

FEATURE 1

Management Talks About Manufacturing, Core SPE and New Growth Drivers



Hirofumi Kitayama
Representative Director

When pursuing costs, we should not overly focus on direct costs and neglect to see the mechanism of production and quality.



Hikaru Ito
Corporate Director

In fiscal 2012, the SPE division was able to gain a foothold to further raise our position in coming years in our focus areas.



Kenji Washino
Corporate Director

We are challenging ourselves to create new growth drivers which draw on our SPE strengths and lead to the establishment of differentiated technologies.



Manufacturing as a Platform for Maximizing Customer Value

Hirofumi Kitayama
*Representative Director,
Executive V.P. and General Manager,
Manufacturing Division (Quality)*

We have set ourselves the challenge to “become the world’s top semiconductor production equipment manufacturer.” As part of our plan to achieve that goal, we began operations at the Tokyo Electron Miyagi new plant in Japan in October 2011. This new plant unifies all the processes behind etch systems, from development to product manufacturing. The plant’s mission is to use this unified structure to deliver products with even higher value to customers on a timely basis. We will shorten the product development time, enhance product quality from the development stage, and improve productivity by completely eliminating wasted time, communication, and costs. What we challenge with flow-line manufacturing introduced at this new plant is “production innovation” through visualization.

In March 2012, Tokyo Electron (Kunshan) Limited began operating its plant in Kunshan, China. Initially, the plant is engaged in the repair of parts used in FPD plasma etch systems. It successfully shipped its first products to customers at the end of April. Through the challenge to manufacture FPD etch systems at a cost that meets market expectations, we seek to build a manufacturing base in the area where demand for digital consumer electronics is expected to grow significantly.

From the customers’ perspective, our value lies in products backed by unsurpassed technology and product manufacturing supported by a cost structure consistent with market

expectations. The new plants in Miyagi and China put this concept of value into practice.

Other issues which we must always keep in mind are the provision of fast, high-quality services delivered close to the customer, exchange rate fluctuations, BCP, and the national policies of the countries in which we operate. To deal with these issues, we are promoting localization and global procurement initiatives aimed at ensuring our costs are in line with market expectations.

Through our sourcing in Taiwan, Korea, and China, we have gradually grasped the characteristics of the cost and quality of goods in each region. Important things are, we have to fully leverage these characteristics, and at the same time we have to value the good faith and trusting relationships with new local partner companies as well as established partner companies. When pursuing costs, we should not overly focus on direct costs and neglect to see the mechanism of production and quality. Paradoxically, by utilizing global sourcing, the Japanese art of manufacturing can continue to find value through thoroughly examining indirect costs for all processes and slimming them down.

With our 50th anniversary approaching, we will spare no effort to advance product manufacturing based on our enduring desire to maximize customer value.

Operations Start at New Production Base for Etch Systems



Tokyo Electron Miyagi Limited

The new Miyagi Plant integrates development and manufacturing as well as using a new production system, thereby improving quality and increasing productivity.

Operations Start at New Kunshan Plant in China



Tokyo Electron (Kunshan) Limited

We have built a manufacturing base for FPD production equipment in China which is expected to become a center for flat panel display manufacturing, aiming to reduce costs and quickly respond to customers

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Actively Introducing New Products to Achieve Growth That Outpaces Market Expansion

Hikaru Ito
Corporate Director,
Executive V.P. and General Manager,
SPE

After the global financial crisis of 2008, two major changes in trends have been occurring in the semiconductor production equipment (SPE) market. One is an increase in the ratio of investment for logic devices. The other is a decrease in the number of semiconductor manufacturers who are able to make large capital investments: in other words, advancement of so-called "oligopolization." In response to these changes, the SPE Division has upgraded and expanded the line of products for logic devices and strengthened the sales organization.

In fiscal 2012, in particular, we gained a foothold for further increasing our position in the coming years in the fields of etch and clean, our focus areas. These two products achieved market share gains, and in addition, succeeded in getting approvals from major customers as their next-generation volume production equipment.

At the same time, the year brought considerable accomplishments in product development. A notable example is Atomic Layer Deposition (ALD), a new deposition process that is

expected to be an essential technology for the manufacturing of next-generation devices. Tokyo Electron succeeded in developing and commercializing a semi-batch ALD system for this process. In addition, in coaters/developers, an area in which Tokyo Electron has dominant market share, the Company began full-scale market introduction of a new model for 20nm node following favorable evaluations from customers.

Looking ahead, Tokyo Electron will aim for further expansion of the SPE business by boosting competitiveness in etch systems, cleaning systems, and the field solutions business while solidifying its position for products with high market share through active introduction of new products.

To that end, we will continue to develop products and technologies unavailable from competitors, as exemplified by new plasma technology that uses a radial line slot antenna, and to nurture and develop human resources all around the world who can provide the best solutions by matching such technologies to customer needs.



Seizing Opportunities to Achieve Our Growth Strategy

Kenji Washino
Corporate Director,
Executive V.P. and General Manager,
Corporate Business Strategy/Organic EL/
FPD/PVE

In recent years, the amount of IP traffic being sent over the Internet has exploded, as GPS, sensor data and other types of data are being transmitted to servers, in addition to computer data. By 2015, the amount of data transmitted is forecasted to be more than double compared to today. We are also seeing smartphones, tablets, and other mobile products drive the growth in the electronics industry, as consumers demand products that are faster, more energy efficient, and thinner.

To meet the era's needs, we are expanding our products for wafer-level packaging (WLP) which promises strong future growth, as well as strengthening our existing products for front-end wafer processing. Ranging from our Etch system and CVD system to the recent additions of wafer bonder/debonder, our product lineup for through-silicon via (TSV) processes is winning high appreciation from our customers. In May 2012, we bolstered our presence in the WLP market with the acquisition of NEXX Systems, a U.S. company with an established reputation for electrochemical deposition and PVD technology. We will maximize synergies between our existing product lines to aggressively expand this business.

In the display fields, organic light-emitting diode (OLED) displays continue to draw attention for their high resolution and energy efficiency. We are collaborating with Seiko Epson Corporation on the development of a coating system using an inkjet method, while developing an evaporation system using our own proprietary technology.

This two-pronged approach will enable us to take advantage of the opportunities offered by the revolutionary shift in our markets, and also meet customer needs with the optimal approach.

In the belief that one of our missions is to address environmental issues through our technology, we are enhancing the photovoltaic cell (PV) production equipment business. We are accelerating the development of the equipment for thin-film silicon technology as we expect it to be the most suitable for large-scale power generation and to have high growth potential from the medium to long term perspective.

Amid a market where the pace of innovation is accelerating and sophisticated solutions are demanded, there are three priorities for product development: planning capabilities to accurately grasp customer needs; capabilities to move quickly by taking ideas from R&D to commercialization in a short time period; and product technology and service capabilities. To hone these three capabilities, we need to consider collaborations and tie-ups with companies outside our industry to respond flexibly and proactively to market needs without overly relying on our own technology.

In FY2012, Tokyo Electron invested the highest R&D expenses to date of ¥81.5 billion. We will continue to invest in new areas, as well as in our existing core SPE fields, and challenge ourselves to create new businesses which draw on our strengths and lead to the establishment of differentiated technologies.

Expand Sales with Differentiated New Products



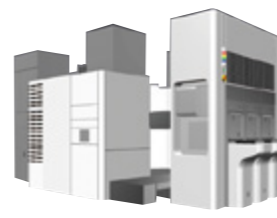
Plasma Etch System
Tactras™ RLSA™ Etch

High-density low-damage silicon etcher. Its strength lies in critical processes such as transistor formation.



Single Wafer Cleaning System
CELLESTA™ -i

This system boasts max. 1,000 wafers/hour, the highest in the industry. It responds to various cleaning requirements accompanying miniaturization.



ALD SiO2 System
NT333™

A semi-batch ALD system that uses a different concept from conventional ones. It simultaneously realizes high quality and high productivity.

TEL Products for Advanced Packaging Technology

Expanding our product lineup for advanced packaging technology by purchasing the U.S. company NEXX Systems.

