Reducing Waste Disposal

In order to minimize the environmental impact of our business operations, we have been working on "zero emission" of waste through measures such as changing manufacturing methods, separated waste collections, and recycling.

Zero Emission Activities

From fiscal 2000 to 2005, the Hitachi Chemical Group has been conducting a Zero Emission Activities as one of the main themes of its environmental activities. The goal is to reduce the annual amount of waste that is sent to the final landfill to less than 5 tons and its ratio to 1% or lower of the total amount of waste generated.

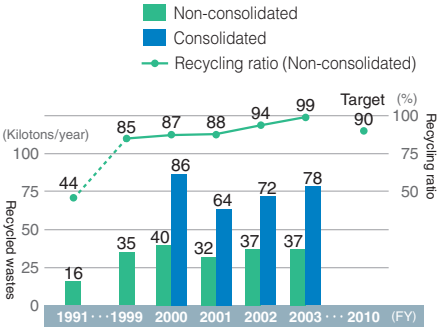
In 2003, we focused our efforts on the establishment of closer exchanges of information about waste treatment measures among manufacturing sites and on the thorough implementation of sorted waste collections. As a result, zero emission was achieved at all the manufacturing sites of Hitachi Chemical, as well as Hitachi Chemical Filtec Inc., Yuki Works of Hitachi Housetec Co., Ltd., Ishioka Works of Hitachi AIC Inc., Tokushima Works of Hitachi Kasei Polymer Co., Ltd., Ibaraki Factory of Hitachi Chemical Automotive Products Co., Ltd., and Namie Japan Brake Co., Ltd.

Promotion of Recycling

For the promotion of recycling, the Hitachi Chemical Group set a goal to improve the recycling rate to 90% or higher by fiscal 2010. As of fiscal 2003, the recycling rate achieved 99% by Hitachi Chemical alone and 87% by the consolidated group companies.

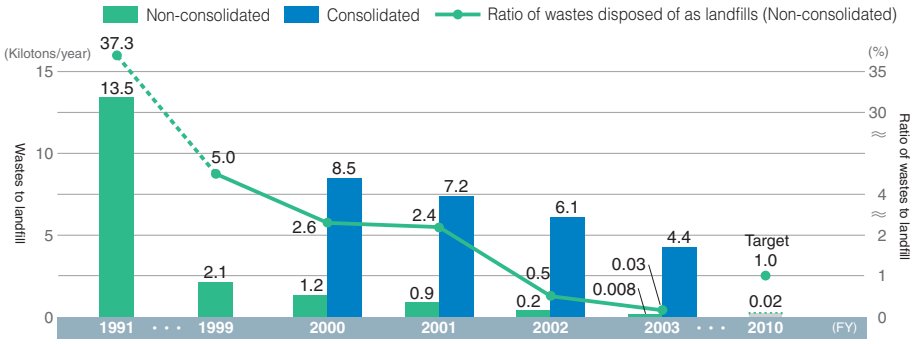
•Please see pages 27 and 28 for specific recycling technologies developed by the Hitachi Chemical Group.

Recycled wastes and recycling ratio



$$\text{Recycling ratio (\%)} = \frac{\text{Recycled wastes}}{\text{Amount of wastes generation}} \times 100$$

Wastes to landfill and their ratio



$$\text{Ratio of wastes to landfill (\%)} = \frac{\text{Wastes to landfill}}{\text{Amount of wastes generation}} \times 100$$

Approaches at Manufacturing Works

Installation of Activated Sludge Treatment System for Waste Liquids (Goi Works, 2003)

In February 2003, the Goi Works installed an activated sludge treatment system for waste liquids in order to reduce the amount of waste liquids treated at landfills and the costs that accompany such treatment. Prior to installation, the wastewater that contains chloride and inorganic substances could not have been treated at the incinerator in the Work site. Instead, these types of waste liquid had to be sent to outside treatment companies, and the residue after incineration (sludge) was sent to landfills. After the installation of the activated sludge treatment system, the amount of sludge sent to landfills was reduced to 10%, and the cost of the treatment was thereby substantially reduced.

As the next step, the Works is planning to alter some manufacturing processes so that there will be no waste liquid generated and to promote waste reduction measures at the design and development phases.

Activated Sludge Treatment System for Waste Liquids

Installation of Recycling System for Wastewater and Sludge (Nikka Sumieito Co., Ltd., 1995)

Nikka Sumieito contributes to the recycling of industrial waste through developing new treatment methods for certain types of wastewater and oil-contaminated sludge. There used to be no other means of treatment other than to incinerate this type of industrial waste. Now, however, it can be blended and processed—without using heat, water, or chemicals—into a supplementary fuel for the cement kilns. The ash and dust are also blended and processed, and recycled into a cement raw material.

Recycling System for Wastewater and Sludge

Next Step

In fiscal 2003, many manufacturing works and factories achieved the goal of zero emission. We will continue our efforts to reduce waste generation through promoting recycling and the reduction of waste in manufacturing processes, so that other factories can also achieve zero emission.