

Achieving a Sustainable Society


Due to changes in the forms of our business, the results of our efforts for energy saving, global warming prevention, waste reduction and chemical substances reduction have become difficult to evaluate. From this year, we will analyze the effects of our activities using a basic unit (e.g. environmental aspect per net sales) as a typical index in order to promote effective measures based on these results.

Measures to Prevent Global Warming

We “contribute to the prevention of global warming by means of our products and manufacturing that use energy without waste” as we work to achieve a low-carbon society.

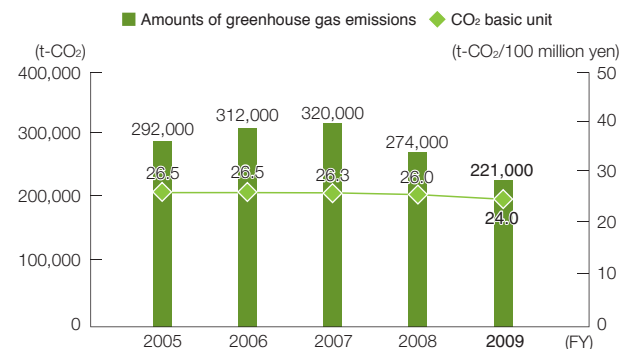
1 Reduce 2020 greenhouse gas emissions in line with national targets.

One of our basic goals is to reduce total emissions of greenhouse gases that occur from our own production activities, but to make sure our improvements also increase productivity, we have established a basic unit target as well, and use these two indicators to reduce emissions.

We are pursuing activities with a target of reducing average CO₂ basic unit  in FY2008-2012 10% compared to FY2007 as the reference year. Our target for FY2020 is still under consideration, but we plan to make it coincide with the Japanese government’s target level.

 A value found by dividing CO₂ emissions by net sales

Amounts of Greenhouse Gas Emissions (CO₂ equivalent)

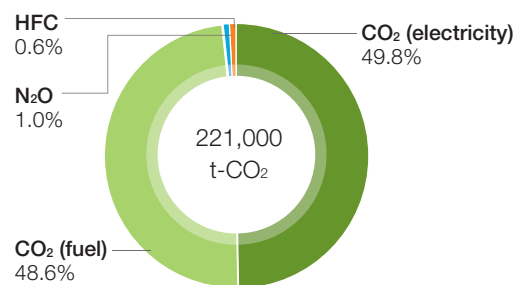


· Electricity conversion factors used herein were specified by power utility companies. (Electricity conversion factor for FY2008 was used to compute those of FY2009.)
 · CO₂ emissions from ship testing on the water have been separately managed from CO₂ emissions at our works since FY2009.

Emissions Results

- Our greenhouse gas emissions in FY2009 declined in both total emissions and emissions per net sales compared to reference year FY2007, but we need to make further reductions to reach our target of 10% lower basic unit.
- The large-scale reduction in total emissions in FY2009 occurred partly because of CO₂ savings that resulted from energy conservation capital investment and operating improvements, but also because of changes in the scope of data collection after a company split and a review of CO₂ emissions sources at production bases.

Breakdown of Greenhouse Gas Emissions (FY2009)



2 Offer customers energy-efficient products and services and reduce emissions of greenhouse gases on a planetary scale.

As a manufacturer of energy and environmental products and transportation systems that help reduce CO₂, we seek to boost global warming countermeasures through our products and services.

Topic

We work to reduce our own CO₂ through capital investment and productivity increases, and are examining the use of credits for CO₂ reductions from our products and technologies to make up for any shortfalls toward our targets. Specifically, we participate in the domestic credit program as a joint reductions business, seeking to acquire domestic credits involving KHI Group products and technologies.

3 Promote energy conservation in production and logistics processes and reduce emissions of greenhouse gases.

We adhere closely to the Law Concerning the Rational Use of Energy and other relevant laws and aim to reduce greenhouse gas emissions throughout our products’ life cycles.

We are undertaking global warming countermeasures that combine reductions of greenhouse gases from our production activities with reductions through products and services, as mentioned above, and also the use of CO₂ credits yielded by our products and technologies.

Waste Reduction Activities

Among our efforts for waste reduction, we are promoting the reuse and recycling of waste oil. We are also continuing to advance our “zero emissions” efforts in which we seek to recycle 100% of the waste emitted from our works without simple incineration or disposal as landfill. In addition to efforts that suit the characteristics of each works, we are also undertaking the “zero emissions” efforts as shared measures at every plant.

Common activities at all works

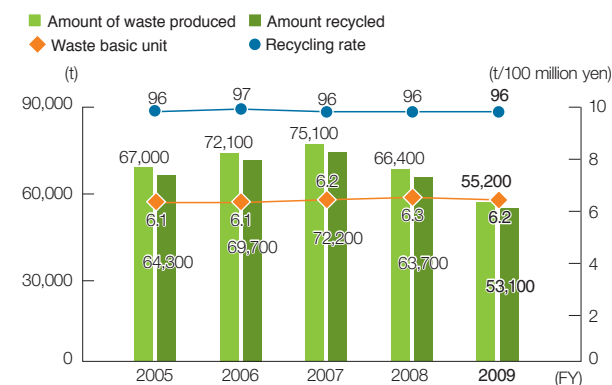
- Activities to reduce three substances with greatest waste emissions (metal scrap, waste oil, wood scrap)
- Promote resource savings, 3Rs
- Maintain and enhance zero emissions
- Promote implementation of electronic manifests

As a result of these efforts, our recycling rate in FY2009 reached 96%, which was the same as in FY2008. Due to the decrease in production volume because of the changing economic conditions and other factors, the total amount of waste that we produced declined, resulting in a reduction of

about 17% from the record of the previous fiscal year to about 55,200 tons.

Moreover, our basic unit (i.e. waste emissions per net sales) was 6.2 points, which is 0.1 point improvement from FY2008. We set FY2002 as reference year for the basic unit, and are striving to achieve our target, 20% improvement in FY2020 from FY2002.

Amount of Waste Produced and Recycling Rate



Efforts for Reducing Chemical Substances

As part of our efforts for reducing chemical substances, we are working to realize reduction targets set at every division for major VOC, dichloromethane and heavy metals. Nearly every division is working to reduce major VOC, hexavalent chromium and lead. The status of those efforts is outlined below.

[Major VOC]

Concerning major VOC, while it is important to reduce VOC from painting processes, there are few low-VOC paints that perform adequately, some users designate specific paints to use, and paint requirements change according to international standards, making it difficult to reduce usage. Our efforts in FY2009 included closely controlling paint thickness and expanding the use of water-based or high-solid paints, but our VOC emissions were about the same as the previous year.

[Hexavalent Chromium]

Through efforts to use chrome-free paint, some divisions were able to eliminate the use of hexavalent chromium, or plan to do so. However, hexavalent chromium is often used in special surfacing processes, and while we are trying to implement technologies that do not use hexavalent chromium and are making progress at replacing it, the amount handled actually increased over the previous year.

[Lead]

Lead is often found in paint, so our efforts have focused on switching to lead-free paint. Some divisions have eliminated lead use, or plan to, and the amount handled decreased from the previous year.

The seventh plan, which began in FY2010, contains the basic policy of driving down the use of chemical substances under control to the absolute minimum (as a rule, totally eliminating heavy metals) by FY2020. This policy will guide our further reduction activities.

Amounts of Chemicals Subject to Reduction Handled and Emitted (t/year)

Substance		FY2009	Increase or decrease from FY2008
Major VOC	Toluene	305	-7.0%
	Xylene	719	-5.4%
	Ethylbenzene	324	+7.6%
	Total	1,348	-3.0%
Heavy metals	Dichloromethane	51	+2.0%
	Hexavalent chromium	22	+10.0%
	Lead	2.4	-33.3%
	Cadmium	0.12	0%

· Amount of major VOC and dichloromethane is the amount emitted, while that of heavy metals is the amount handled.