

# Achieving a Sustainable Society

## **Measures to Prevent Global Warming**

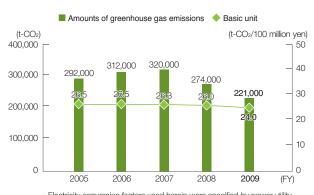
We "contribute to the prevention of global warming by means of our products and manufacturing that use energy without waste" as we work to achieve a low-carbon society.

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.

#### Topic

We work to reduce our own  $CO_2$  through capital investment and productivity increases, and are examining the use of credits for  $CO_2$  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.

Amounts of Greenhouse Gas Emissions (CO<sub>2</sub> equivalent)



- Electricity conversion factors used herein were specified by power utility companies. (Electricity conversion factor for FY2008 was used to compute those of FY2009.)
- CO<sub>2</sub> emissions from ship testing on the water have been separately

#### **Waste Reduction Activities**

Our waste reduction activities take advantage of the characteristics of each works, while the Group as a whole takes initiatives on items common to all works.

#### Common activities at all works

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

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 site for major VOC, dichloromethane and heavy metals.

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%
Dichloromethane		51	+2.0%
Heavy metals	Lead	2.4	-33.3%
	Hexavalent chromium	22	+10.0%
	Cadmium	0.12	0%

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

## **Consideration for the Environment in Our Products**

ULCAN 900 Classic

The KHI Group believes that one of the pillars of our Group Mission is to contribute to the environment through our products. We will make thorough efforts in implementing product assessments and complying to overseas laws and regulations and voluntary regulations in industry, and will continue to promote consideration for the environment in our products in the entire KHI Group.

#### Main Efforts of the KHI Group

### **Implementing Product Assessment**

For newly developed and designed products, as well as for particularly important products, we implement product assessment for resources conservation, energy saving, and recycling with the goal of reducing the environmental impacts of products during their life cycles. Because specific evaluation techniques vary depending on the type of product, each division draws up "Product Assessment Rules" suitable for the characteristics of its products.

# Responding to the ELV Directive , the RoHS Directive and the REACH Regulation

Since 2000, the ELV Directive, the RoHS Directive and the REACH Regulation have strengthened laws and regulations related to chemical substances in the EU, and it has become necessary to have a system to determine information about the chemical substances included in our products throughout our entire supply chain for some of our products.

Each division collects information on chemical substances through a process of "green procurement" (see p. 26), and our Motorcycle & Engine Company has built the "Kawasaki Material Data System" and prepared to respond not only to the REACH Regulation, but to other substance control laws as well.

ELV Directive: End of Life Vehicles Directive
RoHS Directive: Directive on Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment
REACH Regulation: Regulation on Registration, Evaluation, Authorisation and

#### Efforts of the Motorcycle & Engine Company

#### Cleaning Exhaust Gas

As in the year before, in FY2009 we continued to clean the exhaust from motorcycles sold in Japan, making exhaust system improvements to conform with 2007 domestic emissions regulations. During the year, we launched the VULCAN 900 Classic, a large-displacement cruiser model

with exceptional environmental performance.

In addition to an electronically controlled fuel injection system, the model has an  $O_2$  sensor, which detects the density of oxygen in emissions to precisely control how much fuel is injected. The result is the optimal air/fuel ratio for the catalyst to function efficiently. The honeycomb catalyst also has a larger capacity, which enhances cleaning of harmful substances contained in emissions.

#### Promotion of 3R

Since October 2004, we have been steadily operating an autonomous motorcycle recycling system in cooperation with three other motorcycle manufacturers and 12 importers in Japan. Using this system, we have achieved a recycling rate of 87.6% in its sixth fiscal year.

Furthermore, for our new models of motorcycles, we are endeavoring to consider design for environment, including reducing materials and recycling, from the development phase. We conduct preliminary evaluations of our efforts related to reducing, recycling and reusing (3R) at the beginning of each of the design, prototyping and mass-production stages. In particular, through the use of materials that are easy to recycle, we are seeking to increase recyclability, and have achieved a potential recycling rate of over 90% for every model, with the majority of models scoring over 95%.

## Elimination and Reduction of Environmental Substances of Concern

For new motorcycles sold in Japan, we have already been achieving the voluntary reduction targets of environmental substances of concern (lead, mercury, hexavalent chromium and cadmium) established by JAMA. In addition, we have also achieved the voluntary reduction targets for older motorcycle models that we have continued selling.

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