

# Environmental Initiatives in Transportation

The Tokyo Electron Group regards implementing environmental measures in transportation as one of its priorities. We are committed to reducing environmental impact and promoting the effective use of energy and resources in our transportation activities.

## Our Approach to Environment-Friendly Transportation

In April 2006, Japan's Act Concerning the Rational Use of Energy (Energy Saving Act) was revised and regulations on transportation were strengthened with the aim of reducing global warming. Accordingly, there are now increasing demands to reduce the environmental impact caused during transportation.

In response, the Tokyo Electron Group has been actively reducing the environmental impact caused by the transportation of its products. For example, we introduced low-emission trucks to transport our products and started to use returnable containers for their delivery. Also, we give first priority to driving safety in delivering products to customers.



▲ Reusable covers used for delivery to suppliers

## Environmental Impact of Transportation

The Revised Energy Saving Act designates shippers who transport 30 million ton-kilos or more a year as specified shippers and they are requested to reduce CO<sub>2</sub> emissions from the transportation of their cargos.



In FY 2007, the Tokyo Electron Group's freight transportation amount within Japan amounted to 52.42 million ton-kilos (weight of major products transported multiplied by their transportation distance) and the freight transportation amount for TEL alone exceeded 30 million ton-kilos. As a result, we were designated as a specified shipper under the Energy Saving Act. Our transportation amount increased because of an increase in the number of shipments and an increase in the weight per product.

At present, we calculate our transportation amount in freight ton-kilos based on a given load per vehicle. In the future, we will measure the transportation amount and distance and CO<sub>2</sub> emissions from the transportation of our products in a more accurate manner, while examining measures to reduce our CO<sub>2</sub> emissions, including a modal shift\* to rail and marine transportation. (See the TOPICS below.)

\* Modal shift: A shift from conventional freight transportation by truck to marine and rail transportation for mass transport

## Packaging Methods for Products

The Tokyo Electron Group manufactures and delivers precision machines, which are generally far larger than ordinary products and require special packaging methods and skills. What is more, all of our products are different sizes. Taking the environment as well as the size and weight of each product into account, we try to transport our products safely and economically. For example, we use reinforced cardboard as packaging material to shorten the time required when opening a package. In delivering large machines, we use steel to reduce the packaging volume while maintaining the strength of the packaging.



▲ Packaging using steel

## TOPICS

### Modal Shift

Realizing that CO<sub>2</sub> emissions from automobiles account for a large percent of the overall CO<sub>2</sub> emissions during transportation, industries are making a modal shift from transporting freight by truck to the use of rail and marine transportation.

The Tokyo Electron Group manufactures precision machines, which require special transportation methods. Accordingly, we used to deliver our products on individual trucks. However, we studied the use of rail and marine transportation in cooperation with our shipping agents and transportation companies and verified that rail and

marine transportation is as efficient as transportation by truck in terms of time and costs, quality and safety. As a result, we started trial transportation of our products by ship in May 2007. We now intend to look at expanding delivery by ship as part of our proactive efforts to reduce CO<sub>2</sub> emissions in the transportation of our products.

Freight from the Group being driven onto a ferry ▶

