

# VEECO INSTRUMENTS INC

## FORM 10-K (Annual Report)

Filed 03/04/97 for the Period Ending 12/31/96

Address	TERMINAL DRIVE PLAINVIEW, NY 11803
Telephone	516 677-0200
CIK	0000103145
Symbol	VECO
SIC Code	3559 - Special Industry Machinery, Not Elsewhere Classified
Industry	Semiconductors
Sector	Technology
Fiscal Year	12/31

# VEECO INSTRUMENTS INC

## FORM 10-K (Annual Report)

Filed 3/4/1997 For Period Ending 12/31/1996

Address	TERMINAL DR PLAINVIEW, New York 11803
Telephone	516-349-8300
CIK	0000103145
Industry	Semiconductors
Sector	Technology
Fiscal Year	12/31

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

**FORM 10-K**

ANNUAL REPORT PURSUANT TO Section 13  
OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE FISCAL YEAR ENDED DECEMBER 31, 1996

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 0-16244

VEECO INSTRUMENTS INC.  
(REGISTRANT)

DELAWARE  
(State or other jurisdiction  
of incorporation or organization)

11-2989601  
(I.R.S. Employer  
Identification No.)

TERMINAL DRIVE  
PLAINVIEW, NEW YORK  
(Address of principal executive offices)

11803  
(Zip Code)

**REGISTRANT'S TELEPHONE NUMBER, INCLUDING AREA CODE: (516) 349-8300**

**Securities registered pursuant to Section 12(b) of the Act:**  
NONE

**Securities registered pursuant to Section 12(g) of the Act:**  
**COMMON STOCK, PAR VALUE \$.01 PER SHARE**

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 X No \_\_\_

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by references in Part III of this Form 10-K or any amendment to this Form 10-K. [ ]

The aggregate market value of the voting stock held by non-affiliates of the Registrant, based on the closing price of the Common Stock on February 24, 1997 as reported on the Nasdaq National Market, was approximately \$130,306,039. Shares of Common Stock held by each officer and director and by each person who owns 5% or more of the outstanding Common Stock have been excluded from this computation in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

At February 24, 1997, the Registrant had outstanding 5,870,627 shares of Common Stock.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Registrant's Proxy Statement for the Annual Meeting of Stockholders to be held on May 15, 1997 are incorporated by reference into Part III of this Form 10-K Report.

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## PART I

### ITEM 1. BUSINESS.

#### THE COMPANY

Veeco Instruments Inc. ("Veeco" or the Company) is a leader in the design, manufacture, marketing and servicing of a broad line of precision ion beam systems and surface metrology systems used to test and manufacture microelectronic products. Demand for the Company's products has been driven by the increasing miniaturization of microelectronic components and the need for manufacturers to meet reduced time-to-market schedules while ensuring the quality of those components. The ability of the Company's products to precisely etch sub-micron patterns, deposit precise thin films and measure critical surface conditions in these components enables manufacturers to achieve high yields and assure quality in the fabrication of advanced microelectronic devices.

The Company sells its products worldwide to many of the leading data storage and semiconductor manufacturers, including Seagate Technology, Inc. ("Seagate"), Read-Rite Corp. ("Read-Rite"), IBM Corporation ("IBM"), Motorola, Inc. ("Motorola"), Applied Magnetics Corp. ("AMC"), Mitsubishi Semiconductor ("Mitsubishi") and Quantum Corp. ("Quantum"). In addition, the Company sells its products to companies in the flat panel display and high frequency device industries, as well as to other industries, research and development centers and universities.

The Company acquired its business operations from a company that was founded in 1945 under the same name (the "Predecessor"). In August 1989, Edward H. Braun, the Company's Chairman, Chief Executive Officer and President, who was then the Executive Vice President and Chief Operating Officer of the Predecessor, incorporated Veeco Instruments Acquisition Corp. with certain other members of the Company's senior management for the purpose of acquiring a substantial portion of the assets used in the Predecessor's industrial equipment product group business (the "Equipment Group"). In January 1990, Veeco Instruments Acquisition Corp. completed its acquisition of these assets for approximately \$29,200,000 and the assumption of substantially all of the liabilities of the Equipment Group relating to such assets. In connection with the Acquisition, the Predecessor changed its name to "Lambda Electronics Inc." and Veeco Instruments Acquisition Corp. changed its name to "Veeco Instruments Inc."

On December 6, 1994, the Company completed an initial public offering (the "IPO") whereby 2,500,000 shares of Common Stock, par value \$.01 per share (the "Common Stock") were issued and sold at \$11.00 per share. The net proceeds were used to repay the Company's debt and for working capital and other general corporate purposes.

On July 31, 1995, the Company completed a public offering (the "Public Offering") in which 2,300,000 shares of common stock were sold, 800,000 of which were sold by the Company and 1,500,000 of which were sold by certain selling stockholders, at the public offering price of \$20.00 per share. The net proceeds to the Company will be used for working capital and general corporate purposes, including potential acquisitions.

#### INDUSTRY BACKGROUND

**MICROELECTRONICS MANUFACTURING PROCESS.** Semiconductor devices (e.g., integrated circuits) and mass memory data storage devices are fabricated by performing a complex series of process steps on a silicon substrate or wafer. The three primary categories of wafer processing steps are deposition, photolithography and etching. During deposition, layers of conductive or insulating films are deposited on an unpatterned wafer. During photolithography (also known as "patterning"), the wafer is covered with light-sensitive material called photoresist, which is then exposed to light projected in patterns which form integrated circuit components. During etching (which may be accomplished by several processes, including ion beam etching), certain areas of the patterned (metal or insulating) film are removed to leave the desired circuit pattern. Each of these steps is

typically repeated several times during the fabrication process, with alternating layers of conducting and insulating films being deposited each time to create a multi-layered structure.

The resulting finished wafer consists of many integrated circuits. Depending on the specific design of a given integrated circuit, a variety of film thickness and a number of layers and film types will be used to achieve desired performance characteristics. Surface metrology systems are used repeatedly throughout the fabrication process to monitor process accuracy by measuring critical dimensions and other physical properties such as film thickness, line width, step height, sidewall angle and surface roughness.

**PRECISION ETCHING, DEPOSITION AND SURFACE METROLOGY MARKET REQUIREMENTS.** The Company sells its ion beam systems and surface metrology products to manufacturers of microelectronic devices (primarily in the data storage and semiconductor industries), which in turn supply the broader worldwide electronics markets, as well as to industrial and other customers. As the range of end products has expanded to include items such as hand-held and lap-top computers and consumer cellular telecommunications products, the performance and complexity of semiconductor and data storage devices have expanded as well. Fabrication of these miniaturized components requires increasing numbers of manufacturing process steps. (For example, a typical one megabyte DRAM with a smallest feature size of one micron is manufactured using approximately 200 manufacturing steps. In comparison, a 64 megabyte DRAM is currently being manufactured in volume with a smallest feature size of .35 micron using approximately 500 manufacturing steps.) The increased number of manufacturing steps includes greater use of precise etching and deposition equipment and surface metrology systems to ensure critical process control and semiconductor product quality. Growth in the etching, deposition and surface metrology markets is driven by end-users' requirements for greater performance capabilities, and by the increasing miniaturization of components, which has resulted in a demand for equipment capable of etching and measuring sub-micron features (i.e., below one micron).

Manufacturers base their purchases of metrology systems on a variety of criteria, including resolution, accuracy, repeatability and ease of use, total cost of ownership (which depends upon factors including system cost, throughput, reliability, operating costs, up-time and service response time), and the value of the data produced, which depends on the accuracy and speed with which the measurement parameter (for example, step height or film thickness) can be determined. In addition, as metrology systems are incorporated into the production process, automated features such as cassette-to-cassette wafer handling and pattern recognition have become increasingly important, as has the ability of a system to communicate with other systems within the manufacturing process.

**ION BEAM SYSTEMS.** The fabrication of integrated circuits and thin film magnetic heads (for the hard drive industry) requires some form of etching to create the pattern of either an electrical circuit or a mechanical feature. Historically, the industry has utilized several older etching techniques, including chemical wet etching and plasma etching, which offer limited control of critical dimensions, require the use of reactive chemistries, and produce undesired isotropic etching results.

As device geometries have decreased and the need for sub-micron features etched with accurate side wall angles has increased, the use of collimated ion beam etching has expanded. Compared with other etching technologies, ion beam etching permits precise sub-micron, low temperature, low pressure anisotropic (highly directional) etching of any material, including many multi-layered films which cannot be etched by known reactive chemical processes.

With ion beam etching, a precisely controlled, highly collimated broad ion beam removes material from a substrate by physically sputtering any material not protected by a finely patterned photo resist mask. Examples of ion beam etched products include high density thin film magnetic heads, high frequency telecommunication devices, infrared detectors, ferroelectric memory devices, and microsensors. The Company's ion beam etch equipment is used in multiple fabrication process steps in the production of thin film magnetic heads, for both

circuit patterning and micromachining. As the demand for multi-layer, integrated circuits and microsensors with sub-micron features grows, the Company believes the demand for its ion beam etching systems will increase.

Ion beam systems are also increasingly important for the deposition of thin films. Historically these films have been deposited either by electro-chemical processes or cathodic sputtering. Ion beam deposition offers greater control of deposition rate, film morphology and minimized contaminants than do the historical processes. In addition to thin film magnetic heads, applications include tribological coatings for magnetic media, protective coatings for plastic and glass lenses, passivation layers for optoelectronics, and interference coatings and mirrors for precision optics.

**SURFACE METROLOGY SYSTEMS.** Microelectronic device manufacturers use surface metrology systems to measure critical dimensions and physical properties such as film thickness, line width, step height, sidewall angle and surface roughness to ensure that products are being manufactured to increasingly demanding specifications. Surface metrology systems are used throughout the manufacturing process to monitor the accuracy of the manufacturing process.

Metrology systems capable of measuring dimensions above one micron include stylus surface profilers, scanning electron microscopes ("SEMs") and optical measurement systems. In response to decreasing geometries and increasingly complex processes and specifications, a demand has grown for new surface measurement systems which permit measurement of sub-micron features on a three-dimensional basis. To meet this demand, the Company offers the SXM Workstation which incorporates atomic force microscopy ("AFM") technology including non-contact, non-destructive scanning features with the ability to measure critical dimensions as small as 0.25 microns. The Company believes that demand for products incorporating non-contact AFM technology will grow, as product complexities continue to increase and as component geometries continue to decrease.

**INDUSTRIAL MEASUREMENT PRODUCTS.** Thickness measurement systems measure the thickness and composition of metals used in printed circuit boards and electronic components, as well as in the general metal finishing industries. Products in this category rely on a variety of measurement technologies, including Beta Backscatters, resistivity probes, Hall-Effect, eddy-current and electromagnetic-induction, as well as XRF-based products. XRF systems operate by generating a collimated X-Ray beam which is directed at a sample, causing the sample to emit characteristic X-Ray fluorescence. A proportional counter detects the X-Ray fluorescence and generates corresponding electrical impulses, which are used to calculate and display the plating thickness or alloy composition of the sample. The Company believes that the XRF market will continue to grow, as increased accuracy and advances in measurement technology, together with on-line production and lower cost systems, bring XRF technology into new applications.

Leak detectors, which provide a non-destructive precise identification of the size and location of leaks in sealed components, are used in a broad range of electronic, aerospace and transportation products with applications in the production of automotive airbags, semiconductor devices, air conditioning and refrigeration, chemical valves, medical devices and fiber optic cable production.

## PRODUCTS

The Company's products encompass equipment and systems used in the manufacture of microelectronics products. The following table summarizes the Company's major products in each of its product lines and the principal industries to which it offers such products:

Product	VEECO PRODUCT OFFERINGS			
	Semi-conductor	Data Storage	Flat Panel Display	University and Research and Industrial Development
ION BEAM SYSTEMS				
ETCHING SYSTEMS:				
Microetch Air to Air Batch Systems	x	x		x
Microetch Cluster Systems	x	x		x
DEPOSITION SYSTEMS:				
Secondary Ion Beam Sputtering Systems	x	x		x
Direct Ion Beam (Diamond Like Coating) Deposition Systems		x		
SURFACE METROLOGY PRODUCTS				
Dektak Stylus Profilers	x	x	x	x
Dektak FPD Surface Profilers			x	x
Dektak Atomic Force Microscope	x	x		x
TMS Microroughness Scatterometers	x	x		x
INDUSTRIAL MEASUREMENT PRODUCTS				
XRF-Series X-Ray Fluorescence Measurement Systems	x			x
SEA-Series Micro X-Ray Fluorescence Measurement Systems	x	x		x
Portable Mass Spectrometer Leak Detectors	x	x		x
Console Mass Spectrometer Leak Detectors	x	x		x
Industrial Mass Spectrometer Leak Detectors				x

## ION BEAM SYSTEMS

The Company develops and produces ion beam systems, sold under the Microetch brand name. These systems can etch precise, complex features and deposit thin films for use primarily by data storage and semiconductor manufacturers in the fabrication of discrete and integrated microelectronic devices. Veeco believes that it holds the leadership position in the overall market for ion beam etching systems, and believes that it is the leading seller of ion beam systems utilized for production of thin film magnetic heads. Since the Acquisition, the Company has sold over 200 ion beam systems.

Ion beam deposition provides greater control of precise deposition rate, film morphology and incorporated contaminants than traditional processes used in the manufacture of semiconductors or mass memory storage devices. Ion beams can be used two ways to deposit films. Beams can directly deposit material by braking down a feed gas and accelerating non-volatile components at the substrate in a controlled manner (e.g., diamond like carbon coatings for thin film magnetic head slider coatings); or, a beam can be directed at a material

target of the required element or alloy, and have an ion beam sputtered film precisely deposited on the substrate (e.g., giant magneto-resistive read elements in thin film magnetic heads).

Ion beam etching permits precise submicron low temperature etching of any material, including many which cannot be etched by other processes, and has emerged as a leading fabrication process in the thin film magnetic head (hard drive) industry for both circuit patterning and micromachining. This technology is utilized in multiple steps of the advanced thin film magnetic head fabrication process. In addition, as the demand for integrated circuits and microsensors with sub-micron features grows, the Company believes the demand for ion beam etching systems will increase.

The Company's ion beam etching product line has progressed from use principally in research and development applications to automated systems used in production. This evolution was driven by the incorporation of features such as automated wafer handling, advanced substrate cooling technique and load-locked process control which increases throughput and wafer yield.

Sales of ion beam systems were approximately \$53,213,000, \$33,184,000 and \$20,984,000 and accounted for approximately 54.9%, 45.9%, and 42.4% of the Company's net sales for the years ended December 31, 1996, 1995 and 1994, respectively.

The ion beam systems product line consists of the following:

**MICROETCH AIR TO AIR BATCH ION BEAM ETCHING SYSTEMS.** The RF-1201 is an air-to-air systems for high throughput batch processing for deep trench (long etch) feature applications. These systems feature an RF ion source that provides higher etch rates and increased time between maintenance. Sales prices for the Company's Air to Air Batch Systems range from \$450,000 to \$550,000.

**MICROETCH CLUSTER ION BEAM ETCHING AND DEPOSITION SYSTEMS.** The Cluster System has been developed for next-generation requirements of sub-micron etching and deposition. The system can be configured for up to three etch or deposition process modules on a common platform and provides maximum throughput with the advantage of single wafer etching and deposition for process control and uniformity. The system is targeted at advanced next-generation thin film magnetic head memory and high frequency device customers. The Cluster System utilizes the Company's enhanced control system and patented "Flowcool" substrate cooling technology. Sales prices for the Company's Cluster Systems range from \$1,000,000 to \$2,500,000.

**SECONDARY ION BEAM SPUTTERING SYSTEMS.** Secondary ion beam sputtering systems utilize the process module concept of the etching systems, allowing the deposition module to be mated to Veeco's Cluster System platform to allow either parallel or sequential etch/deposition processes. These systems are available as automatic load locked cassette to cassette system or as automatic single substrate systems. Sales prices for the Company's Secondary Ion Beam Sputtering Systems range from \$750,000 to \$2,000,000.

**DIRECT ION BEAM DEPOSITION SYSTEMS.** Veeco's ion beam direct deposit diamond like carbon deposition system has been developed to deposit tribological coatings on advanced thin film head sliders. The system consists of a single substrate carrier vacuum load lock and a high vacuum processing chamber with two ion beam sources. Sales prices of these systems range from approximately \$600,000 to \$1,000,000.

## **SURFACE METROLOGY EQUIPMENT**

Veeco's surface metrology product line, which includes stylus surface profilers, the non-contact atomic force microscope workstation and laser based scatterometers, offers a wide range of innovative products to customers in the semiconductor, data storage and flat panel display industries, as well as in other industries.

Sales of the Company's surface metrology equipment were approximately \$23,902,000, \$20,830,000, and \$13,184,000 and accounted for approximately 24.7%, 28.8%, and 26.7% of the Company's net sales for the years ended December 31, 1996, 1995 and 1994, respectively.

## STYLUS SURFACE PROFILERS

The Company's stylus surface profiler systems are manufactured by its subsidiary Sloan Technology Corp. ("Sloan") at its facility in Santa Barbara, California. Sloan's line of stylus surface profiler systems all utilize the same principle of operation. A stage moves the wafer, or sample, beneath a diamond tipped stylus. As the sample moves under the stylus, surface variations cause vertical translation of the stylus, which is tracked and measured. This data is then used to produce cross-sectional representations and/or a magnified contour map, which is displayed on a video monitor. Stylus surface profilers' applications include height, width, pitch and roughness measurements of features on semiconductor devices, magnetic and optical storage media (e.g., hard drives), flat panel displays, and hybrid circuits. The Company believes that its stylus surface profiler products are recognized for their accuracy, repeatability, ease of use and technology features, as well as features designed for industry specifications and customer needs. Each of the Company's stylus surface profilers incorporates a proprietary software package. Since the Acquisition, the Company has sold over 1,100 stylus surface profiler systems.

The Company's stylus surface profiler products include:

**DEKTAK STYLUS PROFILERS.** The Dektak line of stylus profilers permits testing of wafers, disks, hybrids, optics and other precision surfaces. In July 1996, Veeco surface metrology introduced the V300SI, the first model of its new Series V stylus profiler product line which includes the V300SL, V200SI and V200SL as well. The Series V product line is the next generation of stylus profilers which incorporates leading edge performance and features such as photo-like 3D rendering software, the LIH2 low inertia / low force stylus head, high precision stage control and positioning, host communication software and mini-environment compatible design for operation in fully automated lab environments. The V300SI is a 300mm profiler designed specifically for next generation 300mm wafer labs, and is the industry's first 300mm stylus profiler. The Dektak stylus profilers can sample up to 65,000 points per scan, which is particularly important for applications such as hard disk substrates and optics analysis. The Dektak D3 and D3ST models are designed for measuring fine geometries on 150mm and smaller samples. These systems are used for both thick-film hybrid and thin film microelectronic applications. Sales prices of the Dektak stylus profilers range from approximately \$30,000 to \$205,000.

**DEKTAK FLAT PANEL DISPLAY PROFILERS.** The Dektak FPD Surface Profilers are designed to measure deposition thickness and surface roughness during manufacture of flat panel display. These advanced surface profilers are capable of precise measurements of step heights, line widths and surface texture of flat panel substrate up to 720mm x 720mm. In addition, this product line offers a cassette-to-cassette wafer handling option and pattern recognition for fully automated operation. Sales prices of the Dektak FPD Surface Profilers range from approximately \$100,000 to \$300,000.

## NON-CONTACT ATOMIC FORCE MICROSCOPE WORKSTATION

The Company is IBM's exclusive worldwide sales and marketing representative to market, sell and service the IBM-manufactured SXM Workstation to the semiconductor industry and data storage industries. The AFM technology used in the SXM Workstation is a variation of a technique invented by two IBM scientists who shared the Nobel Prize in Physics in 1986 for their invention.

The SXM Workstation is an automated, in-line manufacturing inspection tool which is capable of non-contact, non-destructive nanometer scale three dimensional measurement and imaging of sub-micron structures in ambient conditions. (A nanometer is equal to one-billionth of a meter.) By scanning a probe tip across a surface at a distance of approximately 30 angstroms, extremely precise measurements of sub-microscopic features can be produced, with resolution down to three angstroms. These measurements include height, width, roughness and sidewall angle characteristics. A "critical dimension" (CD) option permits the user to profile vertical sidewalls, measure sidewall angles and obtain true width measurements of sub-micron lines and trenches. Unlike alternative technologies, the SXM Workstation has the unique ability to make precise three dimensional

measurements without damaging or breaking the wafer, which at the time of measurement may have a manufacturing cost of between \$10,000 and \$100,000.

The Company believes that the SXM Workstation represents a significant extension of the stylus surface profiler instrument line produced by Sloan. By permitting measurements on features with dimensions as small as 0.25 microns, the Company believes that the SXM Workstation provides the precise measurements that semiconductor and data storage manufacturers require in their current and next generation products. See "--Strategic Alliances."

Sales prices of the SXM Workstation range from approximately \$600,000 to \$1,000,000. Since its introduction in the third quarter of 1993, the Company has sold 33 SXM Workstations.

### **LASER BASED SCATTEROMETER**

Veeco is Schmitt Measurement Systems' ("SMS") exclusive distributor for the Texture Measurement System ("TMS") product line for all regions of the world excluding Japan. The TMS products are laser based scatterometers which directly measure microroughness using a technique referred to as Total Integrated Scatter or T.I.S. The TMS product quickly and repeatably measure microroughness as small as a few angstroms for applications such as disk texture for the hard drive industry as well as backside/frontside roughness of bare silicon wafers. The TMS product line includes the TMS 2000 for hard drive disks, the TMS 2000W for wafers up to 200mm in diameter and the TMS 3000W for 300mm wafers. Pricing of these systems ranges from \$65,000 to \$110,000.

### **INDUSTRIAL MEASUREMENT EQUIPMENT**

Veeco's industrial measurement products include X-Ray fluorescence thickness measurement systems as well as leak detection/vacuum equipment. These products have applications in a wide range of industries including electronic, aerospace, transportation and semiconductor. Sales of industrial measurement equipment were approximately \$19,717,000, \$18,345,000 and \$15,266,000 and accounted for approximately 20.4%, 25.3%, and 30.9% of the Company's net sales, respectively, for the years ended December 31, 1996, 1995 and 1994.

### **UPA TECHNOLOGY X-RAY FLUORESCENCE THICKNESS MEASUREMENT SYSTEMS**

The Company believes that its XRF systems incorporate an advanced technology for non-destructive thickness and composition measurement of plated parts, providing high accuracy and precision on a cost-effective basis. As industries increase their emphasis on tighter process control manufacturing specifications (e.g., ISO 9000), XRF technology has become important due to its speed, repeatability, accuracy and non-destructive measurement capability. Due to increased miniaturization of components in the microelectronics industry and the increased need for on-line production testing, the Company believes that the XRF market will continue to grow and that XRF technology will be brought into new applications, such as fine-pitch printed circuit board production and the measurement of multi-layered microelectronic and metal finishing corrosion resistant coatings. Veeco's XRF products incorporate the Company's XPert software package, which operates in an MS-DOS or Microsoft Windows environment and offers features including advanced user-friendly interface and sophisticated statistical data analysis.

Veeco's XRF product line includes the following products:

**XRF SERIES.** The XRF Series is an advanced XRF product line designed to measure plating thickness and composition for the high-end circuit board and microelectronics applications. The XRF Series has a small diameter beam, automated servo driven staging and laser focus capability. The software, which operates in the Microsoft Windows environment, features a real-time video window, a user configurable interface, and point and shoot sample positioning. Sales prices for the XRF Series range from approximately \$15,000 to \$60,000.

SEA SERIES. The SEA Series, produced by Seiko Instruments and marketed in North America and Europe by Veeco, features micro XRF measurement capabilities for deposition thickness, composition and uniformity of thin film magnetic pole structures, hard disks and microelectronic devices. It also provides the ability to analyze the constituent elements of a bulk sample-elemental analysis. Sales prices of these products range from approximately \$50,000 to \$170,000. See "--Strategic Alliances."

### **LEAK DETECTION/VACUUM EQUIPMENT**

For over 50 years, the Company (and its predecessors) have produced mass spectrometry leak detection equipment used for the non-destructive precise identification of the size and location of leaks in sealed components. Leak detectors are used in a broad range of electronic, aerospace and transportation products, with applications in the production of automotive airbags, semiconductor devices, air conditioning and refrigeration components, chemical valves, medical devices such as pacemakers, and fiber optic cable production. Since the Acquisition, the Company has sold more than 1,000 leak detectors throughout the world and services an installed base of approximately 5,000 units, including portable and console units. The Company also produces vacuum components, including vacuum pumping stations and gauges, which are sold primarily to research and university customers.

Veeco's leak detection product line includes the following products:

**AUTOMATIC PORTABLE LEAK DETECTORS.** Fully automatic low-cost portable leak detectors provide gross and fine leak detection for a wide range of applications, including use in semiconductor cleanrooms. They feature automatic tuning and calibrating and require minimal operator training. Sales prices of the portable leak detectors range from approximately \$20,000 to \$30,000.

**CONSOLE LEAK DETECTORS.** Designed for production use, Veeco's line of console leak detectors feature an automatic monitor display and a unique dual mass spectrometer for high resolution and accuracy. Sales prices of the console leak detectors range from approximately \$30,000 to \$40,000.

**ILD-4000 INDUSTRIAL LEAK DETECTION SYSTEMS.** The ILD-4000's are industrial leak detection systems for high production, in-line process testing applications. Sales prices of the industrial leak detectors range from approximately \$60,000 to \$200,000.

### **STRATEGIC ALLIANCES**

The Company's overall business strategy includes the formation of alliances with strategic partners with complementary products or businesses, to assist the Company in gaining access to new markets, technologies and products.

**IBM AGREEMENT.** As part of its strategic alliance strategy, the Company is party to an agreement with IBM (as amended, the "IBM Agreement") with respect to the IBM-manufactured SXM Workstation. Pursuant to the IBM Agreement, the Company has been appointed exclusive worldwide sales and marketing representative to market, service and sell the SXM Workstation to customers in the semiconductor and data storage industries. The IBM Agreement expires in October 1998 and the Company, at its option, may extend the agreement to October 2000. Pursuant to the IBM Agreement, the Company has agreed to purchase a minimum number of SXM Workstations. At December 31, 1996, the Company's purchase commitment under this agreement was approximately \$2,250,000.

Pursuant to the IBM Agreement, in the event that IBM (a) discontinues production of the SXM Workstation, (b) is unable to provide sufficient production of the SXM Workstation, or (c) fails to provide required support for the SXM Workstation, IBM has agreed to grant to the Company an exclusive worldwide license to manufacture the SXM Workstation for sale to the semiconductor and data storage industries. In such event, the parties have agreed to negotiate a mutually agreeable royalty and license agreement.

In the event of such a discontinuance, the Company's ability to manufacture and distribute the SXM Workstation on a timely basis could be disrupted until such time as the Company's production operations for the SXM Workstation are established and the parties conclude the royalty and license agreement. IBM is obligated to ship products for which orders have been accepted by IBM prior to the effective date of such discontinuance, and to provide the Company with an opportunity to purchase reasonable quantities of the SXM Workstation to meet the Company's requirements. Under the IBM Agreement, IBM would not be liable for any lost profits or other consequential damages (including damages based upon third-party claims) incurred by the Company as a result of IBM's actions (or inactions) with respect to the IBM Agreement.

Pursuant to the IBM Agreement, IBM may, and has in the past, licensed intellectual property rights relating to AFM technology to third parties.

**VEECO/SEIKO INSTRUMENTS AGREEMENTS.** In July 1993, Veeco entered into agreements with Seiko Instruments (the "Veeco/Seiko Instruments Agreements"), pursuant to which, among other things, Veeco became the exclusive sales agent and servicer of Seiko Instruments' XRF products in North America, South America and Europe, and Seiko Instruments became Veeco's distribution, marketing and servicing representative in Japan and other parts of Asia. The Veeco/Seiko Instruments Agreements, in addition to providing Veeco with enhanced access to the Japanese and other Asian markets for its XRF products, also give Veeco access to Seiko Instruments' large installed customer base in the United States and broadens Veeco's product line.

Under the Veeco/Seiko Instruments Agreements, Veeco is required to purchase for sale in North America, South America and Europe a minimum of Seiko Instruments' XRF products (measured by sales volume), and Seiko Instruments is required to purchase for sale in Japan and other parts of Asia a minimum of the UPA Technology XRF products (measured by sales volume). These minimum requirements are to be re-negotiated by Veeco and Seiko Instruments for each twelve-month period during the term of the agreements; if the parties fail to timely agree on minimum sales requirements for a twelve-month period, the applicable agreement will terminate. Failure by either party to achieve minimum sales levels will give the other party the right to terminate the applicable agreement upon 60 days' notice. Each of the Veeco/Seiko Instruments Agreements is for a three-year term, which is automatically extended unless either party provides the other with notice of its desire to terminate an agreement. In April 1993, Seiko Instruments was appointed by Veeco as the exclusive distributor in Japan of the Company's ion beam systems product line.

**OTHER STRATEGIC ALLIANCES.** Since 1968, Ulvac has been the exclusive distributor of the Company's (and its predecessors) stylus surface profiler products in Japan and in 1993, Ulvac was appointed as the exclusive distributor of the SXM Workstation in Japan. In 1994, Sloan introduced the Dektak FPD-650, a flat panel display profiler developed by the Company to meet product specifications defined by Ulvac in response to the specific needs of flat panel display manufacturers in Japan.

In November 1996, the Company entered into a strategic alliance with Schmitt Measurement Systems. Under this alliance the Company will market, sell and service Schmitt's current product line as well as to engineer and automate their products for volume production applications.

The Company believes that these strategic alliances enable the Company to continue to access new technologies and introduce innovative products in a cost-efficient manner and will expand the Company's worldwide customer base. Future strategic arrangements may take the form of joint ventures or joint research and development projects, as well as acquisitions or other business combinations.

## **SALES AND SERVICE**

**SALES.** The Company sells its products worldwide through a combination of direct (I.E., Veeco-employed) sales representatives and independent distributors, whose territories do not overlap within a product line. The Company believes that the size, location and expertise of its sales organization represents a competitive advantage in the markets it serves. The Company employs approximately 57 sales professionals in its worldwide

sales organization, with sales offices located in Milpitas, California; Santa Barbara, California; Tustin, California; Plainview, New York; Minneapolis, Minnesota; Dourdan, France; Munich, Germany; Watford, England; Hong Kong; and Tokyo, Japan. In addition to Ulvac and Seiko, Veeco has entered into exclusive distribution agreements with several independent distributors throughout the world. Other than Ulvac, none of these independent distributors accounted for more than 10% of Veeco's sales during the year ended December 31, 1996. See "-- Customers."

Independent distributors typically carry a full line of Veeco's products within a product line, some distributors, such as Seiko Instruments, distribute products from more than one of the Company's product lines. Most distributors also provide product support and servicing for the Veeco products sold by them. As previously described, in 1993 Veeco entered into exclusive distributorship arrangements in Japan with Seiko Instruments with respect to the ion beam systems product line.

See Note 8 to the Consolidated Financial Statements for data pertaining to the Company's net sales to unaffiliated customers by geographic area and for the Company's United States operations export sales.

**SERVICE.** The Company believes that its field service organization is a significant factor in the Company's success. Veeco provides worldwide customer service from five service centers in the United States, three in Europe (Dourdan, France; Watford, England; and Munich, Germany) and four in Asia (Tokyo, Japan; Hong Kong; Bangkok, Thailand and Penang, Malaysia). In addition, most distributors provide service and technical support for the Veeco products they sell. Because of the large installed base of its ion beam systems, surface metrology, X-ray fluorescence measurement systems and mass spectrometry leak detection products, its multiple service centers and its responsiveness to customer needs, Veeco believes that its service organization provides the Company with opportunities for future sales to existing customers.

The Company provides service pursuant to warranty, service contract or on a service-call basis. The Company's products typically carry a one-year warranty, which includes labor costs and replacement of defective parts. The Company also offers enhanced warranty coverage.

The Company offers several types of service contracts, including preventative maintenance plans, on-call, on-site service-call plans and other comprehensive service arrangements. The Company provides training for its customers and employees and consultation services, including a 24-hour hotline service, for certain products.

Approximately 23% of the Company's 1996 net sales were generated from service and support and the sale of spare parts and components.

## **CUSTOMERS**

The Company sells its products to many of the world's major data storage, semiconductor, and flat panel display manufacturers, and to customers in other industries, research centers and universities. For the year ended December 31, 1996, approximately 55.5% of the Company's total net sales were to customers in the data storage industry; approximately 27.4% were sales to customers in the semiconductor industry; approximately 3.8% were sales to customers in the flat panel display industry; and the remaining approximately 13.3% of net sales were to other industry customers and to universities and research centers.

Sales to Read-Rite, which utilizes products primarily from the Company's ion beam system product line totaled \$16,682,000, \$6,631,000 and \$893,000, representing 17.2%, 9.2% and 1.8% of the Company's net sales for the years ended December 31, 1996, 1995 and 1994, respectively.

Sales to Seagate, which also utilizes products primarily from the Company's ion beam system product line, totaled \$15,469,000, \$16,768,000 and \$13,499,000, representing 16.0%, 23.2% and 27.3% of the Company's net sales for the years ended December 31, 1996, 1995 and 1994, respectively. According to industry reports, Seagate is one of the world's largest disk drive manufacturers.

Excluding sales to Read-Rite and Seagate, sales to the next five top customers accounted for 22.9%, 22.71%, and 23.7%, in the aggregate, of total net sales of the Company for the years ended December 31, 1996, 1995 and 1994, respectively.

End-users of the Company's products in each of the following categories include:

Semiconductor -----	Data Storage -----	Flat Panel Display -----
AMD	Applied Magnetics	
AT & T	Headways Technology	Applied Komatsu
CNET/SGS Thomson	IBM	Casio Computer
DEC	Komag	Dai Nippon Print
Harris Semiconductor	Mitsumi	Dai Nippon Screen
Hewlett Packard Company	Quantum	IBM Japan
Hyundai	Read-Rite	Samsung
Micron	SAE Magnetics	Sumitomo Corp.
Mitsubishi	Seagate	Toshiba Corp.
Motorola	Sony	
National Semiconductor		
NEC		
Philips		
Samsung		
Seiko Instruments Inc.		
Siemens		
Texas Instruments		
Toshiba		
VLSI Technology, Inc		

## ENGINEERING, RESEARCH AND DEVELOPMENT

The Company believes that continued and timely development of new products and enhancements to existing products are necessary to maintain its competitive position and relies on a combination of its own internal expertise and strategic alliances with other companies to enhance its research and development efforts. The Company utilizes information supplied by its distributors and customers to design and develop new products and product enhancements and to reduce time-to-market for these products. Through its strategic alliances, the Company has obtained the rights to sell additional products on a timely and cost efficient basis. See "-Strategic Alliances."

The Company's engineering, research and development programs are organized by product line; new products have been introduced into each of the Company's product lines in each of 1996, 1995 and 1994. During 1996, the Company added 13 new products to its product lines: the RF-350S, the Reactive Secondary Ion Beam Sputtering Deposition System, and the Multitarget Secondary Ion Beam Deposition System to its ion beam systems line; the Detak 300 SI, 300 SL, 200 SI and 200 SL Series V Stylus profilers, the Dektak TMS-2000, TMS-2000W, and TMS-3000W Optical Scatterometers (developed by Schmitt Measurement Systems) and the High Definition SXM Atomic Force Microscope to its surface metrology line; and the MS-50 Console Leak Detector and MS-50 Dual Port Console Leak Detector to its industrial measurement line.

Engineering research and development expenses of the Company were approximately \$9,804,000, \$7,101,000 and \$5,096,000 or 10.1%, 9.8% and 10.3% of net sales, for the years ended December 31, 1996, 1995 and 1994, respectively. These expenses consisted primarily of salaries, project material and other product development and enhancement costs.

## **MANUFACTURING**

The Company's principal manufacturing activities, which consist of design, assembly and test operations, take place at its Plainview, New York headquarters, where ion beam systems, XRF and leak detection/vacuum equipment product lines are produced, and in Santa Barbara, California, at the headquarters of the Company's Sloan subsidiary, where the stylus surface metrology system product line is produced. The SXM workstation sold by Veeco is manufactured by IBM at its Boca Raton, Florida facility.

The Company's manufacturing and research and development functions have been organized by product line. The Company believes that this organizational structure allows each product line manager to more closely monitor the products for which he is responsible, resulting in more efficient sales, marketing, manufacturing and research and development. The Company has also implemented a Total Quality Management program, which seeks to emphasize customer responsiveness, customer service, high quality products and a more interactive management style. By implementing these management philosophies, the Company believes that it has increased its competitiveness and positioned itself for future growth.

Certain of the products sold by the Company are obtained from single sources pursuant to written agreements. The Company relies upon IBM for manufacture of the SXM Workstation, and termination of the Company's agreement with IBM or other disruptions in the supply of product could have an adverse effect on the Company's results of operations. In addition, certain of the components and sub-assemblies included in the Company's other products are obtained from a single source or a limited group of suppliers. Although the Company does not believe it is dependent upon any supplier of the components and sub-assemblies referred to in the previous sentence as a sole source or limited source for any critical components (other than as set forth above), the inability of the Company to develop alternative sources, if required, or an inability to meet a demand or a prolonged interruption in supply or a significant increase in the price of one or more components could adversely affect the Company's operating results.

## **BACKLOG**

The Company's backlog consists generally of product orders for which a purchase order has been received and which are scheduled for shipment within twelve months. Because a large percentage of the Company's orders require products to be shipped in the same quarter in which the order was received, and due to possible changes in delivery schedules, cancellations of orders and delays in shipment, the Company does not believe that the level of backlog at any point in time is an accurate indicator of the Company's performance.

## **COMPETITION**

The Company faces substantial competition from established competitors in each of the markets that it serves, some of which have greater financial, engineering, manufacturing and marketing resources than the Company. In addition, to a lesser extent many of the Company's product lines face competition from alternative technologies, some of which are better established than those used by the Company in its products. Significant marketing factors for surface metrology and ion beam systems include system performance, accuracy, repeatability, ease of use, reliability, cost of ownership, and technical service and support. The Company believes it competes favorably on the basis of these factors in each of the Company's served markets for such products. None of the Company's competitors competes with the Company across the Company's product lines.

The Company's ion beam systems compete with other ion beam system manufacturers such as Commonwealth Scientific Corporation, Hitachi and Nordiko.

In the market for surface metrology systems, the Company competes with several companies. The SXM Workstation competes with AFM products produced by other manufacturers such as Digital Instruments as well as with high-end SEM equipment produced by manufacturers such as Hitachi, Ltd. In the surface profiler market, the Company competes primarily with Tencor Instruments.

In the XRF market, the Company competes with other manufacturers of XRF products, including Twin City International, Inc., CMI International, and Fischer, Inc. In the leak detector/vacuum equipment market, the Company competes primarily with Varian Associates, Inc., Leybold A.G. and Alcatel, NV.

## **PATENTS, TRADEMARKS AND OTHER INTELLECTUAL PROPERTY**

The Company's success depends in part on its proprietary technology. Although the Company attempts to protect its intellectual property rights through patents, copyrights, trade secrets and other measures, there can be no assurance that the Company will be able to protect its technology adequately or that competitors will not be able to develop similar technology independently.

The Company has more than 50 patents covering its various products which the Company believes provides it with a competitive advantage. The Company has a policy of seeking patents when appropriate on inventions concerning new products and improvements as part of its on-going research, development and manufacturing activities. The Company believes that there are no patents which are critical to the Company's operations, and that the success of its business depends primarily on the technical expertise, innovation, creativity and marketing and distribution ability of its employees.

The Company also relies upon trade secret protection for its confidential and propriety information. There can be no assurance that others will not independently develop substantially equivalent proprietary information and techniques or otherwise gain access to the Company's trade secrets or disclose such technology or that the Company can meaningfully protect its trade secrets.

The Company is the licensee of certain intellectual property owned by IBM which is associated with the SXM Workstation, including "SXM," which is a registered trademark owned by IBM. See --"Strategic Alliances."

## **ENVIRONMENTAL MATTERS**

In October 1993, the California Regional Water Quality Control Board, Central Coast Region (the "RWQCB") issued a Cleanup and Abatement Order ("CAO") for the site (the "Site") of a facility which was leased by a predecessor of Sloan ("Old Sloan") in Santa Barbara, California. The CAO declared that Lambda Electronics Inc. ("Lambda"), the Company and certain other parties had caused or permitted certain hazardous waste to be discharged into waters of the State at the Site where they create, or threaten to create, a condition of nuisance. (The Company is named as a "discharger" in the CAO because it acquired the assets and liabilities of Old Sloan pursuant to the Acquisition; in addition, the Company may be required to indemnify Lambda for obligations incurred by Lambda as a result of Old Sloan's operations.)

In compliance with the CAO, the Company submitted a corrective action plan for remediating contaminated soils at the Site, by excavating them, spreading them, tilling them, and then refilling the excavated areas with these soils. The RWQCB approved this corrective action plan on June 6, 1994 and on November 29, 1994, the Santa Barbara County Air Pollution Control District exempted the corrective action activities from the District's air permit requirements. The soil remediation was completed in September 1995. The Company is currently performing post soil remediation groundwater monitoring.

Reports prepared by consultants hired by the Company and by owners of the Site indicate elevated levels of certain contaminants in samples of groundwater underneath the Site. The Company's consultants have

recommended that additional groundwater assessment activities and the preparation of a groundwater corrective action workplan, as required by the CAO, should await the results of groundwater testing conducted by other parties near the Site. Until that time, the Company (with the acquiescence of the RWQCB) is monitoring groundwater contamination levels at the Site on a quarterly basis, and is reviewing the results of third party groundwater assessment and monitoring activities being conducted in the vicinity of the Site. The Company cannot predict the extent of groundwater contamination and cannot determine at this time whether any or all of the groundwater contamination may be attributable to the activities of neighboring parties. The Company may be held responsible for the costs of remediating any groundwater contamination under or in the vicinity of the Site but the Company cannot predict the potential scope of such costs at this time.

Pursuant to the Acquisition, the Company is required to pay, and has paid for each of the past seven years, up to \$15,000 per year of the expenses incurred in connection with the operation of certain equipment used in connection with the monitoring and remediation of certain environmental contamination at the Company's Plainview, New York facility. The Company may under certain circumstances also be obligated to pay up to an additional \$250,000 in connection with the implementation of a comprehensive plan of environmental remediation at the Plainview facility; pursuant to the terms of the Acquisition, Lambda (as well as its corporate parent, Unitech plc, and certain of Lambda's subsidiaries) are required to pay all other costs and expenses relating to any such plan of environmental remediation. Because no such comprehensive plan of remediation has been required to date, the Company is not in a position to estimate more precisely what any actual liability might be.

The Company is aware that petroleum hydrocarbon contamination has been detected in the soil at the site of the facility leased by Sloan in Santa Barbara, California (the "Sloan Building"). For 18 months after the Acquisition, the Company owned all of the outstanding capital stock of a company which held title to the Sloan Building, and a leasehold in the property on which the Sloan Building is located. In July 1991, the capital stock of such company was transferred to Lambda, pursuant to provisions in the agreement relating to the Acquisition. Although there appears to be no evidence that the petroleum constituents found in the soil are associated with any activities of Sloan at the Sloan Building, under Federal and California environmental statutes, current "owners and operators" and "owners and operators" at the time of disposal of hazardous substances may be deemed liable for removal and remediation of contamination at a facility. In connection with the Acquisition, Lambda and Unitech plc agreed to indemnify the Company for liabilities incurred by the Company which arise from the environmental contamination at the site, and any costs and expenses relating to the remediation thereof.

## **EMPLOYEES**

At December 31, 1996, the Company had approximately 329 full time employees, including 99 in manufacturing and testing, 57 in sales and marketing, 59 in service and support, 73 in engineering, research and development, and 41 in general administration and finance. The success of the Company's future operations depends in large part on the Company's ability to recruit and retain engineers, technicians and other highly-skilled professionals who are in considerable demand. There can be no assurance that the Company will be successful in retaining or recruiting key personnel. None of the Company's employees is represented by a labor union and the Company has never experienced a work stoppage, slowdown or strike. The Company considers its employee relations to be good.

None of the Company's senior management or key employees is subject to long-term employment agreements; in addition, none of such individuals is subject to an agreement not to compete with the Company. Several of the Company's senior management and key employees hold Common Stock, and/or stock options to purchase Common Stock, of the Company.

## ITEM 2. FACILITIES.

The Company's headquarters, principal manufacturing and research and development facilities are located in an 80,000 square foot building in Plainview, New York, which is owned by the Company. In addition, the Company leases the Sloan Building from Lambda. The Sloan Building, located in Santa Barbara, California, is a 30,000 square foot building which serves as the administrative, sales, manufacturing and research and development facility of Sloan. The lease expires in June 1998.

The Company also leases two facilities located in Milpitas, California and Tustin, California, for use as sales and service centers for certain of its products. Subsidiaries of the Company lease space for use as sales and service centers in Dourdan, France; Munich, Germany; Watford, England; Hong Kong and Tokyo, Japan.

The Company believes that it will be able to either renew the lease for the Sloan Building on satisfactory terms or find a suitable substitute for such facility. Based on the foregoing, the Company believes its facilities are adequate to meet its current needs.

Certain levels of environmental contamination have been detected at the Plainview, New York and Santa Barbara, California facilities of the Company. See "Business - Environmental Matters".

## ITEM 3. LEGAL PROCEEDINGS.

See "Business - Environmental Matters". Except as described therein, there are no material legal proceedings involving the Company or any of its subsidiaries.

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

None.

## PART II

## ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER

### MATTERS

The Common Stock is quoted on the Nasdaq National Market under the symbol "VECO". The 1996 and 1995 high and low closing prices are as follows:

	1996		1995	
	High	Low	High	Low
First Quarter	\$15.63	\$11.13	\$15.00	\$ 7.75
Second Quarter	19.25	12.50	20.25	12.75
Third Quarter	15.00	9.88	30.00	15.25
Fourth Quarter	22.00	11.38	27.00	13.50

On February 24, 1997, the closing price for the Company's Common Stock on the Nasdaq National Market was \$27.25. As of February 24, 1997, the Company had approximately 129 shareholders of record.

The Company has not paid dividends on the Common Stock. The Company intends to retain future earnings, if any, for the development of its business and, therefore, does not anticipate that the Board of Directors will declare or pay any dividends on the Common Stock in the foreseeable future. In addition, the provisions of the Company's current credit facility limits the Company's ability to pay dividends. The Board of

Directors will determine future dividend policy based on the Company's results of operations, financial condition, capital requirements and other circumstances.

## ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA.

The financial data set forth below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and with the Company's Consolidated Financial Statements and notes thereto included elsewhere in this Form 10-K.

	(IN THOUSANDS, EXCEPT PER SHARE DATA)				
	YEARS ENDED DECEMBER 31				
	1996	1995	1994	1993	1992
STATEMENT OF OPERATIONS DATA:					
Net sales	\$96,832	\$72,359	\$49,434	\$43,149	\$36,346
Cost of sales	54,931	39,274	28,940	25,736	21,847
Gross profit	41,901	33,085	20,494	17,413	14,499
Cost and expenses	29,719	24,289	16,511	15,482	13,081
Operating income	12,182	8,796	3,983	1,931	1,418
Interest (income) expense	(678)	(391)	2,620	2,341	3,006
Income (loss) before income taxes and extraordinary item	12,860	9,187	1,363	(410)	(1,588)
Income tax provision (benefit)	4,822	2,395	(795)	-	-
Income (loss) before extraordinary item	8,038	6,792	2,158	(410)	(1,588)
Extraordinary (loss), net of \$355 tax benefit	-	-	(679)	-	-
Net income (loss)	\$8,038	\$6,792	\$1,479	\$(410)	\$(1,588)
Earnings per share:					
Income (loss) before extraordinary item	\$1.36	\$1.24	.87	\$(.22)	\$(.84)
Extraordinary (loss)	-	-	(.27)	-	-
Net income (loss)	\$1.36	\$1.24	\$.60	\$(.22)	\$(.84)
Shares used in computing earnings per share					
	5,906	5,484	2,472	1,874	1,897
AS OF DECEMBER 31					
	1996	1995	1994	1993	1992
BALANCE SHEET DATA:					
Cash and cash equivalents	\$21,209	\$17,568	\$ 2,279	\$386	\$1,063
Working capital	43,454	37,461	16,122	6,666	7,264
Excess of cost over net assets acquired	4,448	4,579	4,710	4,840	4,835
Total assets	80,327	67,380	40,931	32,596	31,464
Long-term debt and capital leases (including current installments)-	-	-	39	24,934	25,150
Shareholders' equity (deficit)	57,970	49,751	28,289	(1,681)	(1,226)

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

The following table sets forth, for the periods indicated, the relationship (in percentages) of selected items of the Company's consolidated statements of operations to its total net sales:

	<b>YEARS ENDED DECEMBER 31</b>		
	1996	1995	1994
	-----		
Net sales	100.0%	100.0%	100.0%
Cost of sales	56.7	54.3	58.
	-----		
Gross profit	43.3	45.7	41.5
Operating expenses:			
Research and development	10.1	9.8	10.3
Selling, general and administrative	20.2	23.3	22.6
Amortization	.2	.2	.7
Other - net	.2	.2	(.2)
	-----		
Total operating expenses	30.7	33.5	33.4
Operating income	12.6	12.2	8.1
Interest (income) expense	(.7)	(.5)	5.3
	-----		
Income before income taxes and extraordinary item	13.3	12.7	2.8
Income tax provision (benefit)	5.0	3.3	(1.6)
	-----		
Income before extraordinary item	8.3	9.4	4.4
Extraordinary (loss), net of tax	--	--	(1.4)
	-----		
Net income	8.3%	9.4%	3.0 %
	-----		

**YEARS ENDED DECEMBER 31, 1996 AND 1995**

Net sales were \$96,832,000 for the year ended December 31, 1996 representing an increase of approximately \$24,473,000, or 33.8%, for the fiscal year ended December 31, 1996 as compared to 1995. The increase reflects growth in all three of the Company's product lines - ion beam systems, surface metrology and industrial measurement. Sales in the U.S. increased approximately 38.6%, while international sales included a 37.8% increase in Asia Pacific and a 56.2% increase in Japan and a 3% decrease in Europe.

Sales of ion beam systems increased by 60.3% to approximately \$53,213,000 in 1996 compared to 1995. This growth was principally driven by increased demand for mass memory storage due to the capacity ramp up in both magnetoresistive and inductive thin film magnetic heads required in high density hard drives.

Sales of surface metrology products increased by 14.6% to approximately \$23,902,000 in 1996 compared to 1995 principally as a result of increased sales of SXM Workstations for semiconductor applications.

Sales of industrial measurement products increased by 7.7% to approximately \$19,717,000 in 1996 compared to 1995 as a result of the introduction of new products in the leak product line.

Gross profit increased to approximately \$41,901,000, or 43.3% of net sales for 1996, compared to \$33,085,000, or 45.7% of net sales for 1995. The decline in gross margin percentage was principally due to product and geographic mix changes in surface metrology and industrial measurement products lines.

Research and development expense increased by approximately \$2,703,000 to approximately \$9,804,000, or 10.1% of net sales in 1996 compared to approximately \$7,101,000 or 9.8% of sales in 1995, as the Company increased its R&D investment in each of its product lines with particular emphasis on ion beam products.

Selling, general and administrative expenses increased by approximately \$2,714,000 to 20.2% of net sales in 1996 from 23.3% for 1995. Selling expense increased \$2,353,000 principally comprised of sales commissions related to higher sales volume, as well as increased compensation and travel expense as a result of additional sales and service personnel required to support the Company's growth. The Company received approximately \$107 million of orders in 1996 compared to approximately \$84 million of orders in 1995 for a 27.9% increase. This resulted in a book to bill ratio of 1.11 to 1 for 1996.

Operating income increased to approximately \$12,182,000 or 12.6% of net sales for 1996 compared to \$8,796,000 or 12.2% of net sales for 1995, due to the above noted factors.

Income taxes amounted to \$4,822,000 or 37.5% of income before income taxes and extraordinary item for 1996 as compared to \$2,395,000 or 26.1% of income before income taxes and extraordinary item for 1995. The Company's effective tax rate in 1995 was lower as a result of the Company recognizing previously unrecognized deferred tax assets.

#### **YEARS ENDED DECEMBER 31, 1995 AND 1994**

Net sales increased by approximately \$22,925,000, or 46.4%, for the fiscal year ended December 31, 1995 to approximately \$72,359,000 as compared to 1994. The increase reflects growth in all three of the Company's product lines - ion beam systems, surface metrology and industrial measurement. Sales in the U.S. increased approximately 48%, while international sales included an approximately 44% increase in European sales and an approximately 47% increase in Asia Pacific sales including Japan.

Sales of ion beam systems increased by 58.1% to approximately \$33,184,000 in 1995 compared to 1994. This increase was driven by increased demand from mass memory storage and telecommunications markets.

Sales of surface metrology products increased by 58.0% to approximately \$20,830,000 in 1995 compared to 1994 as a result of increased sales of SXM Workstations for semiconductor applications and increased sales of surface profilers in Asia Pacific and Europe.

Sales of industrial measurement products increased by 20.2% to approximately \$18,345,000 in 1995 compared to 1994 as a result of the introduction of new products in both the leak detection and XRF thickness measurement systems product lines.

Gross profit increased to approximately \$33,085,000, or 45.7% of net sales, for 1995 compared to \$20,494,000, or 41.5% of net sales for 1994. This improvement was due to the sales volume increases described above, product mix changes and improved operating efficiencies.

Research and development expense increased by approximately \$2,005,000 to approximately \$7,101,000, or 9.8% of net sales in 1995 compared to approximately \$5,096,000 or 10.3% of sales in 1994, as the Company increased its R&D investment in each of its product lines.

Selling, general and administrative expenses increased by approximately \$5,651,000 to 23.3% of net sales in 1995 from 22.6% for 1994. Selling expense increased \$4,150,000 principally comprised of sales commissions related to higher sales volume, as well as increased compensation and travel expense as a result of additional sales and service personnel required to support the Company's growth. The Company received approximately \$84 million of orders in 1995 compared to approximately \$55 million of orders in 1994.

Operating income increased to approximately \$8,796,000 or 12.2% of net sales for 1995 compared to \$3,983,000 or 8.1% of net sales for 1994, due to the above noted factors.

As a result of the repayment of all outstanding debt in December 1994 from the proceeds of the IPO and the investment of the net proceeds from the Public Offering completed in July 1995, the Company had \$391,000 of interest income in 1995 compared to \$2,620,000 of interest expense in 1994.

Income taxes amounted to \$2,395,000 or 26.1% of income before income taxes and extraordinary item for 1995. The Company's effective tax rate is lower than the statutory tax rate as a result of the Company recognizing previously unrecognized deferred tax assets. It is anticipated that the Company's effective tax rate in 1996 will approach the statutory tax rate.

## **LIQUIDITY AND CAPITAL RESOURCES**

Net cash provided by operations totaled \$7,173,000 for the fiscal year ended December 31, 1996 compared to \$1,980,000 for 1995, due primarily to net income of \$8,038,000 in 1996 compared to net income of \$6,792,000 in 1995. Cash flow in 1995 was also impacted by an increase of approximately \$6,072,000 in accounts receivable. Net cash provided by operations of \$1,980,000 for the fiscal year ended December 31, 1995 compared to \$808,000 for 1994 primarily due to net income of \$6,792,000 in 1995 compared to net income of \$1,479,000 in 1994 partially offset by changes in operating assets and liabilities.

Accounts receivable increased by approximately \$843,000 at December 31, 1996 to \$19,826,000 from \$18,983,000 at December 31, 1995, due primarily to increased sales. Accounts receivable increased by approximately \$6,291,000 to \$18,983,000 at December 31, 1995 from \$12,692,000 at December 31, 1994, primarily due to the increased sales.

Inventories increased by approximately \$5,468,000 at December 31, 1996 to \$21,263,000 from \$15,795,000 at December 31, 1995. The increase was principally due to purchases required for the increased level of sales orders. Inventories increased by approximately \$5,101,000 at December 31, 1995 to \$15,795,000 at December 31, 1995 from \$10,694,000 at December 31, 1994 principally due to purchases required for the introduction of new products and increased level of sales orders.

Accounts payable increased by \$2,467,000 at December 31, 1996 to \$11,196,000 from \$8,729,000 at December 31, 1995 due to a higher level of purchases associated with the increased sales volume. Accounts payable increased by \$1,316,000 at December 31, 1995 to \$8,729,000 from \$7,413,000 as a result of purchases required for the introduction of new products.

Accrued expenses increased by \$2,441,000 at December 31, 1996 to \$9,964,000 from \$7,523,000 at December 31, 1995 as a result of increased customer deposits and payroll-related liabilities.

Working capital totaled approximately \$43,454,000 at December 31, 1996 compared to approximately \$37,461,000 at December 31, 1995. Cash increased to approximately \$21,209,000 at December 31, 1996 as a result of cash from operations partially offset by approximately \$3,766,000 of capital expenditures. Working capital was approximately \$37,461,000 at December 31, 1995 compared to approximately \$16,122,000 at December 31, 1994. Cash increased to approximately \$17,568,000 at December 31, 1995 from \$2,279,000 at December 31, 1994 as a result of cash from operations and the Company's Public Offering.

The Company made capital expenditures of \$3,766,000 for fiscal year 1996, principally for manufacturing facilities, laboratory and test equipment and computer system upgrades, as compared to \$965,000 of capital expenditures for 1995. The Company's capital expenditures for 1995 related primarily to the purchase of laboratory and test equipment and manufacturing facility improvements. The Company expects that capital expenditures will increase in the next year as it improves its manufacturing facilities and acquires additional equipment for its ion beam deposition systems business.

In July 1996, the Company entered into a new credit facility (the "Credit Facility") with Fleet Bank, N.A. and The Chase Manhattan Bank. The Credit Facility, may be used for working capital, acquisitions and general corporate purposes, provides the Company with up to \$30 million of availability. The Credit Facility bears interest at the prime rate of the lending banks, but is adjustable to a maximum rate of 3/4% above the prime rate in the event the Company's ratio of debt to cash flow exceeds a defined ratio. A LIBOR based interest rate option is also provided. As of December 31, 1996 there were no amounts outstanding under the Credit Facility.

As of December 31, 1996, the Company's availability under the Credit Facility was reduced by approximately \$931,000 as a result of outstanding letters of credit. The Credit Facility is secured by substantially all of the Company's personal property, as well as the stock of its Sloan subsidiary.

Pursuant to a sales and marketing agreement with IBM, the Company has agreed to purchase a minimum number of IBM-manufactured SXM Workstations for sale by the Company to customers in the semiconductor and data storage industries for an aggregate purchase price of approximately \$2,250,000. These products are required to be purchased prior to July 1997. In addition, the Company has minimum purchase obligations pursuant to agreements with certain other suppliers. See "Business--Strategic Alliances."

The Company believes that the cash generated from operations, funds available from the Credit Facility described above and existing cash balances will be sufficient to meet the Company's projected working capital and other cash flow requirements for at least the next 24 months.

## **RISK FACTORS THAT MAY IMPACT FUTURE RESULTS**

Certain information provided by the Company, statements made by its employees or information included in its filings with the Securities and Exchange Commission may contain statements which are "forward-looking statements" which involve risks and uncertainties. The following risk factors should be considered by shareholders of and by potential investors in the Company.

**CYCLICALITY OF SEMICONDUCTOR INDUSTRY.** The semiconductor industry has been characterized by cyclicity. The industry has experienced significant economic downturns at various times in the last decade, characterized by diminished product demand, accelerated erosion of average selling prices and production over-capacity. The Company may experience substantial period-to-period fluctuations in future operating results due to general industry conditions or events occurring in the general economy.

**RAPID TECHNOLOGICAL CHANGE; IMPORTANCE OF TIMELY PRODUCT INTRODUCTION.** The semiconductor manufacturing industry is subject to rapid technological change and new product introductions and enhancements. The Company's ability to remain competitive will depend in part upon its ability to develop in a timely and cost effective manner new and enhanced systems at competitive prices. In addition, new product introductions or enhancements by the Company's competitors could cause a decline in sales or loss of market acceptance of the Company's existing products. Increased competitive pressure could also lead to intensified price competition resulting in lower margins, which could materially adversely affect the Company's business, financial condition and results of operations. The success of the Company in developing, introducing and selling new and enhanced systems depends upon a variety of factors, including product selections, timely and efficient completion of product design and development, timely and efficient implementation of manufacturing processes, effective sales, service and marketing and product performance in the field. Because new product development commitments must be made well in advance of sales, new product decisions must anticipate both the future demand for the products under development and the equipment required to produce such products. There can be no assurance that the Company will be successful in selecting, developing, manufacturing and marketing new products or in enhancing existing products.

**LIMITED SALES BACKLOG.** The Company derives a substantial portion of its sales from the sale of a relatively small number of systems which typically range in purchase price from approximately \$400,000 to \$1,500,000. As a result, the timing of recognition of revenue for a single transaction could have a material adverse affect on the Company's sales and operating results. The Company's backlog at the beginning of a quarter typically does not include all sales required to achieve the Company's sales objective for that quarter. Moreover, all customer purchase orders are subject to cancellation or rescheduling by the customer with limited or no penalties. Therefore, backlog at any particular date is not necessarily representative of actual sales for any succeeding period. The Company's net sales and operating results for a quarter may depend upon the Company obtaining orders for systems to be shipped in the same quarter that the order is received. The Company's

business and financial results for a particular period could be materially adversely affected if an anticipated order for even one system is not received in time to permit shipping during the period.

**HIGHLY COMPETITIVE INDUSTRY.** The semiconductor capital equipment industry is intensely competitive. A substantial investment is required by customers to install and integrate capital equipment into a production line. As a result, once a manufacturer has selected a particular vendor's capital equipment, the Company believes that the manufacturer generally relies upon that equipment for the specific production line application and frequently will attempt to consolidate its other capital equipment requirements with the same vendor. Accordingly, the Company expects to experience difficulty in selling to a particular customer for a significant period of time if that customer selects a competitor's capital equipment. The Company expects its competitors to continue to develop enhancements to and future generations of competitive products that may offer improved price or performance features. New product introductions and enhancements by the Company's competitors could cause a significant decline in sales or loss of market acceptance of the Company's systems in addition to intense price competition or otherwise make the Company's systems or technology obsolete or noncompetitive. Increased competitive pressure could lead to reduced demand and lower prices for the Company's products, thereby materially adversely affecting the Company's operating results. There can be no assurance that the Company will be able to compete successfully in the future.

## **FOREIGN OPERATIONS**

Approximately 12.5%, 17.3%, and 14.9% of the Company's net sales for years ended December 31, 1996, 1995 and 1994, respectively, were derived from sales denominated in foreign currencies. The effect of foreign currency exchange rate fluctuations on such revenues is largely offset to the extent expenses of the Company's international operations are incurred and paid for in the same currencies as those of its revenues.

The Company has mitigated its exposure to foreign currency transaction adjustments by substantially offsetting assets denominated in foreign currencies with foreign currency liabilities. The Company does not engage in foreign currency hedging transactions. Foreign currency translation adjustments of \$104,000, (\$128,000) and (\$233,000) were (credited) charged to Shareholder's Equity for the years ended December 31, 1996, 1995 and 1994, respectively. The aggregate exchange gains and (losses) included in determining consolidated results of operations were (\$153,000), \$100,000, and \$185,000 for the years ended December 31, 1996, 1995 and 1994 respectively.

## **DEPENDENCE ON MICROELECTRONICS INDUSTRY**

The Company's business depends in large part upon the capital expenditures of data storage, semiconductor and flat panel display manufacturers which accounted for the following percentages of the Company's net sales:

	DECEMBER 31		
	1996	1995	1994
Data storage	55.5%	40.2%	38.1%
Semiconductor	27.4	36.4	33.2
Flat panel display	3.8	6.1	7.3

The Company cannot predict whether the growth experienced in the microelectronics industry in the recent past will continue.

## ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The financial statements of the Company are listed in the Index to Consolidated Financial Statements and Financial Statement Schedule filed as part of this Form 10-K.

### QUARTERLY RESULTS OF OPERATIONS

The following table presents selected financial data for each quarter of fiscal 1996 and 1995. This information is unaudited, has been prepared on a basis consistent with the Company's audited financial statements and, in the opinion of the Company's management, reflects all adjustments (consisting only of normal recurring adjustments) that the Company considers necessary for a fair presentation of this information in accordance with generally accepted accounting principles. Such quarterly results are not necessarily indicative of future results of operations and should be read in conjunction with the audited financial statements of the Company and the notes thereto.

	QUARTERLY STATEMENTS OF OPERATIONS									
	(IN THOUSANDS, EXCEPT FOR PER SHARE DATA)									
	FISCAL 1996					FISCAL 1995				
	Q1	Q2	Q3	Q4	YEAR	Q1	Q2	Q3	Q4	YEAR
Net sales	\$20,644	\$25,095	\$24,071	\$27,022	\$ 96,832	\$ 14,133	\$ 17,498	\$ 18,430	\$ 22,298	\$ 72,359
Cost of sales	11,437	13,972	13,602	15,920	54,931	7,754	9,615	10,061	11,844	39,274
Gross profit	9,207	11,123	10,469	11,102	41,901	6,379	7,883	8,369	10,454	33,085
Costs and expenses	6,522	7,872	7,455	7,870	29,719	5,002	5,863	5,948	7,476	24,289
Operating income	2,685	3,251	3,014	3,232	12,182	1,377	2,020	2,421	2,978	8,796
Interest income	200	162	148	168	678	9	6	152	224	391
Income before income taxes	2,885	3,413	3,162	3,400	12,860	1,386	2,026	2,573	3,202	9,187
Income tax provision	1,075	1,307	1,168	1,272	4,822	291	544	694	866	2,395
Net income	\$ 1,810	\$ 2,106	\$ 1,994	\$ 2,128	\$ 8,038	\$ 1,095	\$ 1,482	\$ 1,879	\$ 2,336	\$ 6,792
Earnings per share:										
Net income	\$ .31	\$ .35	\$ .34	\$ .36	\$ 1.36	\$ .22	\$ .29	\$ .33	\$ .39	\$ 1.24
Shares used in computing earnings per share										
	5,893	5,958	5,860	5,972	5,906	5,077	5,123	5,750	5,984	5,484

A variety of factors influence the level of the Company's net sales in a particular quarter, including specific economic conditions in the semiconductor, data storage and flat panel display industries, the timing of significant orders, shipment delays, specific feature requests by customers, the introduction of new products by the Company and its competitors, production and quality problems, changes in material costs, disruption in sources of supply, seasonal patterns of capital spending by customers, and other factors, many of which are beyond the Company's control. In addition, the Company derives a substantial portion of its revenues from the sale of products which have an average selling price in excess of \$500,000. As a result, the timing of recognition of revenue from a single transaction could have a significant impact on the Company's net sales and operating results in any given quarter.

**ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURES.**

None.

**PART III**

**ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT.**

Reference is made to the Registrant's definitive proxy statement to be filed with the Securities and Exchange Commission within 120 days after the end of the Registrant's fiscal year for information concerning directors and executive officers of the Registrant.

**ITEM 11. EXECUTIVE COMPENSATION.**

Reference is made to the Registrant's definitive proxy statement to be filed with the Securities and Exchange Commission within 120 days after the end of the Registrant's fiscal year for information concerning executive compensation.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT.**

Reference is made to the Registrant's definitive proxy statement to be filed with the Securities and Exchange Commission within 120 days after the end of the Registrant's fiscal year for information concerning security ownership of each person known by the Company to own beneficially more than 5% of the outstanding shares of Common Stock, of each director of the Company and all executive officers and directors as a group.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS.**

Reference is made to the Registrant's definitive proxy statement to be filed with the Securities and Exchange Commission within 120 days after the end of the Registrant's fiscal year for information concerning certain relationships and related transactions.

## PART IV

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

- (a) (1) The Registrant's financial statements together with a separate table of contents are annexed hereto.
- (2) The financial statement schedule is listed in the separate table of contents annexed hereto.
- (3) Exhibits.

#### Exhibit

Number	Exhibit
3.1	Form of Amended and Restated Certificate of Incorporation of the Company. (1)
3.2	Form of Amended and Restated By-Laws of the Company. (1)
4.1	Form of Certificate for Common Stock. (1)
10.1	Lease, dated July 29, 1991 between Sloan Technology Corporation, a California corporation and Sloan Technology Corporation, a Delaware corporation. (1)
10.2	OEM Agreement for Acquisition of IBM Products, dated July 20, 1993 by and between IBM and the Company. (2)
10.3	Modification to OEM Agreement for Acquisition of IBM Products, dated July 20, 1993, by and between IBM and the Company. (2)
10.4	UPA Technology Division, Veeco Instruments Inc. and Roentgenanalytik Messtechnik GmbH XRF Development Program Agreement, dated December 8, 1992, between Veeco-UPA Technology Division and Roentgenanalytik Messtechnik GmbH. (2)
10.5	Distributor Agreement, dated as of December 15, 1974 between Sloan Technology Corporation and ULVAC Corporation. (2)
10.6	Amendment to Distributor Agreement, dated March 11, 1993, by and between Sloan Technology Corporation and ULVAC Japan, Ltd.(2)
10.7	Exclusive Sales Agreement, dated as of July 1, 1993, between Seiko Instruments and the Company. (2)
10.8	Exclusive Sales Agreement, dated as of July 1, 1993, between the Company and Seiko Instruments. (2)
10.9	Distributor Agreement, dated March 5, 1993, between the Company and Seiko Instruments.(2)
10.11	Letter Agreement, dated November 22, 1993 between the Company and John F. Rein, Jr. (1)
10.12	First Amendment and Restatement of Stock Option Agreement dated as of October 13, 1994 between the Company and John F. Rein, Jr. (1)
10.13	Agreement dated as of February 7, 1994, effective as of December 31, 1993, between the Company and Robert Oates, together with Amendment No. 1 thereto dated as of October 13, 1994. (1)
10.15	Veeco Instruments Inc. 1994 Stock Option Plan for Outside Directors. (1)

Exhibit  
Number Exhibit

10.19 Letter Agreement dated, January 16, 1995 between the Company and John Kiernan. (3)

10.20 Amended and Restated Veeco Instruments Inc. Employees' Stock Option Plan.

(4)

10.21 Veeco Instruments Inc. Employees Stock Purchase Plan. (4)

10.22 OEM Agreement for acquisition of IBM products, dated October 12, 1995, between International Business Machines Corporation and Veeco Instruments Inc. (5)

10.24 Lease dated July 1, 1993 and Lease renewal dated February 26, 1996 between Lambda (Santa Barbara) Inc., a California Corporation and Veeco Instruments Inc., a Delaware Corporation. (6)

10.25 Credit Agreement dated July 31, 1996 among the Registrant, Fleet Bank N.A. and The Chase Manhattan Bank. (7)

10.26 Security Agreement dated July 31, 1996 among the Registrant, Fleet Bank N.A. and The Chase Manhattan Bank. (7)

10.27 Guarantee Agreement dated July 31, 1996 among the Registrant, Fleet Bank N.A. and The Chase Manhattan Bank. (7)

10.28 Guarantor's Security Agreement dated July 31, 1996 among Sloan Technology Corporation, Fleet Bank N.A. and The Chase Manhattan Bank. (7)

10.29 The Pledge Agreement dated July 31, 1996 among the Registrant, Fleet Bank N.A. and The Chase Manhattan Bank. (7)

10.30 The Patent and Trademark Security Agreement dated July 31, 1996 among the

Registrant, Fleet Bank N.A. and The Chase Manhattan Bank. (7)

21.1 Subsidiaries of the Registrant. (1)

23.1 Consent of Ernst & Young LLP. \*

27 Financial Data Schedule of Veeco Instruments Inc. for the year ended December 31, 1996. \*

\*Filed herewith.

(1) Previously filed as an Exhibit to the Registrant's Registration Statement on Form S-1 (Registration No. 33-85184) and incorporated herein by reference.

(2) Previously filed as an Exhibit to the Registrant's Registration Statement on Form S-1 (Registration No. 33-85184) and incorporated herein by reference; confidential treatment granted.

(3) Previously filed as an Exhibit to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1994 and incorporated herein by reference.

(4) Previously filed as an Exhibit to the Registrant's Registration Statement on Form S-1 (Registration No. 33-93958) and incorporated herein by reference.

(5) Previously filed as an Exhibit to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1995 and incorporated herein by reference; confidential treatment granted.

(6) Previously filed as an Exhibit to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1996 and incorporated herein by reference.

(7) Previously filed as an Exhibit to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 1996 and incorporated herein by reference.

(b) Reports on Form 8-K.

None.

(c) Exhibits: See Index to Exhibits.

(d) Consolidated Financial Statement Schedule.

### **Schedule II Valuation and Qualifying Accounts**

All other schedules are omitted because they are not applicable or the required information is shown in the Consolidated Financial Statements or notes thereto.

## SIGNATURES

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

### VEECO INSTRUMENTS INC.

By /s/ Edward H. Braun

-----  
Edward H. Braun,  
Chairman, Chief Executive Officer  
and President

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

<i>Signature</i>	<i>Title</i>	<i>Date</i>
/s/ Edward H. Braun ----- Edward H. Braun	Chairman, Chief Executive, Officer, President and Director (principal executive officer)	February 28, 1997
/s/ John F. Rein, Jr. ----- John F. Rein, Jr.	Vice President-Finance, Chief Financial Officer, Secretary and Treasurer (principal financial officer)	February 28, 1997
/s/ John P. Kiernan ----- John P. Kiernan	Corporate Controller (principal accounting officer)	February 28, 1997
/s/ Walter J. Scherr ----- Walter J. Scherr	Director	February 28, 1997
/s/ Richard A. D'Amore ----- Richard A. D'Amore	Director	February 28, 1997
/s/ Paul R. Low ----- Paul R. Low	Director	February 28, 1997
/s/ Joel A. Elftmann ----- Joel A. Elftmann	Director	February 28, 1997

**Form 10-K-Item 14(a)(1) and (2)**

**Veeco Instruments Inc. and Subsidiaries**

**Index to Consolidated Financial Statements  
and Financial Statement Schedule**

The following consolidated financial statements of Veeco Instruments Inc. and subsidiaries are included in Item 8:

Consolidated Balance Sheets at December 31, 1996 and 1995.....	F-3
Consolidated Statements of Income for the Years Ended December 31, 1996, 1995 and 1994.....	F-4
Consolidated Statements of Shareholders' Equity for the Years Ended December 31, 1996, 1995 and 1994.....	F-5
Consolidated Statements of Cash Flows for the Years Ended December 31, 1996, 1995 and 1994.....	F-6
Notes to Consolidated Financial Statements.....	F-7

The following consolidated financial statement schedule of Veeco Instruments Inc. and subsidiaries is included in Item 14(d):

**Schedule II - Valuation and Qualifying Accounts.....F-20**

All other schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the instructions or are inapplicable and therefore have been omitted.

## Report of Independent Auditors

Shareholders and The Board of Directors  
Veeco Instruments Inc.

We have audited the accompanying consolidated balance sheets of Veeco Instruments Inc. and subsidiaries as of December 31, 1996 and 1995 and the related consolidated statements of income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 1996. Our audits also included the financial statement schedule listed in the Index at Item 14(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Veeco Instruments Inc. and subsidiaries at December 31, 1996 and 1995, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 1996 in conformity with generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

*/s/ Ernst & Young  
Melville, New York  
February 7, 1997*

**Veeco Instruments Inc. and Subsidiaries**

**Consolidated Balance Sheets**  
(DOLLARS IN THOUSANDS)

DECEMBER 31

	1996	1995
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$21,209	\$17,568
Accounts and trade notes receivable, less allowance for doubtful accounts of \$482 in 1996 and \$517 in 1995	19,826	18,983
Inventories	21,263	15,795
Prepaid expenses and other current assets	858	923
Deferred income taxes	1,937	1,221
	65,093	54,490
Total current assets		
Property, plant and equipment at cost, net	9,761	7,381
Excess of cost over net assets acquired, less accumulated amortization of \$910 in 1996 and \$779 in 1995	4,448	4,579
Other assets--net	1,025	930
	\$80,327	\$67,380
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 11,196	\$ 8,729
Accrued expenses	9,964	7,523
Income taxes payable	479	777
	21,639	17,029
Total current liabilities		
Deferred income taxes	257	118
Other liabilities	461	482
<b>Shareholders' equity:</b>		
Common stock (9,500,000 shares authorized, 5,836,021 and 5,787,214 shares issued and outstanding at  December 31, 1996 and 1995, respectively)		
Additional paid-in capital	58	58
Retained earnings	47,638	47,353
Cumulative translation adjustment	9,609	1,571
	665	769
	57,970	49,751
Total shareholders' equity		
Total liabilities and shareholders' equity	\$80,327	\$67,380

**SEE ACCOMPANYING NOTES.**

**Veeco Instruments Inc. and Subsidiaries**

**Consolidated Statements of Income**  
(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)

**YEAR ENDED DECEMBER 31**

	1996	1995	1994
	-----	-----	-----
Net sales	\$ 96,832	\$72,359	\$49,434
Cost of sales	54,931	39,274	28,940
	-----	-----	-----
Gross profit	41,901	33,085	20,494
Costs and expenses:			
Research and development expense	9,804	7,101	5,096
Selling, general and administrative expense	19,536	16,822	11,171
Amortization expense	236	202	344
Other--net	143	164	(100)
	-----	-----	-----
	29,719	24,289	16,511
	-----	-----	-----
Operating income	12,182	8,796	3,983
Interest (income) expense--net	(678)	(391)	2,620
	-----	-----	-----
Income before income taxes and extraordinary item	12,860	9,187	1,363
Income tax provision (benefit)	4,822	2,395	(795)
	-----	-----	-----
Income before extraordinary item	8,038	6,792	2,158
	-----	-----	-----
Extraordinary (loss) on prepayment of debt, net of \$355 tax benefit	-	-	(679)
	-----	-----	-----
Net income	\$ 8,038	\$ 6,792	\$ 1,479
	-----	-----	-----
Earnings per share:			
Income before extraordinary item	\$ 1.36	\$ 1.24	\$ .87
Extraordinary (loss)	-	-	(.27)
	-----	-----	-----
Net income	\$ 1.36	\$ 1.24	\$ .60
	-----	-----	-----
Shares used in computing earnings per share	5,906	5,484	2,472
	-----	-----	-----

**SEE ACCOMPANYING NOTES.**

Veeco Instruments Inc. and Subsidiaries  
Consolidated Statements of Shareholders' Equity  
(DOLLARS IN THOUSANDS)

	Common Stock		Preferred Stocks		Additional Paid-in Capital	Retained Earnings (Deficit)	Preferred Treasury Stock		Cumulative Translation Adjustment	Total
	Shares	Amount	Shares	Amount			Shares	Amount		
Balance at December 31, 1993			1,846,154	\$ 4,354	\$ 316	\$ (6,700)	(85,128)	\$ (59)	\$ 408	\$(1,681)
Conversion of Preferred Stocks	1,761,026	\$18	(1,846,154)	(4,354)	4,277		85,128	59		-
Exercise of outstanding warrants	337,449	3			112					115
Conversion of Series B Subordinated debt and accrued interest	313,878	3			3,450					3,453
Stock issued for prepayment penalty	36,364	1			399					400
Net proceeds from initial public offering	2,500,000	25			24,265					24,290
Translation adjustment									233	233
Net income						1,479				1,479
Balance at December 31, 1994	4,948,717	50	-	-	32,819	(5,221)	-	-	641	28,289
Exercise of stock options	38,497	-			82					82
Net proceeds from public offering	800,000	8			14,452					14,460
Translation adjustment									128	128
Net income						6,792				6,792
Balance at December 31, 1995	5,787,214	58	-	-	47,353	1,571	-	-	769	49,751
Exercise of stock options and stock issuances under stock purchase plan	48,807	-			285					285
Translation adjustment									(104)	(104)
Net income						8,038				8,038
Balance at December 31, 1996	5,836,021	\$ 58	-	\$ -	47,638	\$ 9,609	-	\$ -	\$ 665	\$ 57,970

**SEE ACCOMPANYING NOTES.**

**Veeco Instruments Inc. and Subsidiaries**

**Consolidated Statements of Cash Flows**  
(DOLLARS IN THOUSANDS)

	YEAR ENDED DECEMBER 31		
	1996	1995	1994
	-----	-----	-----
OPERATING ACTIVITIES			
Net income	\$ 8,038	\$ 6,792	\$ 1,479
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	1,599	1,200	1,425
Deferred income taxes	(577)	147	(1,250)
Loss on debt prepayment	-	-	1,034
Other	11	-	(28)
Changes in operating assets and liabilities:			
Accounts receivable	(1,062)	(6,072)	(3,355)
Inventories	(5,560)	(4,948)	(2,071)
Accounts payable	2,485	1,291	3,492
Accrued expenses and other current liabilities	2,460	2,984	(2)
Income taxes payable	(298)	686	92
Other--net	77	(100)	(8)
	-----	-----	-----
Net cash provided by operating activities	7,173	1,980	808
INVESTING ACTIVITIES			
Capital expenditures	(3,766)	(965)	(364)
Patents	(17)	-	(165)
	-----	-----	-----
Net cash used in investing activities	(3,783)	(965)	(529)
FINANCING ACTIVITIES			
Net proceeds from public stock offering	-	14,460	24,290
Net repayments under revolving credit agreement	-	-	(8,786)
Long-term debt repayments	-	-	(13,459)
Deferred financing costs	(195)	(85)	(201)
Exercise of stock options and issuance of stock under stock purchase plan	285	82	-
Other	-	(39)	9
	-----	-----	-----
Net cash provided by financing activities	90	14,418	1,853
Effect of exchange rate changes on cash and cash equivalents	161	(144)	(239)
	-----	-----	-----
Net increase in cash and cash equivalents	3,641	15,289	1,893
Cash and cash equivalents at beginning of year	17,568	2,279	386
	-----	-----	-----
Cash and cash equivalents at end of year	\$ 21,209	\$ 17,568	\$ 2,279
	-----	-----	-----

**SEE ACCOMPANYING NOTES.**

## **Veeco Instruments Inc. and Subsidiaries**

### **Notes to Consolidated Financial Statements**

December 31, 1996

#### **1. SIGNIFICANT ACCOUNTING POLICIES**

##### **ORGANIZATION**

Veeco Instruments Inc. ("Veeco" or the "Company") designs, manufactures, markets and services a broad line of precision ion beam systems, surface metrology systems, and industrial measurement equipment used in the manufacture of microelectronic products. The company sells its products worldwide to many of the leading semiconductor and data storage manufacturers. In addition, the Company sells its products to companies in the flat panel display and high frequency device industries, as well as to other industries, research and development centers and universities.

##### **USE OF ESTIMATES**

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

##### **BASIS OF PRESENTATION**

The consolidated financial statements include the accounts of Veeco and its subsidiaries. Intercompany items and transactions have been eliminated in consolidation.

##### **REVENUE**

Revenue is recognized when title passes to the customer, generally upon shipment. Service and maintenance contract revenues are recorded as deferred income, which is included in other accrued expenses, and recognized as income on a straight-line basis over the service period of the related contract. The Company provides for (1) the estimated costs of fulfilling its installation obligations and (2) warranty costs at the time the related revenue is recorded.

##### **CASH FLOWS**

The Company considers all highly liquid investments with an original maturity of three months or less when purchased to be cash equivalents. Interest paid during 1996, 1995 and 1994 was approximately \$70,000, \$113,000 and, \$2,661,000, respectively. Taxes paid in 1996 and 1995 were approximately \$5,226,000 and \$916,000, respectively. No significant tax payments were made in 1994.

## **Veeco Instruments Inc. and Subsidiaries**

### **Notes to Consolidated Financial Statements (continued)**

#### **1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

##### **INVENTORIES**

Inventories are stated at the lower of cost (principally first-in, first-out method) or market.

##### **DEPRECIABLE ASSETS**

Depreciation and amortization are generally computed by the straight-line method and are charged against income over the estimated useful lives of depreciable assets. Amortization of equipment recorded under capital lease obligations is included in depreciation of property, plant and equipment.

##### **INTANGIBLE ASSETS**

Excess of cost of investment over net assets of business acquired is being amortized on a straight-line basis over 40 years. Other intangible assets, principally patents, software licenses and deferred finance costs, of \$892,000 and \$880,000 at December 31, 1996 and 1995, respectively, are net of accumulated amortization of \$577,000 and \$312,000. Other intangible assets are amortized over periods ranging from 3 to 17 years.

##### **FOREIGN OPERATIONS**

Foreign currency denominated assets and liabilities are translated into U.S. dollars at the exchange rates existing at the balance sheet date. Resulting translation adjustments due to fluctuations in the exchange rates are recorded as a separate component of shareholders' equity. Income and expense items are translated at the average exchange rates during the respective periods.

##### **ADVERTISING EXPENSE**

The cost of advertising is expensed as of the first showing. The Company incurred \$1,819,000, \$1,155,000 and \$638,000 in advertising costs during 1996, 1995 and 1994, respectively.

## **Veeco Instruments Inc. and Subsidiaries**

### **Notes to Consolidated Financial Statements (continued)**

#### **1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

##### **STOCK BASED COMPENSATION**

At December 31, 1996, the Company has three stock-based compensation plans, which are described in Note 5 to the consolidated financial statements. The Company has elected to continue to follow Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" (APB 25) and related Interpretations in accounting for its stock-based compensation plans. Under APB 25, because the exercise price of the Company's employee stock options granted equals the market price of the underlying stock on the date of grant, no compensation expense is recognized.

##### **RECLASSIFICATIONS**

Certain amounts in the 1994 and 1995 financial statements have been reclassified to conform with the 1996 presentation.

##### **EARNINGS PER SHARE**

Earnings per share is computed using the weighted average number of common and common equivalent shares outstanding during the year. The Company completed an initial public offering (the "IPO") on December 6, 1994, pursuant to which 2,500,000 shares of Common Stock, par value \$.01 per share (the "Common Stock") were issued and sold at \$11 per share. As a consequence of the IPO and pursuant to the requirements of the Securities and Exchange Commission, stock issued by the Company during the twelve months immediately preceding the IPO, plus the number of equivalent shares issuable pursuant to the grant of options during the same period, have been included in the number of shares used in the calculation of earnings per share for 1994 as if they were outstanding (using the treasury stock method and the IPO price). In addition, the calculation of the shares used in computing earnings per share for 1994 also includes the outstanding convertible preferred stock which automatically converted into 1,761,026 shares of Common Stock upon the closing of the IPO as if they were converted to Common Stock on the respective original dates of issuance.

**Veeco Instruments Inc. and Subsidiaries**

**Notes to Consolidated Financial Statements (continued)**

**2. BALANCE SHEET INFORMATION**

DECEMBER 31

	1996	1995	
-----			
Inventories:			
Raw materials	\$ 9,546,000	\$ 4,349,000	
Work in process	4,909,000	4,222,000	
Finished goods	6,808,000	7,224,000	
	-----		
	\$ 21,263,000	\$ 15,795,000	
-----			
	DECEMBER 31		ESTIMATED
	1996	1995	USEFUL LIVES
-----			
Property, plant and equipment:			
Land	\$ 1,400,000	\$ 1,400,000	
Buildings and improvements	4,965,000	4,776,000	30 years
Machinery and equipment	9,749,000	6,376,000	3-10 years
Leasehold improvements	150,000	147,000	3-10 years
	-----		
	16,264,000	12,699,000	
Less accumulated depreciation and amortization	6,503,000	5,318,000	
	-----		
	\$ 9,761,000	\$ 7,381,000	
-----			
	DECEMBER 31		
	1996	1995	
-----			
Accrued expenses:			
Deferred service contract revenue	\$ 401,000	\$ 670,000	
Customer deposits and advance billings	3,540,000	1,842,000	
Payroll and related benefits	1,836,000	2,046,000	
Other	4,187,000	2,965,000	
	-----		
	\$ 9,964,000	\$7,523,000	
-----			

## Veeco Instruments Inc. and Subsidiaries

### Notes to Consolidated Financial Statements (continued)

#### 3. FINANCING ARRANGEMENTS

In July 1996, the Company entered into a new credit facility ("the Credit Facility") with Fleet Bank, N.A. and The Chase Manhattan Bank. The Credit Facility, which is to be used for working capital, acquisitions and general corporate purposes provides the Company with up to \$30 million of availability. The Credit Facility bears interest at the prime rate of the lending banks, but is adjustable to a maximum rate of 3/4% above the prime rate in the event the Company's ratio of debt to cash flow exceeds a defined ratio. A LIBOR based interest rate option is also provided. The Credit Facility expires July 31, 1999, but under certain conditions is convertible into a term loan, which would amortize quarterly through July 31, 2002.

The Credit Facility is secured by substantially all of the Company's personal property as well as the stock of its subsidiary Sloan Technology Corporation. The Credit Facility also contains certain restrictive covenants, which among other things, impose limitations with respect to incurrence of certain additional indebtedness, incurrence of liens, payments of dividends, long-term leases, investments, mergers, consolidations and specified sales of assets. The Company is also required to satisfy certain financial tests including maintaining specified consolidated tangible net worth and maintaining certain interest coverage and capitalization ratios.

As of December 31, 1996 and 1995, no borrowings were outstanding under the Company's credit facilities. Letters of credit of approximately \$931,000 and \$1,900,000 were outstanding at December 31, 1996 and 1995, respectively, reducing the Company's availability under its credit facilities.

#### 4. SHAREHOLDERS' EQUITY

The Company completed the IPO on December 6, 1994, whereby 2,500,000 shares of Common Stock, par value \$.01 per share (the "Common Stock") were issued and sold at \$11 per share. The net proceeds were used to prepay debt in the amount of \$23,700,000 and for working capital and other general corporate purposes .

The prepayment of the Company's debt and the conversion of the Senior Subordinated Series B Notes into Common Stock in December 1994, resulted in an extraordinary charge of \$679,000, net of \$355,000 of income tax benefit. The extraordinary charge is principally

## Veeco Instruments Inc. and Subsidiaries

### Notes to Consolidated Financial Statements (continued)

#### 4. SHAREHOLDERS' EQUITY (CONTINUED)

comprised of a prepayment penalty and the writeoff of unamortized deferred finance costs.

On July 31, 1995, the Company completed a public offering (the "Public Offering") in which 2,300,000 shares of Common Stock were sold, 800,000 of which were sold by the Company and 1,500,000 of which were sold by certain selling stockholders, at the public offering price of \$20 per share.

As of December 31, 1996, the Company has reserved 805,959 and 233,524 shares of common stock for issuance upon exercise of stock options and issuance of shares pursuant to the Stock Purchase Plan, respectively.

#### 5. STOCK COMPENSATION PLANS

Pro forma information regarding net income and earnings per share is required by FASB Statement No. 123, "Accounting for Stock-Based Compensation" which requires that the information be determined as if the Company has accounted for its stock options granted subsequent to December 31, 1994 under the fair value method of that Statement. The fair value for these options, was estimated at the date of grant using a Black-Scholes option pricing model. The Company's pro forma information follows:

	DECEMBER 31	
	1996	1995
	-----	
Pro forma net income	\$ 7,540,000	\$ 6,444,000
Pro forma earnings per share	\$ 1.30	\$ 1.20

Because Statement 123 is applicable only to options granted subsequent to December 31, 1994 and employee stock options granted vest over a three year period, its effect will not be fully reflected in pro forma net income until 1997.

**Veeco Instruments Inc. and Subsidiaries**

**Notes to Consolidated Financial Statements (continued)**

**5. STOCK COMPENSATION PLANS (CONTINUED)**

**FIXED OPTION PLANS**

The Company has two fixed option plans. The Veeco Instruments Inc. Amended and Restated 1992 Employees' Stock Option Plan (the "Stock Option Plan") provides for the grant to officers and key employees of up to 826,787 options (264,245 options available for future grants as of December 31, 1996) to purchase share of Common Stock of the Company. Stock options granted pursuant to the Stock Option Plan become exercisable over a three-year period following the grant date and expire after ten years. The Veeco Instruments Inc. 1994 Stock Option Plan for Outside Directors (as amended, the "Directors' Option Plan") provides for the automatic grants of stock options to each member of the Board of Directors of the Company who is not an employee of the Company. The Directors' Option Plan provides for the grant of up to 50,000 options (20,003 options available for future grants as of December 31, 1996) to purchase shares of Common Stock of the Company. Such options granted are exercisable immediately and expire after ten years.

The fair values of these options at the date of grant was estimated with the following weighted-average assumptions for 1996 and 1995: risk-free interest rate of 6.3%, no dividend yield, volatility factor of the expected market price of the Company's common stock of 50% and a weighted-average expected life of the option of four years.

A summary of the status of the Company's two fixed stock option plans as of December 31, 1994, 1995 and 1996, and changes during the years ending on those dates is presented below:

	1994		1995		1996	
	SHARES (000)	OPTION PRICE PER SHARE	SHARES (000)	OPTION PRICE PER SHARE	SHARES (000)	WEIGHTED- AVERAGE EXERCISE PRICE
Outstanding at beginning of year	124	\$ .69 to \$ 3.00	175	\$ .69 to \$11.00	441	\$ 11.10
Granted	56	4.50 to 11.00	314	9.50 to 22.75	175	13.68
Exercised	-	-	(38)	.69 to 4.50	(32)	2.68
Forfeited	(5)	.69 to 4.50	(10)	.69 to 13.38	(62)	19.14
Outstanding at end of year	175	\$ .69 to 11.00	441	\$ .69 to 22.75	522	\$ 11.50
Options exercisable at year-end	91	\$ .69 to \$ 4.50	104	\$ .69 to \$13.38	188	\$ 8.74
Weighted-average fair value of options granted during the year				\$ 6.62		\$ 6.24

**Veeco Instruments Inc. and Subsidiaries**

**Notes to Consolidated Financial Statements (continued)**

**5. STOCK COMPENSATION PLANS (CONTINUED)**

The following table summarizes information about fixed stock options outstanding at December 31, 1996:

RANGE OF EXERCISE PRICE	OPTIONS OUTSTANDING			OPTIONS EXERCISABLE	
	NUMBER OUTSTANDING AT DECEMBER 31, 1996	WEIGHTED-AVERAGE REMAINING CONTRACTUAL LIFE	WEIGHTED- AVERAGE EXERCISE PRICE	NUMBER OUTSTANDING AT DECEMBER 31, 1996	WEIGHTED- AVERAGE EXERCISE PRICE
	(000)			(000)	
\$ .69 to \$ 5.00	101	7.2 years	\$ 3.46	88	\$ 3.32
5.01 to 10.00	24	8.0	9.50	8	9.50
10.00 to 15.00	387	8.9	13.45	82	12.99
15.00 to 21.50	10	8.5	21.32	10	21.50
<b>\$ .69 to \$21.50</b>	<b>522</b>	<b>8.5</b>	<b>\$ 11.50</b>	<b>188</b>	<b>\$ 8.74</b>

**EMPLOYEE STOCK PURCHASE PLAN**

Under the Veeco Instruments Inc. Employees Stock Purchase Plan (the "Plan"), the Company is authorized to issue up to 250,000 shares of Common Stock to its full-time domestic employees, nearly all of whom are eligible to participate. Under the terms of the Plan, employees can choose each year to have up to 6% of their annual base earnings withheld to purchase the Company's Common Stock. The purchase price of the stock is 85% of the lower of its beginning-of-year or end-of-year market price. Under the Plan, the Company granted 14,278 shares and 16,476 shares to employees in 1996 and 1995, respectively. The fair value of the employees' purchase rights were estimated using the following assumptions for 1996 and 1995, respectively: no dividend yield for both years; an expected life of one year and six months; expected volatility of 70% and 64%; and risk-free interest rates of 5.2% and 5.7%. The weighted-average fair value of those purchase rights granted in 1996 and 1995 was \$5.20 and \$4.40 respectively.

**Veeco Instruments Inc. and Subsidiaries**

**Notes to Consolidated Financial Statements (continued)**

**6. INCOME TAXES**

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax liabilities and assets as of December 31, 1996 and 1995 are as follows:

**DECEMBER 31**

	1996	1995
	-----	-----
Deferred tax liabilities:		
Tax over book depreciation	\$ 257,000	\$ 118,000
	-----	-----
Total deferred tax liabilities	257,000	118,000
	-----	-----
Deferred tax assets:		
Inventory valuation	1,620,000	1,122,000
Foreign net operating loss carryforwards	795,000	1,276,000
Research tax credit carryforward	-	277,000
Other	317,000	459,000
	-----	-----
Total deferred tax assets	2,732,000	3,134,000
Valuation allowance	(795,000)	(1,913,000)
	-----	-----
Net deferred tax assets	1,937,000	1,221,000
	-----	-----
Net deferred taxes	\$1,680,000	\$ 1,103,000
	-----	-----

For financial reporting purposes, income before income taxes and extraordinary item includes the following components:

**YEAR ENDED DECEMBER 31**

	1996	1995	1994
	-----	-----	-----
Domestic	\$13,157,000	\$8,926,000	\$2,064,000
Foreign	(297,000)	261,000	(701,000)
	-----	-----	-----
	\$12,860,000	\$9,187,000	\$1,363,000
	-----	-----	-----

**Veeco Instruments Inc. and Subsidiaries**

**Notes to Consolidated Financial Statements (continued)**

**6. INCOME TAXES (CONTINUED)**

Significant components of the provision (benefit) for income taxes for income before extraordinary item are presented below.

**YEAR ENDED DECEMBER 31**

	1996	1995	1994
Current:			
Federal	\$4,712,000	\$3,226,000	\$ 1,067,000
Foreign	129,000	379,000	217,000
State	835,000	260,000	180,000
Utilization of research tax credits	(277,000)	(909,000)	-
Utilization of net operating losses	-	(708,000)	(1,294,000)
	5,399,000	2,248,000	170,000
Deferred:			
Federal	(525,000)	335,000	(965,000)
Foreign	-	(90,000)	-
State	(52,000)	(98,000)	-
	(577,000)	147,000	(965,000)
	\$4,822,000	\$2,395,000	\$ (795,000)

The reconciliation of income taxes attributable to income before extraordinary item computed at U.S. federal statutory rates to income tax expense is:

**YEAR ENDED DECEMBER 31**

	1996	1995	1994
Tax at U.S. statutory rates	\$ 4,501,000	\$ 3,123,000	\$ 463,000
State income taxes (net of federal benefit)	334,000	74,000	119,000
Goodwill amortization	46,000	44,000	44,000
Nondeductible expenses	39,000	42,000	31,000
Recognition of previously unrecognized deferred tax assets, net	-	(314,000)	(639,000)
Operating losses not currently realizable	225,000	212,000	456,000
Operating losses currently realizable	-	(708,000)	(1,294,000)
Other	(323,000)	(78,000)	25,000
	\$ 4,822,000	\$ 2,395,000	\$ (795,000)

**Veeco Instruments Inc. and Subsidiaries**

**Notes to Consolidated Financial Statements (continued)**

**6. INCOME TAXES (CONTINUED)**

Several of the Company's foreign subsidiaries have net operating loss carryforwards for foreign tax purposes of approximately \$2.0 million at December 31, 1996, a portion of which expires in years 1997 through 2001 and a portion for which the carryforward period is unlimited.

**7. COMMITMENTS AND CONTINGENCIES AND OTHER MATTERS**

The Company has an agreement with IBM pursuant to which the Company is IBM's exclusive worldwide sales and marketing representative for the SXM Workstation to the semiconductor and data storage industries. Under this agreement, the Company has agreed to purchase a minimum number of SXM Workstations by July 1997. At December 31, 1996 such purchase commitment amounted to approximately \$2.25 million. IBM has the right to discontinue production at any time upon written notice to the Company, in which event IBM has agreed to grant to the Company an exclusive worldwide license to manufacture the SXM Workstation for sale to the semiconductor and data storage industries pursuant to a royalty and license agreement to be negotiated at such time.

Minimum lease commitments as of December 31, 1996 for property and equipment under operating lease agreements (exclusive of renewal options) are payable as follows:

1997	\$ 737,000
1998	489,000
1999	223,000
2000	98,000
2001	36,000
Thereafter	98,000
	-----
	\$1,681,000
	-----
	-----

Rent charged to operations amounted to \$870,000, \$772,000 and \$825,000 in 1996, 1995 and 1994, respectively. In addition, the Company is obligated under the leases for certain other expenses, including real estate taxes and insurance.

**Veeco Instruments Inc. and Subsidiaries**

**Notes to Consolidated Financial Statements (continued)**

**7. COMMITMENTS AND CONTINGENCIES AND OTHER MATTERS (CONTINUED)**

The Company's business depends in large part upon the capital expenditures of data storage, semiconductor and flat panel display manufacturers which accounted for the following percentages of the Company's net sales:

	DECEMBER 31		
	1996	1995	1994
	-----		
Data storage	55.5%	40.2%	38.1%
Semiconductor	27.4	36.4	33.2
Flat panel display	3.8	6.1	7.3

The Company cannot predict whether the growth experienced in the microelectronics industry in the recent past will continue.

Sales to one customer accounted for approximately 17%, 9% and 2% and sales to another customer accounted for approximately 16%, 23% and 27% of the Company's net sales during the years ended December 31, 1996, 1995 and 1994, respectively.

The Company manufactures and sells its products to companies in different geographic locations. The Company performs periodic credit evaluations of its customers' financial condition, generally does not require collateral, and where appropriate, requires that letters of credit be provided on foreign sales. Receivables generally are due within 30 days. The Company's accounts receivable are concentrated in the following geographic locations:

	DECEMBER 31	
	1996	1995
	-----	
United States	\$10,699,000	\$ 10,892,000
Europe	3,161,000	5,008,000
Far East	5,729,000	3,069,000
Other	237,000	14,000
	-----	
	\$19,826,000	\$18,983,000
	-----	

**Veeco Instruments Inc. and Subsidiaries**

**Notes to Consolidated Financial Statements (continued)**

**8. FOREIGN OPERATIONS AND GEOGRAPHIC AREA INFORMATION**

Information as to the Company's foreign operations and geographic area information (assets not specifically identified to Europe and the Far East are included in the United States) is summarized below:

	NET SALES UNAFFILIATED CUSTOMERS			OPERATING INCOME			Total Assets		
	1996	1995	1994	1996	1995	1994	1996	1995	1994
	( IN THOUSANDS )								
United States	\$92,063	\$66,826	\$45,713	\$12,613	\$8,670	\$4,702	\$72,589	\$58,051	\$32,518
Europe	11,214	11,863	7,297	(69)	651	(541)	6,953	8,790	7,563
Far East	915	913	681	(231)	(394)	(15)	785	539	850
Eliminations	(7,360)	(7,243)	(4,257)	(131)	(131)	(163)	-	-	-
	\$96,832	\$72,359	\$49,434	\$12,182	\$8,796	\$3,983	\$80,327	\$67,380	\$40,931

Export sales from the Company's United States operations are as follows:

	1996	1995	1994
	( IN THOUSANDS )		
Far East	\$33,666	\$22,847	\$15,455
Europe	566	544	1,802
Other	749	564	556
	\$34,981	\$23,955	\$17,813

The aggregate foreign exchange gains and (losses) included in determining consolidated results of operations were \$(153,000), \$100,000 and \$185,000 in 1996, 1995 and 1994, respectively.

Veeco Instruments Inc. and Subsidiaries  
Schedule II--Valuation and Qualifying Accounts

COL. A	COL. B	COL. C ADDITIONS		COL. D	COL. E
DESCRIPTION	BALANCE AT BEGINNING OF PERIOD	CHARGED TO COSTS AND EXPENSES	CHARGED TO OTHER ACCOUNTS	DEDUCTIONS	BALANCE AT END OF PERIOD
-----					
Deducted from asset accounts:					
Year ended December 31, 1996					
Allowance for doubtful accounts	\$ 517,000	\$ 14,000	\$ -	\$ 49,000	\$ 482,000
Valuation allowance on net deferred tax assets	1,913,000	-	-	1,118,000	795,000
	-----	-----	-----	-----	-----
	\$ 2,430,000	\$ 14,000	\$ -	\$ 1,167,000	\$ 1,277,000
-----					
Deducted from asset accounts:					
Year ended December 31, 1995:					
Allowance for doubtful accounts	\$ 383,000	\$ 147,000	\$ -	\$ 13,000	\$ 517,000
Valuation allowance on net deferred tax assets	2,858,000	-	-	945,000	1,913,000
	-----	-----	-----	-----	-----
	\$ 3,241,000	\$ 147,000	\$ -	\$ 958,000	\$ 2,430,000
-----					
Deducted from asset accounts:					
Year ended December 31, 1994:					
Allowance for doubtful accounts	\$ 385,000	\$ 54,000	\$ -	\$ 56,000	\$ 383,000
Valuation allowance on net deferred tax assets	4,294,000	-	-	1,436,000	2,858,000
	-----	-----	-----	-----	-----
	\$ 4,679,000	\$ 54,000	\$ -	\$ 1,492,000	\$ 3,241,000
-----					

## INDEX TO EXHIBITS

### Exhibit

Number	Exhibit
3.1	Form of Amended and Restated Certificate of Incorporation of the Company. (1)
3.2	Form of Amended and Restated By-Laws of the Company. (1)
4.1	Form of Certificate for Common Stock. (1)
10.1	Lease, dated July 29, 1991 between Sloan Technology Corporation, a California corporation and Sloan Technology Corporation, a Delaware corporation. (1)
10.2	OEM Agreement for Acquisition of IBM Products, dated July 20, 1993 by and between IBM and the Company. (2)
10.3	Modification to OEM Agreement for Acquisition of IBM Products, dated July 20, 1993, by and between IBM and the Company. (2)
10.4	UPA Technology Division, Veeco Instruments Inc. and Roentgenanalytik Messtechnik GmbH XRF Development Program Agreement, dated December 8, 1992, between Veeco-UPA Technology Division and Roentgenanalytik Messtechnik GmbH. (2)
10.5	Distributor Agreement, dated as of December 15, 1974 between Sloan Technology Corporation and ULVAC Corporation. (2)
10.6	Amendment to Distributor Agreement, dated March 11, 1993, by and between Sloan Technology Corporation and ULVAC Japan, Ltd.(2)
10.7	Exclusive Sales Agreement, dated as of July 1, 1993, between Seiko Instruments and the Company. (2)
10.8	Exclusive Sales Agreement, dated as of July 1, 1993, between the Company and Seiko Instruments. (2)
10.9	Distributor Agreement, dated March 5, 1993, between the Company and Seiko Instruments.(2)
10.11	Letter Agreement, dated November 22, 1993 between the Company and John F. Rein, Jr. (1)
10.12	First Amendment and Restatement of Stock Option Agreement dated as of October 13, 1994 between the Company and John F. Rein, Jr. (1)
10.13	Agreement dated as of February 7, 1994, effective as of December 31, 1993, between the Company and Robert Oates, together with Amendment No. 1 hereto dated as of October 13, 1994. (1)
10.15	Veeco Instruments Inc. 1994 Stock Option Plan for Outside Directors. (1)
10.19	Letter Agreement dated, January 16, 1995 between the Company and John Kiernan. (3)
10.20	Amended and Restated Veeco Instruments Inc. Employees' Stock Option Plan. (4)
10.21	Veeco Instruments Inc. Employees Stock Purchase Plan. (4)
10.22	OEM Agreement for acquisition of IBM products, dated October 12, 1995, between International Business Machines Corporation and Veeco Instruments Inc. (5)
10.24	Lease dated July 1, 1993 and Lease renewal dated February 26, 1996 between Lambda (Santa Barbara) Inc., a California Corporation and Veeco Instruments Inc., a Delaware Corporation. (6)

## Exhibit

Number	Exhibit
10.25	Credit Agreement dated July 31, 1996 among the Registrant, Fleet Bank N.A. and The Chase Manhattan Bank. (7)
10.26	Security Agreement dated July 31, 1996 among the Registrant, Fleet Bank N.A. and The Chase Manhattan Bank. (7)
10.27	Guarantee Agreement dated July 31, 1996 among the Registrant, Fleet Bank N.A. and The Chase Manhattan Bank. (7)
10.28	Guarantor's Security Agreement dated July 31, 1996 among Sloan Technology Corporation, Fleet Bank N.A. and The Chase Manhattan Bank. (7)
10.29	The Pledge Agreement dated July 31, 1996 among the Registrant, Fleet Bank N.A. and The Chase Manhattan Bank. (7)
10.30	The Patent and Trademark Security Agreement dated July 31, 1996 among the Registrant, Fleet Bank N.A. and The Chase Manhattan Bank. (7)
21.1	Subsidiaries of the Registrant. (1)
23.1	Consent of Ernst & Young LLP. *
27	Financial Data Schedule of Veeco Instruments Inc. for the year ended December 31, 1996. *

\*Filed herewith.

(1) Previously filed as an Exhibit to the Registrant's Registration Statement on Form S-1 (Registration No. 33-85184) and incorporated herein by reference.

(2) Previously filed as an Exhibit to the Registrant's Registration Statement on Form S-1 (Registration No. 33-85184) and incorporated herein by reference; confidential treatment granted.

(3) Previously filed as an Exhibit to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1994 and incorporated herein by reference.

(4) Previously filed as an Exhibit to the Registrant's Registration Statement on Form S-1(Registration No. 33-93958) and incorporated herein by reference.

(5) Previously filed as an Exhibit to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1995 and incorporated herein by reference; confidential treatment granted.

(6) Previously filed as an Exhibit to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1996 and incorporated herein by reference.

(7) Previously filed as an Exhibit to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 1996 and incorporated herein by reference.

**Exhibit 23.1**

**Consent of Independent Auditors**

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 33-95424) pertaining to the Veeco Instruments Inc. Amended and Restated 1992 Employees' Stock Option Plan, the Registration Statement (Form S-8 No. 33-87394) pertaining to the Veeco Instruments Inc. 1994 Stock Option Plan for Outside Directors, and the Registration Statement (Form S-8 No. 33-95422) pertaining to the Veeco Instruments Inc. Employees Stock Purchase Plan of our report dated February 7, 1997, with respect to the consolidated financial statements and schedule of Veeco Instruments Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 1996, filed with the Securities and Exchange Commission.

*/s/ Ernst & Young*  
- -----  
*Melville, New York*  
*February 28, 1997*

## ARTICLE 5

THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE CONSOLIDATED FINANCIAL STATEMENTS AS OF DECEMBER 31, 1996 WHICH ARE CONTAINED IN FORM 10-K AND IS QUALIFIED BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

MULTIPLIER: 1,000

PERIOD TYPE	12 MOS
FISCAL YEAR END	DEC 31 1996
PERIOD START	JAN 01 1996
PERIOD END	DEC 31 1996
CASH	21,209
SECURITIES	0
RECEIVABLES	20,308
ALLOWANCES	482
INVENTORY	21,263
CURRENT ASSETS	65,093
PP&E	16,264
DEPRECIATION	6,503
TOTAL ASSETS	80,327
CURRENT LIABILITIES	21,639
BONDS	0
PREFERRED MANDATORY	0
PREFERRED	0
COMMON	58
OTHER SE	57,912
TOTAL LIABILITY AND EQUITY	80,327
SALES	96,832
TOTAL REVENUES	96,832
CGS	54,931
TOTAL COSTS	29,576
OTHER EXPENSES	143
LOSS PROVISION	0
INTEREST EXPENSE	(678)
INCOME PRETAX	12,860
INCOME TAX	4,822
INCOME CONTINUING	0
DISCONTINUED	0
EXTRAORDINARY	0
CHANGES	0
NET INCOME	8,038
EPS PRIMARY	1.36
EPS DILUTED	0

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**End of Filing**

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