The active capital investment in semiconductor production equipment that had continued through 1999 and 2000 dropped off sharply from the beginning of 2001 under the impact of the deteriorating semiconductor market. On an annual basis, the global semiconductor production equipment market suffered significant negative growth. The backdrop to this slump was the weak personal computer and mobile phone markets, which drive demand in the semiconductor market. After recording high growth in 2000, personal computer and mobile phone shipments slowed down, resulting in a surplus of worldwide semiconductor inventories. Subsequently, the utilization rate of chip manufacturer’s plants fell notably, minimizing non-critical capital investment.

Sales of the Semiconductor Production Equipment (SPE) division for the fiscal year ended March 31, 2002, declined 47.4 percent to ¥325.7 billion. Contribution to consolidated net sales dropped to 78.0 percent from 85.5 percent. Sales of FPD production equipment, which are also included in the division’s sales, decreased 42.3 percent to ¥41.4 billion because of the reduction in plant and equipment investment in the wake of a softening of the FPD market. Division’s orders sunk 67.0 percent to ¥207.2 billion, shrinking not only because of the lack of new orders but also because of order write-offs.

Orders staged a recovery in the fourth quarter, however, supported by a resurgence in capital investment primarily by major semiconductor manufacturers to build production lines for 300mm wafers and to upgrade their lines to accommodate finer geometries to 0.13 µm. Although it will take time for a full-fledged recovery in investment, this trend indicates that the semiconductor production equipment industry is about to shift into a growth cycle. Orders for FPD production equipment, which also have a cyclic nature, returned to a high level in spring 2002, reflecting an improvement in a balance between demand and supply in the FPD market.

Review by Geographic Region

SPE division sales declined in every region during the fiscal year. The drop was significant in the Asian region, dropping 50.8 percent to ¥96.7 billion in Japan, 61.3 percent to ¥23.2 billion in the Republic of Korea, 53.9 percent to ¥60.5 billion in Taiwan and 45.5 percent to ¥22.3 billion in other Asian countries. Sales to the People’s Republic of China, which are included in the other Asian countries category, increased thanks to sales orders from new customers. In the United States, sales decreased 32.4 percent to ¥94.7 billion, but total sales contribution for the division reached 29.1 percent from 22.6 percent. Excluding FPD production equipment sales, semiconductor production equipment sales in the United States were the highest of all regions. Sales in Europe amounted to ¥28.3 billion, down 43.9 percent.

Review by Product

Sales fell in every product category year on year. Nevertheless, there were some bright spots. Although sales of 200mm wafer equipment continued to slide, sales of 300mm equipment grew steadily. Sales of coaters/developers, etch systems and wafer probers for 300mm wafers were especially favorable. The division believes that sales of these products earned a larger share of the market than those for 200mm wafers in what could be recognized as the first real step towards 300mm.

R&D Expenses and New Products

There are three technological transitions concurrently transforming our industry—finer geometries, a shift to new materials, and the larger 300mm wafers. To respond to these challenges, the Company invested a record ¥53.8 billion in R&D to develop innovative, proprietary products and
processes despite the difficult operating environment. One of the areas in which progress was made during the fiscal year was a new concept of equipment incorporating the metrology technology of Timbre Technologies, Inc., acquired by the Company in the previous fiscal year, into TEL’s lithography equipment. Pilot systems have entered the evaluation stage. In other state-of-the-art research, we are pioneering key 70-nanometer node technologies.

Major products launched during the fiscal year under review included:

- **TEFORMULA™**
  In December 2001, we officially began accepting orders for TELFORMULA™, our new thermal processing system for 300mm wafers providing a flexible load size of up to 25 wafers. This innovative high-speed thermal processing system has solved conventional batch processing systems issues by providing a significant reduction in production cycle time. With its high-productivity and cost-advantages, we expect a strong growth in orders for the future.

- **Trias™ SPA**
  In December 2001, we also launched Trias™SPA, a plasma nitridation system that enables damage-free plasma processing to incorporate nitrogen in gate dielectric films. Use of this product eliminates the need for thermal annealing to remove crystal defects caused by plasma damage. Trias™SPA has a high sales growth potential due to its extendability to other key processes for advanced logic, DRAM and flash memory.

- **SRTF**
  Single Wafer Rapid Thermal Furnace, announced in July 2001, is a revolutionary system, featuring superior repeatability and cost-effectiveness of hot-wall thermal processors. It has the flexibility of a single wafer production system, as well as boasting extremely low power consumption. Commercialization of the 200mm system has been concluded, with a 300mm system currently under development.

**Restructuring of Business Operations**

Prompted by the deterioration in earnings during the fiscal year, we reviewed and restructured our business organizations. In Japan and the United States, we focused on manufacturing operations, reorganizing to achieve better productivity and improve efficiency. Further details on this restructuring, please refer to To Our Shareholders in this annual report.

**Tokyo Electron (Shanghai) Strengthens Company’s Position in Growing China Market**

In view of the high-growth anticipated in the Chinese semiconductor market, we decided to strengthen our support services in that market for both our semiconductor and FPD production equipment. Accordingly, Tokyo Electron (Shanghai) Limited was established in Shanghai during the fiscal year and operations commenced in April 2002. Although we have been providing customer support services in China since 1996 on an agency basis, we have moved to a direct support service structure to further strengthen local services and increase our presence in the market. We also plan to extend our activity to include procurement within China. Tokyo Electron (Shanghai) began operations with an initial staff of 70, and plans to add more employees according to business conditions in China.
Computer Network

Net sales of the Computer Network (CN) division increased 21.2 percent to ¥17.0 billion supported by the division’s product strategies. The popularization of broadband communications has raised several major issues for companies. They must achieve higher speed and greater security, as well as cope with the storage and management of the explosive increase in the volume of data being transferred via the Internet. One of the first to begin introducing products for these fields, the Computer Network division utilizes its accumulated technical capabilities to provide not only high-performance products but also the best business solutions for its customers.

In the network-related product segment, sales of Gigabit Ethernet switches from Extreme Networks continued to expand favorably. Sales of Internet traffic management products from F5 Networks also advanced, increasing 1.8 times over the previous fiscal year, partially due to the introduction of an Internet Protocol (IP) application switch incorporating the latest technology. The especially strong spotlight on security, an essential component of Internet business, helped triple sales of securities products from nCipher. During the fiscal year, the division also added the Caw Networks’ Stress Testing Appliance to its lineup to reinforce its solutions for creating trouble-free web sites for mission critical environments. This product allows the newly created web site to be tested before its launch in a simulated environment that closely approximates real conditions.

The growing volume of data traffic enabled by broadband has brought storage area network (SAN) technology into the realm of practical use. Able to store huge volumes of data without placing a burden on the network, SANs also allow for easy recovery of data should it become corrupt or damaged. Accordingly, sales of Brocade Communications Systems’ Fibre Channel Fabric Switches, which are key to constructing SANs, increased 1.6 times over the previous fiscal year. In response to the growing interest in remote backups that save data at a distant location in the event of system problems, the division began handling the IP storage switches of Nishan Systems, expanding the range of its SAN solutions. These switches make possible the location of a SAN in a remote area.

Growing demand for video and audio transmission through networks prompted by the shift to broadband on the Internet supported a four-fold increase in sales of Ruff Systems over the previous fiscal year. Ruff Systems, which was developed jointly with the Communications Research Laboratory, an independent administrative institution, enables transmission of high-quality, uncompressed video under Windows XP in an IPv6 environment, the next-generation Internet environment.

Leveraging capabilities in networks, SANs, and video transmission technologies, which are the areas of expertise essential to the Internet, the division will continue to utilize its ability to discover and introduce state-of-the-art products in providing indispensable solutions for the Internet age.

Note: Product names and company names are trademarks or registered trademarks of their respective holders.
Net sales for the Electronic Components (EC) division declined 17.4 percent to ¥73.7 billion amid weak demand for semiconductors in Japan. The division’s product lineup includes semiconductor products, board computer products, software, and other electronic components.

Semiconductor products accounted for 88 percent of divisional net sales. This category includes semi-custom ICs, primarily Xilinx’s programmable logic devices (PLDs), that are finding wider application in the market because of the trend to higher performance in electronic products and the shortened product cycle; application-specific standard products (ASSPs) for communications-related applications; and other ICs. In its semiconductor product lineup, the division focuses on products with growth potential in information network-related fields and high-value-added products that require technical support. Despite these strategies, their sales fell substantially during the fiscal year because of deteriorating performance among electronic manufacturers, capital investment restraint, and other factors. Sales of board computer products, software, and other electronic components also decreased. One of the highlights of this otherwise difficult year was the division’s reception of an award from Microsoft as the “Windows Embedded Partner of the Year”. Microsoft’s products accounted for 87% of the division’s software sales.

Against the backdrop of the rapid development of broadband services, the division is seeking out products focused on information network-related fields and the digital consumer market that is emerging as a result of the digitization of consumer appliances. During the past fiscal year, the division newly concluded distribution agreements with such global semiconductor companies as Texas Instruments and Infineon Technologies.

The division operates design & development centers where its broad experience is used to develop semi-custom ICs on a contract basis that meet the specific needs of customers. During the past fiscal year, the division opened a new design & development center in Sendai to strengthen its design and development organization. Design & development centers are also concentrating on the design and development of original products based on communication interface and memory control technologies.

Looking forward, the division will continue to emphasize the discovery of new suppliers and products. In addition, the division will work to establish a strong foundation as a “technology” trading company by sales and marketing high-value-added products that require technical support, utilizing its technical capabilities to design and develop semi-custom ICs, and strengthening development of original products.

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