

Environmental Report

2005



Basic Ideology

Shinwa Kaiun Kaisha, Ltd. and its Group companies will strive to maintain a healthy global environment – a common property of all mankind – as a marine transportation corporate group providing services in worldwide waters.

Environmental Policies

- 1 We recognize that a marine accident can cause huge damage to the environment; for example, marine pollution from an oil spill. We will strive to realize zero-marine perils and always remember safe navigation.
- 2 We will not only comply with laws and regulations concerning environment, but also will establish our own criteria when necessary, and strive to reduce the burden on the environment.
- 3 We will establish “Environmental Objectives” and “Target” considering the environmental burden brought about by marine transportation services and improve environmental preservation activities continually.
- 4 We will perform energy-saving navigation and develop the technologies for improving it.
- 5 We will choose environmentally sound supplies when acquiring vessels, instruments, materials, and other products.
- 6 We will promote resource saving in all corporate activities, including those in land offices, as well as reducing the amount of waste generated by all facilities.
- 7 We will raise employees awareness of environmental issues through environmental education and in-house promotional activities.
- 8 We will make public announcement of environmental preservation activities periodically.

Established on October 26, 2001
Revised on December 17, 2004

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Pictures on cover page are
TOBATA MARU, FUGOU MARU, SHINHO MARU, KODAIJISAN, AQUARIUS WING from left center to clockwise

Greeting

Our Shinwa Kaiun Group has been engaged in marine transport in oceans that occupy about 70% of the surface of the globe. The sea provides not only a stage for our activities, but also a source of supply of food and resources. Besides, it plays an important role in maintaining the global environment at a time of climate change.

A ship is an energy-efficient mode of transport, and is economically suitable for mass-transportation. However, if an accident such as the grounding of a large tanker occurs, it can have a serious impact on the global environments. Therefore, we are convinced that the continued safe operation of ships is the most important environmental protection activity; and, with this consciousness we have been taking the necessary measures to prevent marine casualties, protect the environment, and prevent pollution. Actual means used are in compliance with legal requirements, maintenance of hull and machinery for the safe operation of ships, provision of education and training for crew-members, and ensuring a functioning comprehensive safe operation management organization.

We launched a Medium-Term Business Plan III in April of 2005 with the objective of implementing our policy to “enhance the operating base for the next stage”. One of the challenges set to achieve the above objective is the ensuring safe navigation and promoting environmental conservation, therefore we consider that this is a prerequisite for the sustainable growth of the Company.

We hope that this Report helps you to understand our approach to environmental issues and activities for environmental conservation.



June 2005














President

Takahiko Kakei

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Verification of Environmental Management Program 2004

PLAN ⇒			Do ⇒
Environmental Policy	Environmental Objective	Targets for 2004	Contents of activities
Promotion of Safe Operation	Preservation of Marine Environment	Zero Accidental Oil Spill from Ships (4 Continuous years)	<ul style="list-style-type: none"> Education of Crewmembers Adoption of Air-seal-type stern tube sealing device for New ships Regular maintenance of Oil detecting equipment (ODM, Oil Content Monitor) and calibration
		Complete Exchange of Ballast Water in the Ocean	<ul style="list-style-type: none"> Compliance with Procedure(s)
		Adoption of Tributyltin(TBT) free Paint as Bottom Paint (85 %)	<ul style="list-style-type: none"> Adoption of TBT free Paint as Bottom Paint for New Ships Alteration from TBT Paint to TBT free Paint in Dry-dock
Resource-Saving & Reduction of Wastes	Reduction of Consumption of Natural Resources	1% Reduction of Annual Power Consumption in the Office over the Previous Year	<ul style="list-style-type: none"> Education of Shoremembers Post notice on In-house electronic bulletin board Switch-off of Unnecessary Lighting
		Green Purchase of 30 items (new 10 items)	<ul style="list-style-type: none"> Listing of object items Investigation and implementation of purchase of items
		10% Reduction of F.O. Consumption per Unit Load over Year of 1990	<ul style="list-style-type: none"> Education of Crewmembers Information gathering of New product Improving fuel oil consumption by Bottom Blast and Propeller polish Preparing of effective operational plan Increase of loading quantity
	Reduction of Waste Generation	Grasp of Numerical Value of Shipboard Waste Generation	<ul style="list-style-type: none"> Complete segregated collection and retention Review Record form
		Complete Segregation of Wastes Generated in the Office (100%)	<ul style="list-style-type: none"> Complete segregation of Recyclables, Combustibles and Noncombustible
Preservation of the Air	Reduction of Harmful Air Pollutants	Reduction of Dioxin	<ul style="list-style-type: none"> Adoption of incinerators of IMO approved type of newly built Ships
		10% Reduction of NOx Emission per Unit Load over Year of 1990	<ul style="list-style-type: none"> Adoption of Improvement Machineries of newly built Ships
		10% Reduction of CO2 Emission per Unit Load over the Year of 1990	
		Supply of Low-Sulfur Fuel	<ul style="list-style-type: none"> Selection and Analysis of Fuel oil to be Purchased
		Adoption of Alternative CFC Refrigerate Equipment for newly built Ships	<ul style="list-style-type: none"> Adoption of Alternative CFC(R404a) Refrigerate Equipment and Air Cond System for newly built Ships
		Terminate Halon Extinguishant for newly built Ships	<ul style="list-style-type: none"> Adoption of CO₂ or Air-Foam Liquid Extinguisher for newly built Ships

CHECK ⇒				ACTION ⇒
Verification results	Evaluation	Cause for un-achieved items	Improvement methods	
Oil spill accident "zero"				
Achieved 100% (Bulk Carrier only)		Not practiced by some ships taking into consideration navigation route and safety	Shall practice as required taking into account of safety and ship's stability	
Adopted TBT-Free paint for 83% of ship		As the dry-docking schedule had been extended into 2005	Completed to dry-dock in April 2005	
Achieved 5 % reduction over the previous year				
Achieved 30 items (Add new 10 items)				
Achieved 11.7 % reduction as compared with 1990				
Volume of shipboarded waste can be estimated as a result of a review of measurement records. Numerical target shall be set within the next year.				
Achieved waste segregate completely				
Object: Newly built Crude Oil Tanker (Achieved)				
Achieved 11.2 % reduction as compared with 1990				
Purchased fuel oil suited ISO standard (Sulfur content ISO 5%, Actual 3%)				
Object: Newly built Crude Oil Tanker (Achieved)				
Object: Newly built Crude Oil Tanker (Achieved)				

REDUCATION OF HARMFUL AIR POLLUTANTS

- Reduction of Dioxin
- Responding to Exhaust Gases
- Prevention of Ozone Depletion
- Supply of Low-Sulfur Fuel

In Port , Cargo Work



PRESERVATION OF MARINE ENVIRONMENT

- Disposal of bilge and waste oil from the engine room
- Adopt air-seal type stern tube sealing system
- Preventing oil spills from On-deck
- Anti-fouling paint without Organotin Compounds
- Ballast water

SAFE OPERATION, OTHER ACTIVITIES

Maintenance and improvement of safety management system

Emergency Response Exercise

Ship Inspection

Safety & Environmental Committee

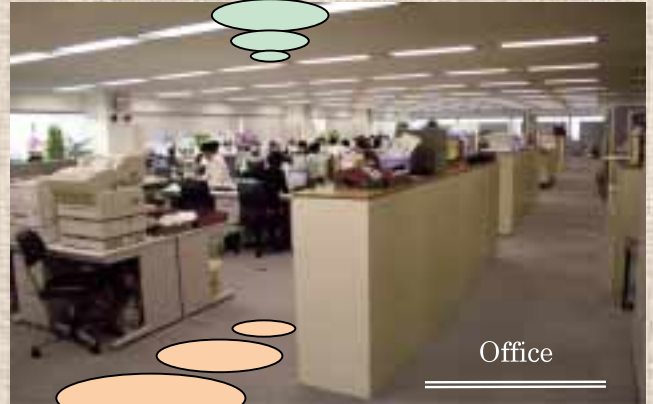
Seamen's Education and Training

Improving the Consciousness of Personal

Marine Transport



REDUCATION OF WASTE GENERATION



Office

REDUCATION OF CONSUMPTION OF NATURAL RESOURCES

Reduction of Power consumption at office area

Promoting Green Purchases

SAFE OPERATION

The Shinwa Kaiun Group has been performing the following activities to ensure safe operation of ships and to promote environmental protection.

Maintenance and improvement of safety management system

All of the ships owned by us are managed by Shinwa Marine Corp., an ocean ship management company with advanced marine experts. They established and execute the safety management system (SMS), and make continuous efforts to maintain and improve it, in order to ensure safety at sea, prevent fatal accidents, and avoid environmental damage, especially to the ocean, as well as damage to property.

Emergency Response Exercise

The Company carries out regular emergency response exercises that assume the occurrence of an emergency incident. In 2004, the exercise assumed that a coal carrier had encountered a major earthquake during a bunkering operation in a port, which caused fuel oil spill overboard as well as a fire in the engine room. The exercise was carried out in coordination with related internal and external organizations.



From in-house magazine

Ship Inspections

Checking the physical condition of ship is considered to be the most important matter from the viewpoint of preventing an accident. Therefore, the Company has prepared a specific inspection checklist for ships under management and time-chartered ships. Based on these checklists the Company conducts periodic inspections of ships.

Safety & Environmental Committee

For promotion of safe navigation and environmental conservation, the “Safety & Environmental Committee” is assembled on a regular basis, with the president assumed as chairman. The committee discusses issues of safe navigation management from various aspects, including research and analysis of marine perils, planning of prevention measures, establishment of risk management systems, and seamen’s education and training.

Seamen’s Education and Training

Primarily managed by the Seamen’s Training Team, Shinwa Kaiun Kaisha Group provides onboard training sessions, including lectures and on-the-job training, along the lines of the proprietary action plan. The plan above includes items relating to environmental protection activities, which should enlighten crew-members about environmental protection if adequate education is given during pre-boarding training.

PRESERVATION OF MARINE

ENVIRONMENT

1. Prevention of the oil spill accident

Disposal of bilge and waste oil from the engine room

Wastewater with oil generated in the engine room is called “bilge.” The bilge is processed with our special filtration system before it is discharged overboard, so that only water without oil is discharged. The water discharged overboard is constantly monitored with an oil sensor, and the discharge stops automatically when the system detects any oil.

We perform maintenance on these systems at regular intervals and pay close attention to the bilge discharge. The removed oil is burned onboard as waste oil.



Oily Water Separator



Indicator

Adopt air-seal-type stern tube sealing system



Air-seal-type stern tube sealing system

In the past, the stern tube used a seal of the oil-seal-type to prevent the ingress of sea water through the clearance between the propeller shaft and the tube. However, the Company, which has a zero oil leak accident policy, in its

policy has decided to adopt the air-seal-type, which has higher performance against the ingress of sea water, and prevents the egress of lubricating oil outboard, on newly built ships.

Preventing Oil Spills from On-deck

There is a possibility of an oil spill from on-deck, which might be caused by a rupture of a high-pressure pipeline for hydraulic deck machinery, or due to grease applied to steel



Picture of Discharged Oil Removal Drill

wire ropes being washed off by rain or sea water. To prevent an accident resulting in an outboard oil spill, and to minimize a spill should it occur, crew-members of the Company conduct an exercise in every month in response to such situation.

If there is a discharge and water is trapped on deck outboard, an oil-absorbing filter is used to remove the oil component.



Oil Absorbing Filter

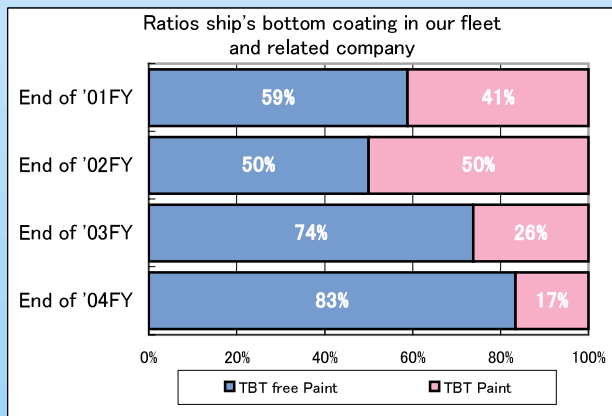
2 . Other Efforts to Preserve the Marine Environment

Anti-fouling without Organotin Compounds

Barnacles and marine growth that attach to a ship's hull below the water line increase the water resistance of the ship, thus reducing the ship's speed and increasing fuel oil consumption.

To prevent these growths from fouling the surface of the hull an anti-fouling paint containing organic tin was introduced in the 1960's. Although this type of anti-fouling paint was very effective for preventing the attachment of marine life, it became clear that it had an adverse effect on human beings because it contained a substance that affected the internal secretion function (so-called environmental hormone). As a result, use of paint containing organic tin was prohibited worldwide in 2003; and, during and after 2008 dissolution of this paint into seawater will be prohibited. The Company has been changing the coating used and applies non-organic tin paint to every ship at dry-docking.

Although the Company had set the target percentage of the number of ship's applying non-organic tin at 85% in 2004, this target was not achieved because the planned dry-docking of one ship was set back to 2005.



Ballast Water

When a ship is not loaded with cargo it carries sea-water as ballast in dedicated tanks so ensure the propeller is fully submerged under the water line, and to secure the stability of the ship.

Because the ballast water is discharged when loading cargo at the next port-of-call, there is an international migration of aquatic organisms contained in ballast water, and this has disturbed ecological systems and become an international issue.

As a result, the Company adopted a procedural requirement in line with the guideline of IMO in its Safety Management System, which controls all ships under management, to exchange ballast water in the open sea to minimize the effects of harmful aquatic organisms at a port-of-call when loading.

REDUCTION OF AIR POLLUTANT

Reduction of Dioxin

Freon gas (CFC), which is used in air conditioning and refrigerating systems, and halone gas, which is used in fire extinguishers, are said to cause a depletion of the ozone layer. As a result, the Company has positively adopted the use of non-CFC refrigerants for air conditioning and refrigerating systems, and foam fire extinguishing systems.

Responding to Exhaust Gases

To reduce emissions of harmful exhaust gases that cause global warming and acid rain, the Company has installed a new model engine that operates with low emission of nitrogen oxide (NOx) for newly built ships.



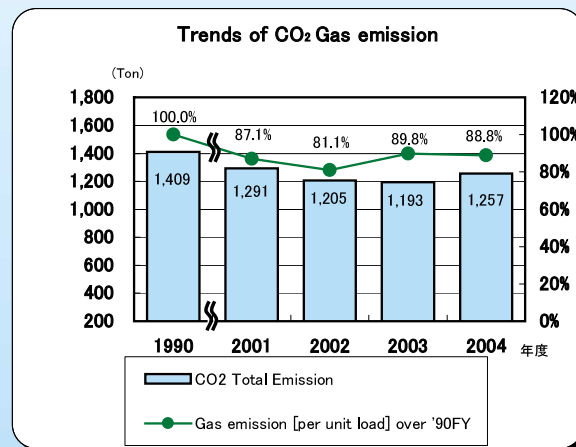
New type engine installed in new VLCC

Prevention of Ozone Depletion

To prevent generation of dioxin, incinerators capable of rapidly cooling down the exhaust gas temperature below 350°C were installed for newly built ships.

Supply of Low-Sulfur Fuel

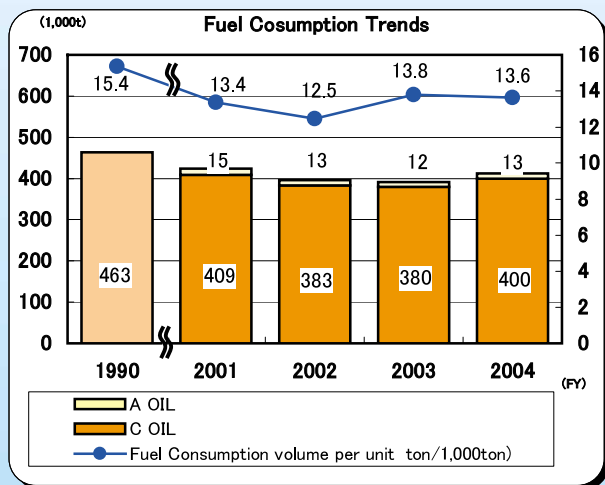
The Company has selected fuel oil supply firms that provide ships with fuel oil based on the ISO standard. All fuel oil supplied has been analyzed by a specialized organization. The results of analyses show that in 2004 the sulfur content of fuel oil supplied was 3%, while the ISO standard was 5% or less.



REDUCTION OF CONSUMPTION OF NATURAL RESOURCES

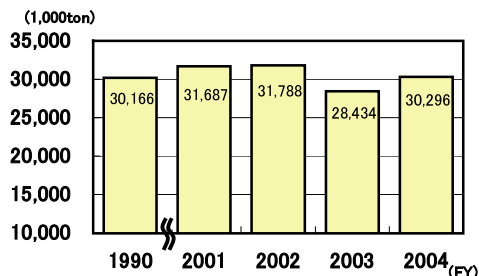
Efficient Fuel Oil Consumption

In 2004, due to an increase of transported cargo quantity, the volume of fuel oil consumption increased. However, by effectively operating ships with an increased quantity of cargo per ship, we have achieved efficient cargo transport while reducing fuel oil consumed per ton-mile basis.



※The Value of 1990 is total Quantity A oil and C oil

Transported Cargo Quantity



Reduction of power consumption at the office area

In 2004, the office achieved the electric power saving target of 1% in comparison with the previous year, with the actual results 5% due to the efforts of all personnel in the office, who achieved the saving by switching off unnecessary lighting and equipment.

Promoting "Green Purchases"

The term "Green Purchase" means to purchase something being effective, while fully considering the need, and giving priority not only to price and quality but also to minimize environmental impact.

In 2004, we added 10 new items to Green Procurement including file folders made of recycled paper, and now adapt 30 Green Procurement Items in all.

REDUCTION OF WASTE

GENERATION

Some shipboard wastes may be disposed of at sea under International Convention, and other must be disposed of onshore.

Classified collection and disposal have been carried out onboard ships in accordance with the Convention. The volume of waste of each ship has been reported to the office ashore, which should know the situation and control disposal.

In the office, classified collection and disposal of waste have been carried out in accordance with an ordinance of the Administration. Effective recycling of resource waste is promoted, and use of the reverse sides of sheets of paper under the “my own cup” campaign has continued from the previous year.



CLASSIFIED DISPOSAL OF WASTES

OTHER ACTIVITIES

Improving the Consciousness of Personnel Using a Bulletin Board

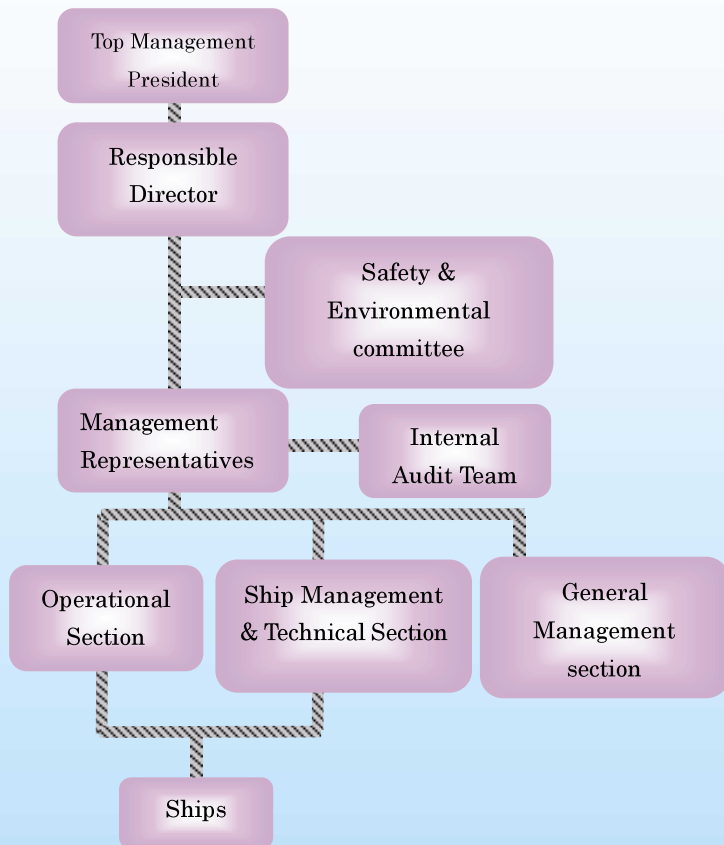
To improve the consciousness of personnel about environmental protection, the articles “Key words for reading and understanding the Environment” and “I’d like to know more about Global Warming” were placed on Bulletin Boards at regular intervals, and could be read on individual personal computers.

Environmental Management Program 2005

Environmental Objectives	Target for 2005	Contents of activities
Preservation of Marine Environment	Zero Accidental Oil Spill from Ships (Continuous for 5 years)	<ul style="list-style-type: none"> ▪ Adaption of Double-hull Construction for newly built VLCC ▪ Adaption of Air-seal Type Stern Tube Sealing Device for newly built Ships ▪ Compliance with Procedure for Receiving/Transferring FO and LO ▪ Compliance with Regulation for Preventing Oil Pollution ▪ Recommendation of install Oil Absorbing Filter On Deck ▪ Instruction of Prevention of The Oil Spill Accident
	Complete Exchange of Ballast Water in the Ocean	<ul style="list-style-type: none"> ▪ Compliance with Procedure for Changing Ballast Water
	Adoption of TBT free paint as Bottom Paint (95%)	<ul style="list-style-type: none"> ▪ Adoption of TBT free Paint as Bottom Paint for newly built Ships ▪ Alteration from TBT paint to TBT free paint in Dry-docking
Reduction of Consumption of Natural Resources	10% Reduction of Fuel Oil Consumption per Unit Load over the year 1990	<ul style="list-style-type: none"> ▪ Improving Propulsion Efficiency by Bottom clean and Propeller polish ▪ Preparing of Effective Operational Plan ▪ Increasing of Loading Cargo Quantity ▪ Instruction of Saving Fuel Oil Consumption in Port
	Selection of Consumption Saving Equipment of M/E Cylinder Oil Lubricator	<ul style="list-style-type: none"> ▪ Adoption of Improvement Machineries of newly built Ships
	Reduction of Consumption of Papers	<ul style="list-style-type: none"> ▪ Advance of Electronic Library ▪ Introducing IT(Information Technology) Onboard and Advance Paperless
	1% Reduction of Annual Power Consumption in the Office over the Previous year	<ul style="list-style-type: none"> ▪ Notice on In-house Electronic Bulletin Board ▪ Saving Electricity of Unnecessary Lighting
Reduction of Waste Generation	Advance of Landing Shipboard Wastes (1% Increase Over the Previous Year)	<ul style="list-style-type: none"> ▪ Complete Segregated Collection and Retention ▪ Management of Quantity of Shipboard Wastes and Landing
	Complete Segregation of Wastes Generated in the Office (100%)	<ul style="list-style-type: none"> ▪ Complete Segregation of Recyclables, Combustibles and Noncombustible
Reduction of Harmful Air Pollutants	10% Reduction of NOx Emission per Unit Load over the year of 1990	<ul style="list-style-type: none"> ▪ Adoption of Improvement Machineries of newly built Ships
	10% Reduction of CO2 Emission per Unit Load over the year of 1990	
	Supply of Low-Sulfur Fuel (Sulfer below 4.5%)	<ul style="list-style-type: none"> ▪ Selection and Analysis of Fuel oil to be Purchased
	Reduction of Dioxin	<ul style="list-style-type: none"> ▪ Adoption of Incinerators of IMO-Approved type of newly built Ships
	Adoption of Alternative CFC Refrigerate Equipment for newly built Ships (100%)	<ul style="list-style-type: none"> ▪ Adoption of Alternative CFC(R404a) Refrigerate Equipment and Air cond. System for newly built Ships
	Terminate Halon Extinguishant for newly built Ships	<ul style="list-style-type: none"> ▪ Adoption of Air Foam Liquid Extinguisher for newly built Ships
Advance of Environmental Mind	Education of Shoremembers	<ul style="list-style-type: none"> ▪ Practice In-house seminar
	Education of Crewmembers	<ul style="list-style-type: none"> ▪ Practice Pre-boading seminar ▪ Practice Training for Company Overseas ▪ Practice Shipboard Education for crew members

Organization Chart of EMS

Corporate Profile



【Company Name】 Shinwa Kaiun Kaisha, Ltd.
【Head Office】 KDDI Otemachi Bldg.
 14-15F, 8-1, Otemachi 1-Chome,
 Chiyoda-ku, Tokyo
 100-8108, Japan
【Capital】 Yen 8,100,000,000
【Fleet】 85 ships 5,301,140DWT (K/T)
【No. of Employees】 Shore 101 Ship 55
 Total 156
【Principal Lines of Business】
 Carriage of iron ore, coal, oil,
 and LPG by special carriers,
 carriage of export steel,
 non-ferrous metals, feed grain,
 fertilizer, wood chips, and many
 others by tramp ships, thus
 serving as an international
 shipping company deploying a wide
 range of shipping services around
 the globe.

Recipients of Report and Frequency

- Environmental Protection Measures Taken by the Shinwa Kaiun Kaisha, Ltd., part of its group companies and ships under management.
- The Environmental Management Program of FY2004 (April 2004 to March 2005)

For inquiries to

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