

■ Feature 4: Manufacturing

Features: Technological Innovation in Pursuit of Growth

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Manufacturing that Maximizes Customer Value

Tokyo Electron continuously aspires to realize manufacturing that maximizes customer value. Two years ago we began operations at the new Tokyo Electron Miyagi plant, which deals in etch systems from development to production. Then, last year, in China, the principal market for the flat panel display (FPD) production equipment business, we began operations at a new plant manufacturing FPD etch systems and carrying out a repair business for their key components.

Tokyo Electron's basic stance with regard to manufacturing is to build quality, cost performance and production processes from the development

and design stage to realize manufacturing that is continuously responsive to market demands. The broader definition of quality includes functionality, safety, environmental soundness, reliability, maintainability and cost effectiveness. Manufacturing begins with marketing: precisely understanding each customer's desires and problems.

The most sought-after technological innovations in semiconductors are low power consumption, high-speed processing and low cost. These qualities can be realized through miniaturization, the use of new materials and new device structures, larger wafers, and total cost reduction. It is our job to cre-

ate production equipment that has the functions that make these possible.

To realize those functions it is first and foremost essential to quickly create differentiated technologies through combinations of cutting-edge and conventional technologies (value creation). We then need the manufacturing technology to consistently produce the products we have designed at the lowest cost (maximizing value).

Furthermore, in realizing these functions, it is important that they be backed by core, foundational technologies in order to build a competitive advantage that can be sustained into the future (the source of value).

Our customers also have high expectations for Tokyo Electron's production equipment. They most often seek clearly specified conditions for producing non-defective products, ease of set-up, reliably stable performance, predictability of variations in performance, and ease of repair. Again, these attributes must be built in from the design stage to achieve the desired level of quality.

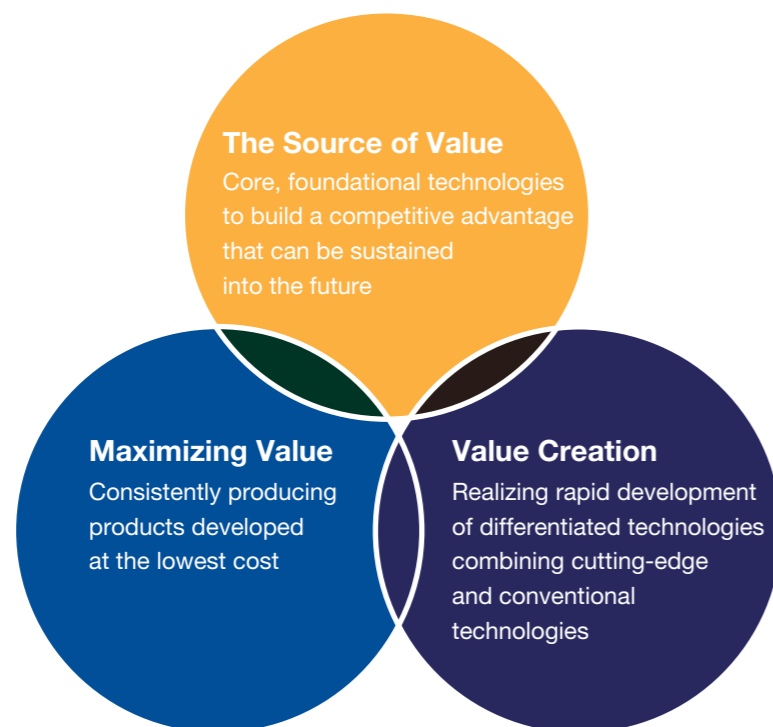
To reiterate, manufacturing begins with marketing. Quality must be built in from the development and design stage. Furthermore, in order to quickly bring new products to market, concurrent engineering* is also necessary.

Throughout all stages of operations, beginning with marketing, the thorough implementation of waste elimination via TPM** and prevention of defective products is indispensable.

Tokyo Electron will mark its 50th anniversary this year. Looking toward the next 50 years, we will spare no effort to advance manufacturing and continue to grow as a manufacturer.

* Concurrent engineering: a product development methodology in which all steps of design and production planning, including concept design, detailed design, production design and pre-production, are performed in parallel.

** TPM: Total productive management coordinates all activities throughout an organization to prevent loss and improve efficiency.



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Manufacturing operations of FPD etch systems begun at new Kunshan plant in China



Tokyo Electron (Kunshan) Limited

Tokyo Electron (Kunshan) Limited has begun manufacturing operations of FPD etch systems in China, the main market for FPD production equipment, to improve responsiveness to customers and reduce costs.