

Environmentally Conscious Production

We focus on energy saving and waste reduction. In terms of waste reduction, four of our thirteen works have already attained the goal of zero waste disposal. We are now determined to reduce harmful chemical substances and achieve the numerical targets set for the whole company according to our Greenhouse Gas Reduction Plan.

Energy Saving

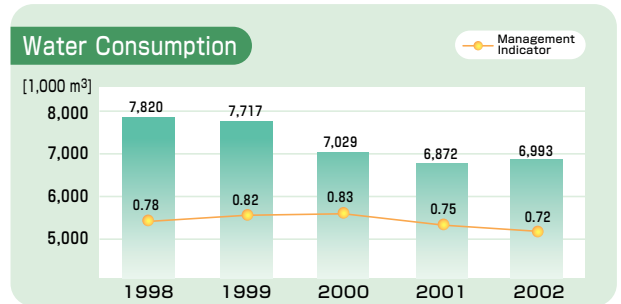
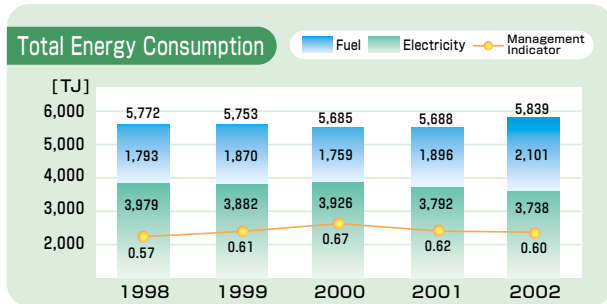
All Works and Offices are attempting to proceed with energy saving according to an Environmental Management Program (EMP). To this end, each works and office calls for energy saving actions that include turning off unnecessary lighting and appropriate temperature settings for air-conditioning in summer and winter, as well as reviewing expected energy saving effects before introducing equipment.

However, owing to the growth of our production, the electric power and fuel consumptions in FY2002 increased by 151 TJ

over FY2001. With this greater production taken into account, our environmental management indicator shows improvement. Water consumption in FY2002 was also 121,000 m³ greater compared to FY2001.

The co-generation plant newly introduced at the Akashi Works is going to be fully operative and great energy saving is expected.

The amounts of energy saving activities are based on the total quantity of heat (Joules) for both electricity and fuel.

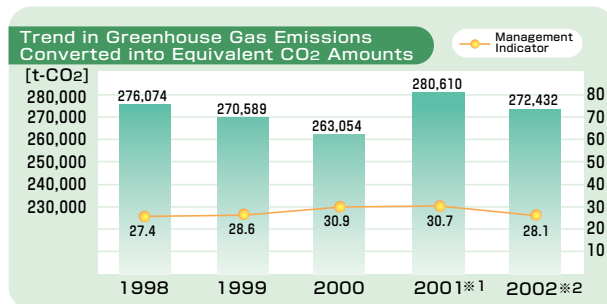


*Management Indicator: Total energy consumption, water consumption, and CO₂ emissions each divided by sales volume (including Kawasaki Shipbuilding and KPM).

Prevention of Global Warming

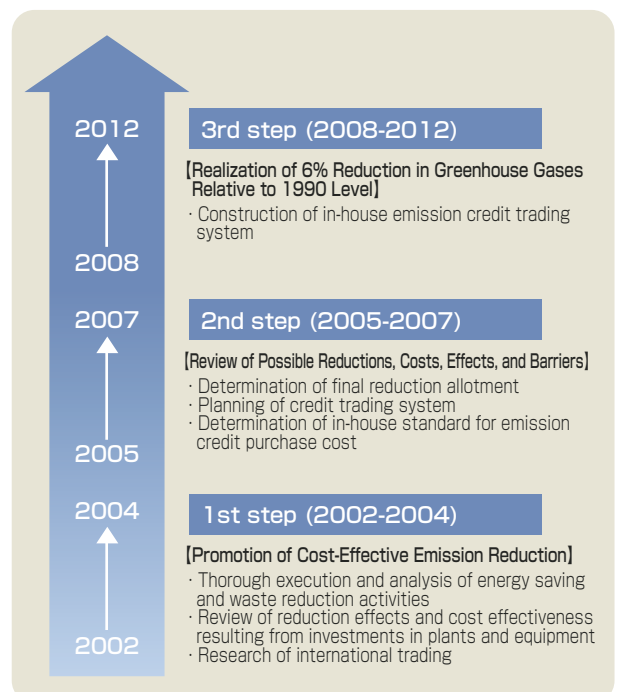
For energy saving and waste reduction, each works and office is investing money into plants and equipment that will be effective in reducing CO₂ emissions. In FY2002, the improvement reached 2.6 points on a management indicator basis. Also, the decrease in total emissions amounted to 8,200 t-CO₂.

We are now beginning to introduce "Efforts to Reduce Greenhouse Gas Emissions" at each internal company and major affiliates as a plan with the goal of carrying out cost effective emission reduction activities in the three steps defined below.

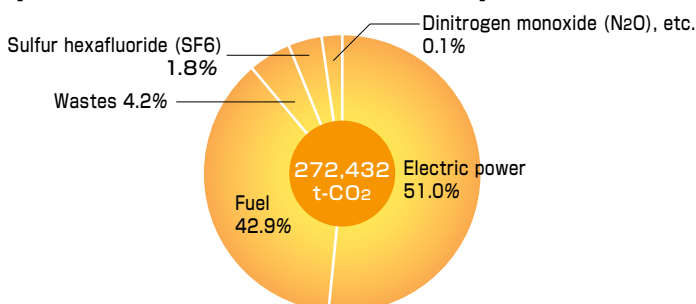


*1: SF₆ is included beginning with FY2001.
*2: Waste paper and waste wood are excluded from the materials emitted beginning with FY2002.

[Efforts to Reduce Greenhouse Gas Emissions]



[Breakdown of Greenhouse Gas Emissions]



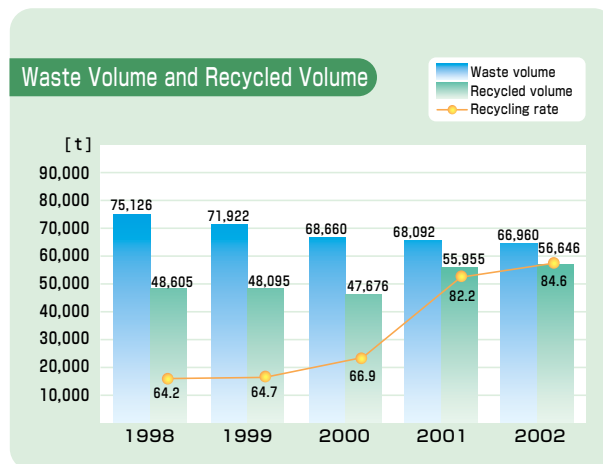
Waste Reduction

Improved Recycling Rate

We are actively applying the 3Rs—Reduce, Reuse and Recycle—to our activities and trying to reduce waste and promote recycling. In particular, our sorting and collection activities for recycling cover not only industrial refuse such as waste paper and waste wood but also industrial wastes such as used oil, waste plastic and metal scraps.

In FY2002 waste amounted to 66,960 tons, a reduction of 1,132 tons relative to FY2001 level. The amount recycled reached 56,646 tons, which corresponds with a recycling rate of 84.6% or an improvement of 2.4% over FY2001 level. We will further enhance our recycling activities until we attain a 100% recycling rate and zero waste disposal.

To comply with dioxin regulations, Kawasaki shut down every incinerator at all of our works by November 2002 and has outsourced waste disposal by incineration to local governments and recycling agents.



Hyogo Works Attained Zero Waste Disposal

We set a goal of zero waste disposal for all of our works by FY2004. Following three Works in FY2001, our Hyogo Works achieved zero waste disposal in FY2002. In the electric railcar production process of the Hyogo Works, 100% recycling of aluminum sand generated in the manufacturing process was achieved by introducing a sorting procedure with a vibrating sieve.

To reduce the amount of packaging used for equipment delivery, Hyogo issues returnable containers and encourage recovery of pallets by shipping agents.

The Kobe Head Office has encouraged careful sorting and collection of waste paper and has attained zero waste disposal.



Sorting bins with identifying illustrations at Hyogo Works

Chemical Substance Reduction

Compliance with PRTR Law

We intend to reduce use of chemical substances by improving manufacturing process and by introducing alternative materials. In particular, large emissions of xylene and toluene from paints are posing a challenge for Kawasaki. We are going to solve this problem by, for example, introducing water-based paints with

lower environmental impacts.

Gifu Works is attempting to reduce the use of dichloromethane by half through the introduction of an alternative substance.

The amounts of chemical substances discharged in FY2002 are summarized in the table below.

[Total of Chemical Substances Handled in FY2002]

(Unit: kg)

Gov't No.	Substance	Release into air	Release into public water area	Release into ground	Release subtotal	Transfer to public sewerage	Transfer as waste
[Type 1 Designated Chemical Substances]: 5,000 kg or more handled annually							
30	Bisphenol A	0.0	0.0	0.0	0.0	0.0	3,458.0
40	Ethyl benzene	122,419.4	0.0	0.0	122,419.4	0.0	5,949.7
43	Ethylene glycol	0.0	0.0	0.0	0.0	0.0	200.0
63	Xylene	624,284.7	0.0	0.0	624,284.7	0.0	42,883.8
68	Chromium and its trivalent compounds	51.6	24.0	0.0	75.6	0.0	40,163.0
100	Cobalt and its compounds	1.5	0.0	0.0	1.5	0.0	227.8
145	Dichloromethane (Also known methylene chloride)	92,844.0	15.0	0.0	92,859.0	0.2	7,640.0
177	Styrene	5,200.0	0.0	0.0	5,200.0	0.0	2,100.0
224	1,3,5-trimethyl benzene	0.0	0.0	0.0	0.0	0.0	80.0
227	Toluene	290,101.1	0.0	0.0	290,101.1	0.0	41,350.9
231	Nickel	3.6	1,330.0	0.0	1,333.6	0.0	4,543.0
266	Phenol	0.0	114.0	0.0	114.0	0.0	10,640.0
283	Hydrogen fluoride and its water-soluble salts	0.0	1,790.0	0.0	1,790.0	0.0	10,030.0
311	Manganese and its compounds	194.5	0.0	0.0	194.5	0.0	57,721.2
[Special Type 1 Designated Chemical Substances]: 500 kg or more handled annually							
69	Hexavalent chromium compounds	7.0	21.0	0.0	28.0	0.0	3,893.0
179	Dioxins (mg-TEQ)	3.3	0.4	0.0	3.7	0.0	0.0
232	Nickel compounds	0.0	0.0	0.0	0.0	0.0	3,040.0
299	Benzene	2.6	0.0	0.0	2.6	0.0	0.0