

Reducing Industrial Wastes

Reducing industrial wastes

The Total Loss Reduction Project started to reduce total waste generation.

Nitto Denko defined the target for industrial waste recycling ratio*1 for fiscal 2005 as 98% or over. Toward the achievement of this target, all plants thoroughly separate wastes according to their types, increase the recycling ratio of valuable resources and promote thermal recycling or material recycling of other wastes in the industrial waste treatment facilities to which the company outsourced their treatment. As a result of the efforts, the rate marked 98.6% in fiscal 2004 and the target was achieved.

The ratio of industrial waste value*2 was improved by 1.5 points from fiscal 2003 to be 12.3%, as a result of such efforts as improving yield in business activities, reducing energy included in the process cost, and altering manufacturing processes. The achievement of the target for fiscal 2005 is almost secured.

However, the total amount of industrial waste generated was the largest ever, marking 51,882 metric tons in fiscal 2004 and a 23% increase from fiscal 2003, due to the increase in production. To reduce the waste generation itself, the Total Loss Reduction Project was inaugurated in November 2004. The project reviews the total manufacturing process and develops a production method that does not produce industrial waste (narrowing sources).

This project was first started in the Shiga Plant where membrane products are handled and the development technology used in this product can be applied to almost all membrane products. Substantial reduction of industrial waste generation compared to the previous year is expected in fiscal

2005. The project will be applied to the Kameyama Plant and other plants, and then finally to all divisions to reduce the total industrial waste generation. Moreover, we will further focus on the establishment of the technology to reuse the generated wastes as raw materials (narrowing outlets).

- *1 Industrial waste recycling ratio: Ratio of industrial wastes material recycled or thermal recycled.
- *2 Ratio of industrial waste value: An original index showing the ratio of the material and process cost of industrial wastes themselves to the total production.

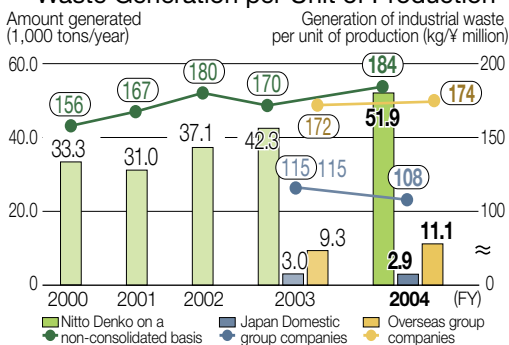
Authorized under the interregional industrial waste recycling manufacturer appointment system

The Nitto Denko products used at the customer end are material recycled.

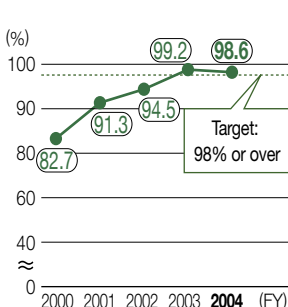
For the purpose of promoting the reduction of industrial wastes and effective resource utilization at the customer's end, Nitto Denko was successfully approved under the interregional industrial waste recycling manufacturer appointment system*3 for the products of the Surface Protective Products Division in April 2003 and for the products of the Industrial Products Division in August 2004. The system enables us to collect and treat the Nitto products used and discarded by the customers throughout the nation. Although the treatment of collected wastes was outsourced to external specialists, equipment and systems in the Toyohashi Plant became ready for recycling in fiscal 2004. Now, wastes are treated and effectively utilized as raw material by Nitto Denko.

- *3 Interregional industrial waste recycling manufacturer appointment system: allows manufacturers to collect and recycle the used and wasted products originally manufactured by the company inter-regionally without obtaining license for industrial-waste disposal business, if the purpose for collection is recycling

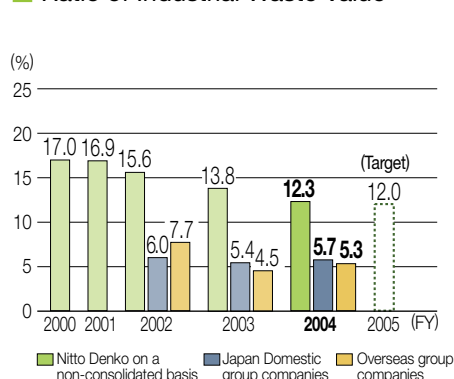
Industrial Waste Generated and Waste Generation per Unit of Production



Recycling Ratio (Nitto Denko on a non-consolidated basis)



Ratio of Industrial Waste Value



TOPICS

The Recycling Center (tentative name) will be established in the Toyohashi Plant to promote material recycling of films.

The Toyohashi Plant has long been tackled recycling. To further increase the volume of material recycling and add more value as raw materials, it will construct the Recycling Center (tentative name) within its site in November 2005. The center will partly start material recycling of the waste from the production activities and used films collected from the customers as defined in the

interregional industrial waste recycling manufacturer appointment system as above. It will also develop recycled films and sub-materials with utilizing the recycling technologies to substantially increase the ratio of the use of recycled materials in the company, which currently remains at approximately 4%.