Construction of Terms.

Time shall be of the essence of each provision of this Lease. This Lease shall be

construed and interpreted in accordance with the laws of the State of Colorado. This Lease contains all the agreements of the parties and cannot be modified or amended except by a written agreement.

D. Representations.

Tenant declares that in entering into this Lease, it relied solely upon the statements contained in this Lease and fully understands that no agents or representatives of the Landlord have authority to in any manner change, add to, or detract from the terms of this Lease. Tenant acknowledges and agrees that it has not relied on any statements, representations, agreements, or warranties, except as are expressed herein.

E. Rights Under This Lease.

If any term, covenant, or provision of this Lease shall to any extent be invalid or unenforceable, the remainder of this Lease shall nevertheless be valid and enforceable. All of the rights given herein are cumulative and are given without any other rights or of remedies of Landlord.

It is understood and agreed that Tenant will only be bound by a written lease agreement that is properly executed by Tenant. No proposal, counter-proposal, letter or oral statement will be construed as a binding lease agreement or as a contract to enter into a lease agreement. All such correspondence is considered to be an exploration by both parties to determine if the basis for such an agreement exists between Tenant and Landlord.

Agreed and Accepted by:

ASPEN INDUSTRIAL PARK PARTNERSHIP
a Colorado Limited Liability
Limited Partnership

MKS INSTRUMENTS, INC.
a Massachusetts Corporation

By: /s/ Christopher Stewart

Christopher Stewart, General
Partner
Date: August 29, 2005

By: /s/ Ronald C. Weigner

Ronald C. Weigner, CFO
Date: -----

OPTIONAL ADVANCE DEMAND GRID NOTE

\$35,000,000

Nyack, New York
August 3, 2004

FOR VALUE RECEIVED, MKS INSTRUMENTS, INC., a Massachusetts corporation, with an office at 90 Industrial Way, Wilmington, Massachusetts, and MKS JAPAN, INC., a Japanese corporation, with an office at Harmonize Bldg., 5-17-13, Narita-Higashi, Suginami-Ku, Tokyo, Japan (collectively, the "Borrower"), jointly and severally promise to pay to HSBC BANK USA, NATIONAL ASSOCIATION ("Bank"), or order, on demand, at its 17 South Broadway office in Nyack, New York, United States of America, the aggregate unpaid principal amount of all advances made by the Bank to the Borrower from time to time (each an "Advance" and collectively the "Advances") as evidenced by the inscriptions made on the Schedule attached hereto ("Schedule"), together with interest thereon at a per annum rate as provided herein. The aggregate amount of all advances outstanding hereunder shall not at any time exceed \$35,000,000.

As used in this Note, the following terms shall have the meanings set forth below:

ADJUSTED LIBOR RATE: the LIBOR Rate plus 1.25%

BUSINESS DAY: any day other than a Saturday, Sunday or other day on which commercial banks in London and/or New York, New York are authorized or required by law to close.

LIBOR PERIOD: a period, if available to the Bank, of at least 1 day but not more than 180 days.

LIBOR RATE REQUEST: the written request by the Borrower to the Bank for the LIBOR Rate Advance, and including a LIBOR Period, the date of the LIBOR Rate Advance, currency and amount.

LIBOR RATE: means the per annum interest rate equal to the London Interbank Offered Rate as shown on the Telerate Screen, Page 3750 or on the Bloomberg BBAM Screen (or, if the foregoing are both not available, such alternative source as the Borrower and the Bank may mutually determine), at approximately 11:00 a.m. (London time) two Business Days prior to the proposed borrowing date for deposits of United States dollars, Japanese Yen or Euros, depending on the currency chosen for the LIBOR Rate Advance being requested, in an amount and for a period of time comparable to the principal amount of the proposed LIBOR Rate Advance.

LIBOR RATE ADVANCE: any Advance bearing interest at the Adjusted LIBOR Rate.

PRIME RATE: the rate of interest publicly announced by the Bank from time to time as its prime rate and is a base rate for calculating interest on certain loans.

PRIME RATE ADVANCE: any Advance bearing interest at the Prime Rate.

REGULATORY CHANGE: after the date hereof, the introduction of any new, or any change in existing, applicable laws, rules or regulations or in the interpretation or administration thereof by any court or governmental authority charged with the interpretation or administration thereof, or compliance by Bank with any new request or directive by any such court or authority (whether or not having the force of law.)

All Advances, interest rates and all payments of principal made on this Note may be inscribed by the Bank on the Schedule. Each Advance shall be payable on demand.

Borrower may request a LIBOR Rate Advance and LIBOR Period by calling in a LIBOR Rate Request on any Business Day to the Bank not later than 1:00 p.m. (New York, New York time) two Business Days prior to the date of the proposed LIBOR Rate Advance. Borrower may not select a LIBOR Period having an expiration date later than July 31, 2005. Notwithstanding any provision herein to the contrary, any LIBOR Rate Advance shall be made in a minimum amount of \$500,000. LIBOR Rate Advances may be denominated in United States dollars, Japanese Yen or Euros. If at any time any LIBOR Rate Advances are outstanding in Japanese Yen or Euros, the Bank will determine, from time to time, based on the Bank's currency exchange rates then in effect, the United States dollar equivalent for such LIBOR Rate Advances and if the sum of such dollar equivalent amounts plus the amount of then-outstanding United States dollar LIBOR Rate Advances exceeds \$35,000,000 the Borrower will, upon Bank's request, immediately pay such excess amount to the Bank, to be applied to this Note.

If Borrower fails to timely select an applicable LIBOR Period for calculation of a LIBOR Rate Advance, then the Advance shall bear interest at the Prime Rate and shall be deemed a Prime Rate Advance.

If by reason of any Regulatory Change, the Bank determines that, (i) by reason of circumstances affecting the London interbank market generally, adequate and fair means do not or will not exist for determining the LIBOR Rate, (ii) by reason of any Regulatory Change, the Bank becomes restricted in the amount which it may hold of a category of liabilities which includes deposits by reference to the LIBOR Rate or a category of assets which includes loans which bear interest at a rate determined in part by reference to the LIBOR Rate, (iii) by reason of any Regulatory Change, it shall be unlawful for the Bank to maintain a LIBOR Rate Advance, or any portion thereof, bearing interest at the Adjusted LIBOR Rate, (iv) in the exclusive judgment of the Bank, deposits are not available to the Bank in the international interbank market in the requisite amounts and for the requisite durations, (v) in the exclusive judgment of the Bank, the Adjusted LIBOR Rate does not adequately reflect the cost to the bank of making or maintaining a LIBOR Rate Advance then, in any such case, after 30 days written notice to Borrower any LIBOR Rate Advance shall bear interest at the Prime Rate, unless the Borrower decides to prepay in full the LIBOR Rate Advance in accordance with the terms of this Note. If the Bank determines that because of a change in circumstances the Adjusted LIBOR Rate is again available to the Borrower hereunder, the Bank will so advise the Borrower, and the Borrower may convert the rate of interest payable hereunder to the Adjusted LIBOR Rate at any time (provided the Adjusted LIBOR Rate is otherwise available hereunder) by making such election in accordance with, and subject to the conditions of, this Note.

If, at any time, any Regulatory Change: (i) shall subject the Bank to any tax, duty or other charge with respect to this Note, except an income tax, based upon the charging and collecting of interest hereunder at the Adjusted LIBOR Rate, shall change the basis of taxation or payments to the Bank of the principal of or interest on this Note; (ii) shall result in the imposition, modification or deemed applicability of any reserve, special deposit or similar requirements against assets of, deposits with or for the account of, or credit extended by, the Bank; (iii) shall, because of the existence of this Note, affect the amount of capital required or expected to be maintained by the Bank, or any corporation controlling the Bank; or (iv) shall impose on the Bank or the London interbank market any other condition affecting this Note or the charging and collecting of interest hereunder at the Adjusted LIBOR Rate and the result of any of the foregoing is, in the Bank's reasonable judgment, (a) to increase the cost to the Bank of charging and collecting interest hereunder at the Adjusted LIBOR Rate, or (b) to reduce the return on the Bank's capital or the amount of any sum received or receivable by the Bank under this Note by an amount deemed by the Bank to be material, after 30 days written notice to Borrower by the Bank, the Borrower agrees to pay to the Bank such additional amount or amounts as will compensate the Bank for such increased cost or reduction. Such payments shall be made on the first date for payment of interest hereunder following the 30 day notice of the demand by the Bank and on each such payment date thereafter or shall be paid promptly on demand if the Borrower is not advised of the amount of such payment prior to any such payment date. Determinations by the Bank for purposes of this paragraph of the effect of any Regulatory Change on its costs of making or maintaining Advances bearing interest at the Adjusted LIBOR Rate and of the additional amounts required to compensate the Bank in respect thereof, shall be conclusive absent manifest error in calculation, provided that such determinations are made in good faith.

The Bank must receive written notice of any prepayment not less than three (3) Business Days prior to such prepayment, and any prepayment in part must be made in multiples of \$100,000.

The Borrower understands and acknowledges that in connection with LIBOR Rate Advances the Bank may enter into funding arrangements on terms and conditions which could result in substantial losses, costs and expenses to the Bank if LIBOR Rate Advances are prepaid on a date other than the expiration of the selected LIBOR Period. Therefore, if there is a prepayment of any LIBOR Rate Advance on a date other than the expiration of the selected LIBOR Period for any reason whatsoever including, but not limited to, any payments made by the Borrower because the holder of this Note has demanded payment in accordance with the terms hereof or any other document relating to the indebtedness hereunder, then the Borrower shall pay to the Bank, as liquidated damages and not as a penalty, a fee (the "Liquidation Fee") equal to the losses (including but not limited to, lost profits of the Bank), costs and expenses of the Bank in connection with such prepayment as determined by the Bank, which payment shall be made by the Borrower to the Bank on the date on which such prepayment is made. The calculations made by the Bank to ascertain such Liquidation Fee shall be conclusive absent manifest error in calculation by the Bank, provided that such calculations are made in good faith. The Bank, upon the written request of the Borrower, shall advise the Borrower in writing of the amount of the Liquidation Fee applicable to any such prepayment.

Each entry set forth on the Schedule shall be prima facie evidence of the facts so set forth, except for any such facts as to which the Bank has sent to the Borrower a written confirmation and

the borrower has timely objected as provided herein. No failure by the Bank to make, and no error by the Bank in making any inscription on the Schedule shall affect the Borrower's obligation to repay the full principal amount advanced by the Bank to or for the account of the Borrower, or the Borrower's obligation to pay interest thereon at the agreed upon rate.

Before maturity, LIBOR Rate Advances shall bear interest at the Adjusted LIBOR Rate.

Any LIBOR Rate Advance not paid when due shall bear interest thereafter until paid in full, payable on demand, at the rate otherwise applicable thereto plus 3% from the time of default in payment of principal until the end of the then current LIBOR Period therefor, and thereafter at a rate equal to the Prime Rate plus 3%.

If any payment to be made under this Note shall be stated to be due on a Saturday, Sunday or banking holiday the Borrower will pay interest thereon at the applicable rate until the date of actual receipt of such payment by the holder of this Note.

In no event shall the interest rate on this Note exceed the maximum rate authorized by applicable law. Any change in interest rate on this Note resulting from a change in the Bank's Prime Rate shall be effective on the date of such change. Interest on Advances will be calculated for each day at 1/360th of the applicable per annum rate, which will result in a higher effective annual rate. Accrued interest on Prime Rate Advances shall be payable monthly on the first day of each month and on the date any Prime Rate Advance is paid in full. Accrued interest on LIBOR Rate Advances shall be payable on the last day of each LIBOR Period, as applicable, and on the date any LIBOR Rate Advance is paid in full. If any payment due under this Note is received by the holder of this Note more than 10 days after it is due, the undersigned shall pay to the holder a late charge in the amount of the greater of 5% of the amount of the late payment or \$15.00.

NOTHING CONTAINED IN THIS NOTE OR OTHERWISE IS INTENDED, NOR SHALL CONSTITUTE, ANY OBLIGATION OF THE BANK TO MAKE ANY ADVANCE.

No failure by the holder hereof to exercise, and no delay in exercising, any right or remedy hereunder shall operate as a waiver thereof, nor shall any single or partial exercise by such holder of any right or remedy hereunder preclude any other or further exercise thereof or the exercise of any other right or remedy. The rights and remedies of the holder hereof as herein specified are cumulative and not exclusive of any other rights or remedies, which such holder may otherwise have.

The Borrower will furnish the Bank with the following information: (i) within 120 days of each fiscal year end, audited consolidated financial statements prepared by an accounting firm acceptable to the Bank; (ii) within 45 days of the end of each fiscal quarter, management prepared quarterly financial statements prepared in accordance with GAAP; (iii) management prepared financial forecasts for each fiscal year; and (iv) all filings made by Borrower with the Securities and Exchange Commission.

Any and all payments made to the Bank pursuant to this Note shall be made free and clear of, and without deductions or withholdings for, or on account of, any present or future taxes,

duties, levies, imposts, charges, compulsory loans, assessments, or other deductions or withholdings whatsoever, and all liabilities with respect thereto, imposed at any time by any authority having power to tax in any jurisdiction worldwide (such deductions or withholdings being hereinafter referred to as "Taxes"), unless the deduction or withholding of such Taxes is required by any applicable law. If any Taxes are required by applicable law to be deducted or withheld from any payment hereunder, the Borrower shall (i) increase the amount payable as is necessary so that, after making all required deductions or withholdings (including deductions or withholdings applicable to additional amounts payable under this paragraph), the Bank shall receive an amount equal to the amount it would have received had no deductions or withholdings been made, (ii) the Borrower shall make such deductions or withholdings, and (iii) the Borrower shall pay the full amount deducted or withheld to the relevant taxation authority or other authority in accordance with applicable law. Within 30 days after the date of payment of any taxes or other amounts deducted or withheld, the Borrower shall furnish the Bank with an official receipt (or certified copy thereof) or other documentation reasonably acceptable to the Bank evidencing such payment. The Borrower shall indemnify the Bank from and against any and all Taxes (irrespective of when imposed) and any liability, including, without limitation, any related interest, penalties and expenses, that may become payable by the Bank as a consequence of Borrower's failure to perform any of its obligations under this paragraph, whether or not such Taxes or liability were correctly or legally asserted. Payment pursuant to this indemnification shall be made upon written demand therefor. The Borrower shall pay (or if appropriate, reimburse the Bank for) any stamp, documentary or similar taxes or any other excise, intangible or property taxes, charges or similar levies (and any interest or penalty relating thereto) imposed at any time which arise from, or otherwise with respect to, any payment made hereunder or from execution, delivery or registration of this instrument.) The Borrower's obligation under this paragraph shall survive the termination of this Note.

THE BORROWER AGREES TO PAY ALL COSTS AND EXPENSES INCURRED BY THE HOLDER HEREOF IN ENFORCING THIS NOTE, INCLUDING, WITHOUT LIMITATION, REASONABLE ATTORNEY'S FEES AND LEGAL EXPENSES. THE BORROWER HEREBY WAIVES (I) DEMAND, PRESENTMENT FOR PAYMENT, NOTICE OF DISHONOR, PROTEST AND NOTICE OF PROTEST OF THIS NOTE AND (II) THE RIGHT OF A JURY TRIAL. ANY NOTICE, DEMAND OR REQUEST RELATING TO ANY MATTER SET FORTH HEREIN, OTHER THAN A REQUEST FOR BORROWING, SHALL BE IN WRITING AND SHALL BE DEEMED EFFECTIVE WHEN MAILED, POSTAGE PREPAID, BY REGISTERED OR CERTIFIED MAIL, RETURN RECEIPT REQUESTED, TO ANY PARTY HERETO AT ITS ADDRESS HEREIN OR AT SUCH OTHER ADDRESS OF WHICH IT SHALL HAVE NOTIFIED THE PARTY GIVING SUCH NOTICE IN WRITING AS AFORESAID. COPIES OF ALL SUCH NOTICES, DEMANDS AND REQUESTS TO BANK SHALL BE SENT TO BANK AT ITS ADDRESS ABOVE STATED. IN THE CASE OF THE BORROWER, ALL SUCH COPIES SHALL BE SENT TO THE BORROWER AT THE ADDRESS OF THE BORROWER AS STATED HEREIN.

THIS NOTE, BEING DRAWN, EXECUTED AND DELIVERED IN THE STATE OF NEW YORK, WHERE ALL ADVANCES AND REPAYMENTS SHALL BE MADE, SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK. THE UNDERSIGNED AGREES THAT ANY ACTION OR PROCEEDING TO

ENFORCE OR ARISING OUT OF THIS NOTE MAY BE COMMENCED IN THE SUPREME COURT OF NEW YORK OR IN THE DISTRICT COURT OF THE UNITED STATES IN ANY COUNTY OR DISTRICT WHERE THE BANK HAS A BRANCH. THE UNDERSIGNED WAIVES PERSONAL SERVICE OF PROCESS AND AGREES THAT A SUMMONS AND COMPLAINT COMMENCING AN ACTION OR PROCEEDING IN ANY SUCH COURT SHALL BE PROPERLY SERVED AND SHALL CONFER PERSONAL JURISDICTION IF SERVED BY REGISTERED MAIL TO THE ADDRESS SPECIFIED ABOVE OR AS OTHERWISE PROVIDED BY THE LAWS OF THE STATE OF NEW YORK OR THE UNITED STATES.

MKS INSTRUMENTS, INC.

By: /s/ Joseph M. Tocci

Joseph M. Tocci
Treasurer

MKS JAPAN, INC.

By: /s/ Ronald Weigner

Ronald Weigner
Director, MKS Japan

FIRST AMENDMENT
TO
OPTIONAL ADVANCE DEMAND GRID NOTE

This First Amendment dated as of July 29, 2005 amends the Optional Advance Demand Grid Note dated August 3, 2004, made by MKS Instruments, Inc. and MKS Japan, Inc. in favor of HSBC Bank USA, National Association (the "Note"). Terms defined in the Note shall have the same meanings in this Amendment.

1. The date of "July 31, 2005", wherever it appears in the Note, is hereby deleted and replaced with: "July 31, 2006". After July 31, 2006, the termination date of "July 31, 2006" (and any subsequent termination date), wherever it appears in the note, shall be deleted and replaced by such later date as may be agreed to in writing by the Bank and the Borrower as the new termination date of the Note.
2. Except as amended hereby, the Note remains unchanged and in full force and effect.

MKS INSTRUMENTS, INC.

HSBC BANK USA, NATIONAL ASSOCIATION

By: /s/ Joseph M. Tocci

By: /s/ Patrick J. Doulin

Name: Joseph M. Tocci
Title: Treasurer

Name: Patrick J. Doulin
Title: Senior Vice President

MKS JAPAN, INC.

By: /s/ Ronald C. Weigner

Name: Ronald C. Weigner
Title: Director

SUBSIDIARIES OF THE REGISTRANT

SUBSIDIARY	JURISDICTION OF INCORPORATION
MKS International, Inc.	Massachusetts
MKS Instruments France S.A.	France
MKS Instruments, U.K. Limited	United Kingdom
MKS East, Inc.	Massachusetts
MKS Japan, Inc.	Japan
MKS Korea Co., Ltd.	Korea
ASTeX GmbH	Germany
Telvac Engineering Limited	United Kingdom
Spectra Sensortech, Ltd.	United Kingdom
MKS MSC, Inc.	Massachusetts
ASTeX Realty Corporation	Massachusetts
MKS (Bermuda) Ltd.	Bermuda
MKS Luxembourg S.A.R.L.	Luxembourg
MKS Germany Holding GmbH	Germany
MKS Instruments Deutschland GmbH	Germany
Applied Science and Technology, GmbH	Germany
MKS Instruments (Asia) Ltd.	Bermuda
MKS Instruments (Hong Kong) Ltd.	Hong Kong
MKS Instruments (China) Company Ltd.	China
MKS Taiwan Technology Ltd.	Taiwan
M.K.S. Tenta Products Ltd.	Israel
MKS Denmark APS	Denmark
Tega Systems Ltd.	Israel
MKS Instruments (Shanghai) Ltd	China
Ion Systems, Inc.	California
MKS Holding	Sweden
MKS Umetrics AB	Sweden
Umetrics (UK) Ltd.	UK
Umetrics, Inc.	New Jersey
Tantec, Inc.	Illinois

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-78069, 333-78071, 333-78073, 333-31224, 333-54486, 333-54488, 333-54490, 333-90498, 333-90500, 333-90502, 333-116385, 333-116387 and 333-116389) and Form S-3 (No. 333-34450 and 333-109753) of MKS Instruments, Inc. of our report dated March 14, 2006 relating to the consolidated financial statements, the financial statement schedule, management's assessment of the effectiveness of internal control over financial reporting and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
March 14, 2006

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO RULE 13a-14(a)/RULE 15d-14(a) OF THE
SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Leo Berlinghieri, certify that:

1. I have reviewed this annual report on Form 10-K of MKS Instruments, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any changes in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control and financial reporting.

Dated: March 15, 2006

/s/ Leo Berlinghieri

Leo Berlinghieri
Chief Executive Officer and President
(Principal Executive Officer)

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(a)/RULE 15d-14(a) OF THE
SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Ronald C. Weigner, certify that:

1. I have reviewed this annual report on Form 10-K of MKS Instruments, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any changes in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control and financial reporting.

Dated: March 13, 2006

/s/ Ronald C. Weigner

Ronald C. Weigner
Vice President and Chief Financial Officer
(Principal Financial Officer)

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

In connection with the Annual Report on Form 10-K of MKS Instruments, Inc. (the "Company") for the period ended December 31, 2005 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Leo Berlinghieri, Chief Executive Officer and President of the Company, and Ronald C. Weigner, Vice President and Chief Financial Officer of the Company, each hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

(1) based on my knowledge, the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) based on my knowledge, the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 15, 2006

/s/ Leo Berlinghieri

Leo Berlinghieri
Chief Executive Officer and President

Dated: March 13, 2006

/s/ Ronald C. Weigner

Ronald C. Weigner
Vice President and Chief Financial Officer