

# 5 Ecological Factory

## 1 Global warming prevention (energy conservation)

To help achieve the Kyoto-Protocol objective of reducing greenhouse gas emissions in Japan by 6%, we have set ourselves the goal of reducing our primary unit of carbon dioxide emission by 25% from the 1990 levels by fiscal 2010 and have also taken various energy-saving measures. We reduced our carbon dioxide emissions in fiscal 2001 by 4% from the 2000 levels. However, the index of the primary unit has worsened by 19% because of a sharp reduction in production.

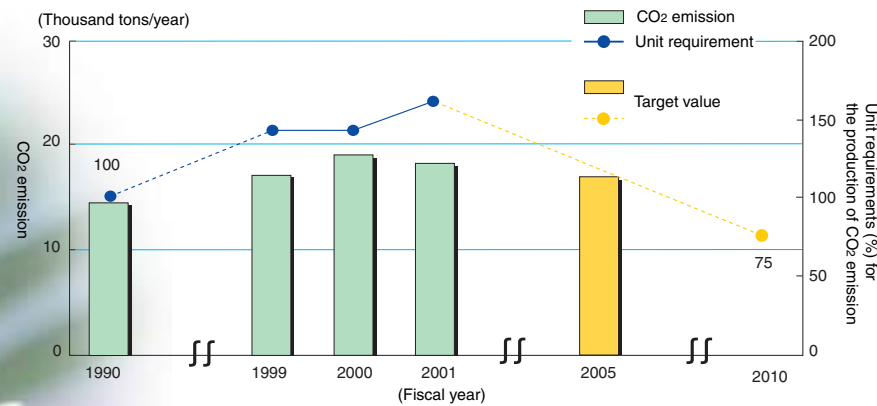
### <Major energy-saving measures taken in fiscal 2001 and before>

1. Demand control of air-conditioners
2. Use of inverters in cooling pumps and air blowers
3. Reduction in power consumption of personal computers (use of LCD monitors)

### <Energy-saving measures to be taken in the future>

1. Diagnosis of energy-saving systems by external experts (application of NEDO and ESCO)
2. Fundamental improvements in production processes

Trends in CO<sub>2</sub> emission and primary unit index



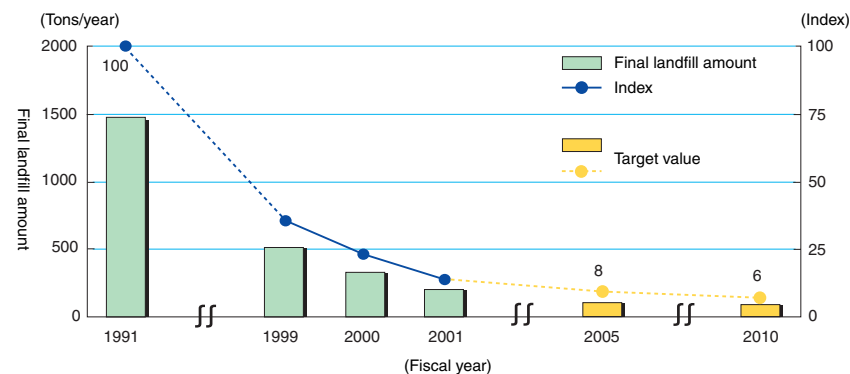
## 2 Waste reduction

We have steadily achieved results in our efforts to reduce the waste produced by business activities and have set ourselves the goal of zero emissions in fiscal 2010. We reduced our final landfill amount in fiscal 2001 to 14% of the 1990 levels. This reduction was due to the company-wide effort to reduce waste and a decrease in the company's production output. We will continuously strive to take aggressive measures to achieve zero emissions as soon as possible.

### <Major measures taken in fiscal 2001 and before>

1. Recycling of waste acid, waste alkali, and sludge
2. Thermal recycling (RDF) of waste plastics
3. Improvement in the yield rates of production lines

Trends in final landfill amount



## 3 Chemical substance management

The PRTR (\*) system was enacted into Japan law in July 1999. Therefore, it is now important for companies to strictly control chemicals and exercise strong disaster management in their business operations. The PRTR Act stipulates that all companies that used 5 tons or more of any of the 354 first-category chemicals in fiscal 2001 must report the fact to the appropriate regulating authority. Because of our commitment to protecting the environment, we have reduced to below 5 tons or completely eliminated our consumption of these chemicals, and as a result we did not need to make such a report for fiscal 2001.

\* PRTR: Pollutant Release and Transfer Register

unit:kg/year

Chemical	Handled amount	Consumed amount	Recycled amount	Transferred amount (waste)	Released amount (atmosphere and water)
Lead solder	730	89	641	0	0
Hydrogen fluoride	550	0	0	540	10
Xylene	384	7	0	20	357
Toluene	226	0	0	10	216
Dichloromethane	160	0	0	30	130

At the end of fiscal 2001, we completely abolished the use of dichloromethane, which is designated as a hazardous air pollutant, at all of our factories by replacing it with an alternative.

## 4 Water pollution prevention

We have not only complied with the laws and ordinances regulating water discharge from factories to public water areas but have also set even stricter voluntary control standards for all of our factories to further protect water quality. There has not been a single violation of these voluntary control standards.

## 5 Air pollution prevention

To prevent air pollution, we have set voluntary control standards that are more strict than the regulations stipulated by law for atmospheric release of dust, sulfur oxides (SO<sub>x</sub>), and nitrogen oxides (NO<sub>x</sub>). As with our voluntary water pollution control standards, there has not been a single violation of our voluntary air pollution control standards. Also, we have abolished the use of all incinerators.

## 6 Prevention of noise, vibration, and odors

The levels of noise and vibration at our factories are below the standard limits set by the pertinent laws and ordinances. In cases where there is no public regulation regarding odors, we have voluntarily set our own control standards to protect the local residents.

## 7 Research on natural energy

We have introduced compact hybrid devices for solar cells and wind power generation. Also, in the near future we will collect basic data to study the power generating capacity of Hokkaido.

