

"K" Line Group  
**Social and Environmental Report 2011**



Toward Synergy for All and Sustainable Growth



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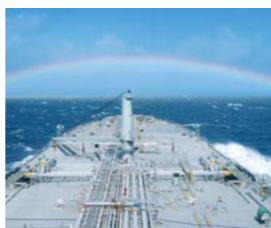
To fulfill its mission as a shipping business, the “K” Line Group incorporates its CSR activities into its daily operations, including initiatives to ensure safe navigation and cargo operations and action to protect the environment. All of these activities are undertaken by its employees, who are essential to the success of the Group.



#### HIGHLIGHT Responsibility as a Shipping Line I

### Ensuring safety and passing on skills

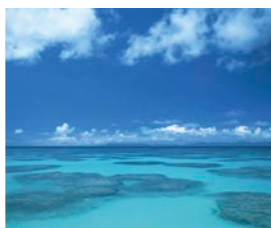
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## Corporate Principles of the “K” Line Group

The basic principles of the “K” Line Group as a shipping business organization centering on shipping lie in:

- (a) Diligent efforts for safety in navigation and cargo operation as well as for environmental preservation;
- (b) Sincere response to customer needs by making every possible effort; and
- (c) Contributing to the world’s economic growth and stability through continual upgrading of service quality.

### Vision

- 1 To be trusted and supported by customers in all corners of the world while being able to continue to grow globally with sustainability.
- 2 To build a business base that will be capable of responding to any and all changes in business circumstances, and to continually pursue and practice innovation for survival in the global market.
- 3 To create and provide a workplace where each and every employee can have hopes and aspirations for the future, and can express creativity and display a challenging spirit.



“KUMANOGAWA”  
A large tanker unloading at sea berth

## Editorial Policy

The purpose of this report is to describe to our stakeholders in clear terms the initiatives undertaken by the “K” Line Group. These initiatives are based on the Group’s corporate principles, and include efforts to fulfill its corporate social responsibility (CSR), ensure safe navigation and cargo operations, and protect the environment. The “K” Line Group first published the “Environmental Report” in 2002, and expanded its scope in 2004 to a “Social and Environmental Report.” The Social and Environmental Report 2011 was edited with particular attention given to the following:

#### • Focus on the characteristics of a shipping line

In editing this report, we held a number of meetings to review the initiatives of the Company and the information it has disclosed. As a result, based on the principle of “disclosing the Group’s initiatives for fulfilling its social responsibilities to its stakeholders,” we emphasized articles on four themes considered important from the viewpoint of “responsibility as a shipping line.” These themes are Safety in Navigation and Cargo Operation, Environmental Preservation, Work Environment, and Social Contribution. We also used many photographs and illustrations, focused on the diversity of people working for the Group, and showed as many opinion as possible in VOICE articles to ensure that the reports are reader-friendly.

#### • Emphasizing clarity

In this report, we used as many figures and tables as possible to illustrate the Group’s initiatives in a way that can be readily grasped. We also attached marks to some terms and explained their meanings on the same page, to ensure that the report is understandable for all readers.

#### • Disclosing information on our website

We attached marks to information not covered in this report to let readers know where they can find it on our website.

#### Period Covered

Fiscal Year 2010 (April 1, 2010 – March 31, 2011)

The report also includes details of some activities undertaken after the above period. Data for the environmental report are based on calendar years.

#### Scope of Report

In principle, this report covers the activities and data of Kawasaki Kisen Kaisha, Ltd. and all of its affiliates in the “K” Line Group, unless otherwise noted. (See our website for details of our consolidated subsidiaries and affiliates.)

#### Reference Guidelines

Sustainability Reporting Guidelines, Version 3.0, Global Reporting Initiative (GRI) (The GRI Content Index is shown in our website.)  
Environmental Reporting Guidelines 2007 and Environmental Accounting Guidelines 2005, The Ministry of the Environment of Japan

#### Date of Issue

August 2011 (The previous report was issued in August 2010, and the next report is scheduled to be issued in August 2012).

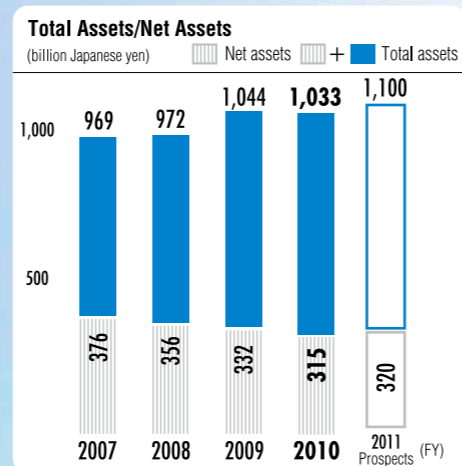
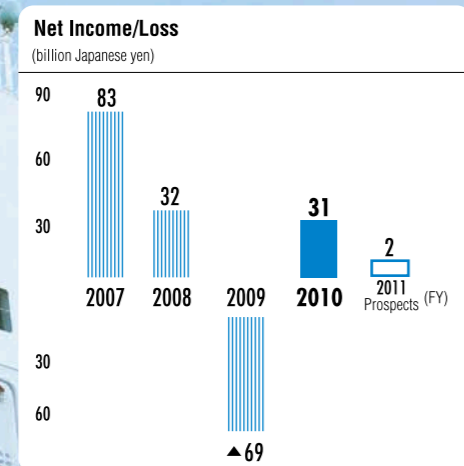
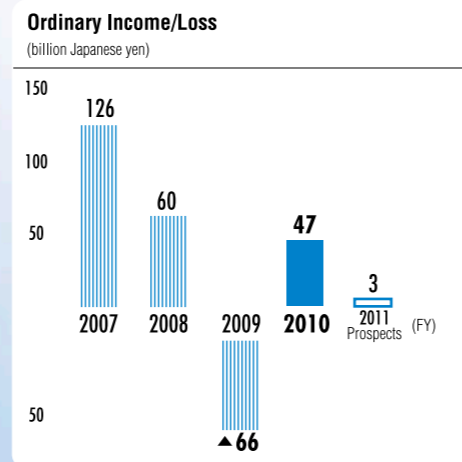
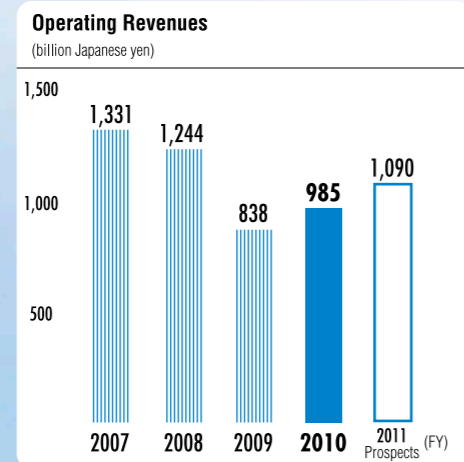
## Profile of the “K” Line Group (As of March 31, 2011)

**Name:** Kawasaki Kisen Kaisha, Ltd.  
**Established:** April 5, 1919  
**Head Office:** Hibiya Central Building, 2-9, Nishi-Shinbashi 1-chome, Minato-ku, Tokyo 105-8421, Japan  
**Paid-in Capital:** 65,032 million Japanese yen  
**Shares Outstanding:** 765,382,298 shares of common stock including treasury stock  
**Employees:** Non-consolidated: 623 (504 males and 119 females)  
 Consolidated subsidiaries: 3,372 (Japan), 4,523 (Overseas)  
**Workforce breakdown by region (Group):** Japan: 38.18%, Asia: 41.37%, North America: 6.91%, Europe: 11.70%, Others: 1.84%  
**Offices:** Head Office (Tokyo), Registered Office (Kobe), Branches (Nagoya and Kansai)  
**Overseas Representative Offices:** Beijing, Manila, Middle East (Dubai)

- Overseas Subsidiaries:** South Korea, Hong Kong, China, Taiwan, Thailand, Philippines, Singapore, Malaysia, Indonesia, Vietnam, India, Australia, U.K., Germany, France, Netherlands, Belgium, Italy, Finland, Denmark, Norway, Sweden, Spain, Portugal, Turkey, Canada, U.S.A., Mexico, Chile, Peru, Brazil, South Africa
- Consolidated Subsidiaries:** Japan: 26, Overseas: 290, Equity Method Affiliates: 29 (Japan: 5, Overseas: 24)
- Fleet: 499 ships (34.91 million DWT)**
  - Containerships (Owned 8/Chartered 74)
  - Dry bulk carriers (Owned 58/Chartered 148)
  - Car carriers (Owned 31/Chartered 58)
  - Energy Transportation and Tankers (Owned 33/Chartered 22)
  - Heavy Lifters (Owned 15/Chartered 0)
  - Other (Owned 26/Chartered 26)
  - Owned 171/Chartered 328 Total 499
- Membership (Japan and Overseas):** Japan Business Federation (Nippon Keidanren), The Japanese Shipowners' Association (JSA), Japan Foreign Trade Council, Inc. (JFTC), The Tokyo Chamber of Commerce and Industry (TCCI), International Chamber of Commerce (ICC), Japan Federation of Freight Industries (JFFI), International Association of Ports and Harbors (IAPH), Japan Ship Technology Research Association (JSTRA), National Maritime Research Institute (NMRI), Japan Internal Combustion Engine Federation (JICEF), Box Club, the Baltic and International Maritime Council (BIMCO), the International Association of Independent Tanker Owners (Intertanko), Clean Cargo Working Group (CCWG)

(See our website for a history of our social and environmental activities.)

### Primary Financial Data (Consolidated)

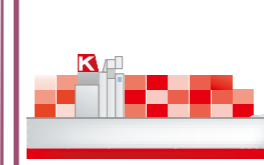


The above outlook is based on estimated values as of May 31, 2011, assuming an exchange rate at 85 Japanese yen to the US dollar and a fuel oil price of US\$650/MT.

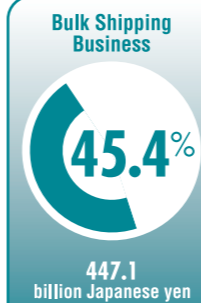
### Segment Breakdown of Operating Revenues



#### Containership Services



We operate major east-west shipping routes between Asia and North America, between Asia and Europe, and between Europe and North America in alliances with Chinese, Taiwanese, and South Korean shipping companies. In addition, we also operate Intra-Asia shipping routes and North-South routes linking Asia and South America and Asia and the Middle and Near East or Africa. With this global service network, we ship any item that can be accommodated in container boxes, including electronic devices, home electric appliances, furniture, clothing, frozen foods, beverages, hops, consumables, parts, and raw materials. As of March 31, 2011, our fleet consisted of 82 ships, totaling 4,183,905 deadweight tons.



#### Dry Bulk Carrier Services



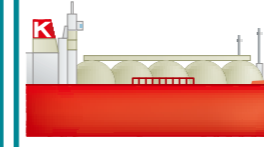
We transport raw materials such as coal, iron ore, grains (such as wheat, soybean, and corn), and papermaking materials by bulk carrier. In recent years, we have increasingly been shipping to emerging markets such as China and India, as well as between foreign countries via the Atlantic Ocean, in addition to shipping to Japan. As of March 31, 2011, our fleet consisted of 206 ships, totaling 22,473,068 deadweight tons.

#### Car Carrier Services



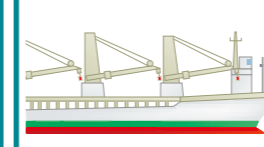
Since 1970, when we launched the Toyota Maru No. 10, Japan's first Pure Car Carrier (PCC) for the transportation of completed cars, we have been providing safe, prompt services in shipping passenger cars and trucks as a pioneer in car carrier services. We take a proactive approach to fleet strengthening as part of our commitment to quality transportation. As of March 31, 2011, our fleet consisted of 89 ships, totaling 1,269,882 deadweight tons.

#### Energy Transportation and Tanker Services



We transport liquefied gas by LNG and LPG carriers and crude oil and oil products by tankers. In addition to energy for industry, we transport energy closely linked to daily life, such as utility gas and petroleum. We also offer offshore support vessel services via K Line Offshore AS of Norway, supporting the expanding ocean energy development. As of March 31, 2011, our fleet consisted of 55 ships, totaling 6,343,976 deadweight tons.

#### Heavy Lifter Services

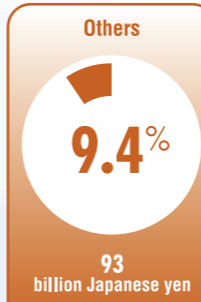


We mainly ship large-scale and heavy cargo related to the energy industry and infrastructure development via the SAL Group of Germany, a dedicated heavy lift player. On June 30, 2011, we acquired all shares of the SAL Group and made it a wholly owned subsidiary. As of March 31, 2011, our fleet consisted of 15 ships, totaling 153,488 deadweight tons.

#### Coastal Shipping and Ferry Services



“K” Line Group companies headed by Kawasaki Kinkai Kisen Kaisha, Ltd. operate coastal shipping within Japanese waters, employing passenger-cargo ferries, high-speed cargo ferries, high-speed roll-on/roll-off ships, specialized limestone carriers for steel and cement production, and general cargo carriers. We also provide liner and tramper services for intra-Asian trade. As of March 31, 2011, our fleet consisted of 52 ships, totaling 482,635 deadweight tons.



#### Total Logistics Services



To effectively meet increasingly sophisticated logistics needs, we combine the know-how and services of the “K” Line Group companies to provide total logistics services, including not only maritime shipping but also airfreighting, buyers consolidation, warehousing and trucking.

#### Other Services

In addition to the above, the “K” Line Group engages in other businesses, including ship management as well as real-estate leasing and management.

# Aiming for Sustainable Growth by Fulfilling Social Responsibility as a Shipping Business Organization



## Impact of the Great East Japan Earthquake and Responses of the “K” Line Group

First, I would like to express my heartfelt sympathy on behalf of everyone at “K” Line to all victims of the Great East Japan Earthquake. We look forward to the earliest possible reconstruction and restoration of the affected areas.

“K” Line established a Disaster Response Task Force immediately after the earthquake struck on March 11 and determined the extent of the damage to our fleet, facilities, and officers and employees, and ensured workplace and employee safety.

Fortunately, none of our staff including employees on ships and on shore was injured. However, a large bulk carrier chartered by “K” Line ran aground at the Port of Kashima as a result of the tsunami following the earthquake. Fortunately, the accident did not result in any oil pollution casualties. On May 3, the ship was dispatched to a shipyard for repairs after completion of its cargo

discharge at the port. Kawasaki Kinkai Kisen, our Group company, has temporarily altered the ports of call on some shipping routes. Apart from this, however, the entire Group is operating normally as of May 31.

To the disaster-hit areas, we have donated relief money, some of which was collected from individual officers and employees. In addition, we are using our resources as a shipping business organization to provide active assistance including free marine transport services to the recovery efforts. The earthquake caused such tremendous damage to the wide area that recovery and restoration will require considerable time and patient, long-term assistance. As a corporate citizen, we at “K” Line will continue to participate proactively in relief activities so that the victims will get back to normal lives as soon as possible.

## “K” LINE Vision 100 – New Challenges

In April 2008, “K” Line Group developed its medium-term management plan, “K” LINE Vision 100 focusing on the mid 2010s. However, the global recession triggered by the failure of Lehman Brothers in the fall of that year radically changed the business environment. To respond to the difficult situation, we reviewed the medium-term management plan in January 2010, and adopted the “K” LINE Vision 100 KV 2010 plan. In fiscal 2010, the Group outperformed its plan, thanks in part to the recovery of the global economy.

In April 2011, we used the turn of the fiscal year as an opportunity to review our plan, and decided to shift to business operation under the “K” LINE Vision 100 – New Challenges. This revised plan leaves intact the Five Missions for achieving the Group’s goal of “Synergy for All and Sustainable Growth.” It also specifically sets forth two missions – that is, “expansion of stable earnings base and sustainable growth” and “strategic investment in response to structural market changes and growth in demand.”

As the new president of “K” Line Group who took from former president Kenichi Kuroya in May, I believe it my primary mission to make every effort to achieve this medium-term management plan.

## Social Responsibility of “K” Line Group as a Shipping Business Organization

The basic principles of the “K” Line Group are “diligent efforts for safety in navigation and cargo operation as well as for

environmental preservation,” “sincere response to customer needs by making every possible effort,” and “contributing to global economic growth and stability through continual upgrading of service quality.” We can carry out these principles only by fulfilling our social responsibility as a shipping business organization through our business activities. We have important missions to transport cargo of customers safely and reliably, to have sufficient awareness of environmental preservation as we transport cargo, and to continue to recruit and train the people who will provide these transportation services. The “K” Line Group recognizes that achieving these missions and embodying its Corporate Principles is the very purpose of its CSR activities. Specifically, the “K” Line Group is taking the following initiatives to achieve these three missions, that is, “safe navigation and cargo operations,” “environmental preservation,” and “human resource development.”

### Safe Navigation and Cargo Operations

The operation of ships entails a number of risks. Risks at sea include those attributable to natural phenomena, as well as those we can prevent on our own, such as accidents caused by the mishandling of ships and problems with ship engines and equipment. At present, we also face a growing number of unpredictable risks that are hard to address with existing knowledge. One example is piracy in the Gulf of Aden, which is now expanding into the Indian Ocean. Consequently, the pursuit of safe navigation and cargo operations is a never-ending process that will never allow us to relax. We must prepare for these risks by taking every possible measure to protect the lives of our crew members, the cargo of our customers, and the environment of our planet. To this end, we are striving to establish a firm system for managing the safety of navigation and cargo operation. Our efforts include enhancing risk management systems to prepare for accidents, in addition to the daily efforts of marine technical personnel to improve their technical skills and pass on their knowledge to the next generation.

### Environmental Preservation

Just like the pursuit of safe navigation and cargo operations, efforts to protect the environment are also a never-ending process. We need to constantly renew our awareness of environmental

issues in our daily operations and consider and deal with issues flexibly, without being constrained by actions taken in the past. As a company that uses fossil fuels to operate its ships, the “K” Line Group is aware of its obligations to minimize fuel consumption and to improve energy efficiency.

Cargo transport using ships emits less CO<sub>2</sub> than any other transportation mode, assuming the same volume of cargo moving the same distance. To improve energy efficiency still further, we will take action from every possible point of view, including studies on the use of fuels that emit less CO<sub>2</sub>.

### Human Resource Development

Our people are our most valuable assets. Even if we have good systems and facilities and set high goals, we cannot expect the desired results unless each person who uses the systems and facilities and takes action to achieve the goals works with sufficient knowledge and awareness. To enable each employee of the Group to maximize his/her ability, we will carefully consider the diversity of our employees and improve work safety and conditions. We will also improve the skills of each employee through a range of training programs.

### Toward Sustainable Growth

A key characteristic of ocean transport, the core business of the “K” Line Group, is the fact that the business environment is closely linked to the political and economic situation as well as to weather conditions around the world. The market for ocean transport is heavily influenced by global trends, including social trends in each region and natural phenomena. We need to keep this point in mind, look at the world from a global viewpoint, and remain sensitive to changes in the business environment to respond appropriately to fluctuations in the market and demand. I believe that this stance is essential for fulfilling our social responsibilities as a shipping business organization. We are eager to achieve sustainable growth by working with our stakeholders around the world and helping to improve the wealth of everyone we deal with.

Jiro Asakura  
President and CEO

June 2011

A handwritten signature in black ink, appearing to read 'J. Asakura', written in a cursive style.

# Fulfilling Our Social Responsibilities

At the "K" Line Group, the objective of our corporate social responsibility (CSR) activities is to embody our Corporate Principles. To fulfill our social responsibilities, we are taking a number of steps in accordance with our Charter of Conduct for "K" Line Group Companies to meet the expectations of stakeholders all over the world.

## Objective and Mission of Our CSR Activities

### ● Social Responsibility:

We observe laws and regulations, respect social precepts, engage in fair business activities, and strive to ensure safety in navigation and cargo operation and environmental preservation.

### ● Social Contribution:

We contribute to society through the business activities of our Group and proactively as a good corporate citizen.

At the "K" Line Group, the objective of our CSR activities is to embody our Corporate Principles. Therefore, we made "Synergy for All and Sustainable Growth" as the principle theme of our medium-term management plan, "K" LINE Vision 100 KV 2010," and engage in management under the three basic objectives of "borderless management through the best and strongest organization," "proper allocation of strategic investment and management resources," and "improvement of corporate value and complete risk management" based on the two basic principles of "establishment of a firm structure for managing the safety of ship navigation and cargo operation" and "activities to promote environmental protection." We recognize that the concept of CSR comprises two elements: a company's social responsibility and its social contribution. We base our CSR activities on the policies at left.

We have adopted the following Charter of Conduct for "K" Line Group Companies as standards of behavior for the entire Group. Also, each one of our Group companies has established its own Implementation Guideline for the Charter of Conduct. The Guideline stipulates specific actions each company should take, in accordance with the legal system of the country where it is located, as well as the type and area of its business.

## Charter of Conduct: "K" Line Group Companies

Kawasaki Kisen Kaisha, Ltd. and its group companies (hereinafter "K" Line Group) reemphasize that due respect for human rights and compliance with applicable laws, ordinances, rules are the fundamental foundations for corporate activities and that group companies' growth must be in harmony with society and therefore we herein declare to abide by "Charter of Conduct" spelled out below:

### 1. Human rights

The "K" Line Group will consistently respect human rights and well consider personality, individuality and diversity of its corporate members and improve work safety and conditions to offer them comfort and affluence.

### 2. Compliance

The "K" Line Group promises to comply with applicable laws, ordinances, rules and spirit of the international community and conduct its corporate activities through fair, transparent and free competition.

### 3. Trustworthy company group

The "K" Line Group continues to pay special attention to safety in navigation, achieving customer satisfaction and garnering trust from the community by providing safe and beneficial services.

### 4. Environmental efforts

The "K" Line Group recognizes that global environmental efforts are a key issue for all of humanity and that they are essential both in business activities and existence of the company and therefore we are committed to a voluntary and proactive approach to such issues to protect and preserve the environment.

The management of each "K" Line Group Company recognizes that it is their role to realize the spirit of the Charter and to set the pace that is to be followed by every employee in their company as well as by business partners. In the event of any incidents in breach of this Charter, the management of respective "K" Line Group member companies will demonstrate decisiveness to resolve the problem(s), conduct a thorough investigation to determine the cause and to take preventative measures. Additionally, such management will expeditiously and accurately release information and fulfill their accountability to society.

(Adopted December 2006)

### 5. Disclosure of corporate information and communication with society

The "K" Line Group will protect personal information, properly manage corporate information and disclose corporate information timely and appropriately, widely promoting bi-directional communication with society including shareholders.

### 6. Contribution to society

The "K" Line Group as a Good Corporate Citizen will make ongoing efforts to contribute to social development and improvement and support employees' voluntary participation in such activities.

### 7. Harmony with the international society

The "K" Line Group will contribute to the development of international society in pursuance of its business pertaining to international logistics and related businesses, respecting each country's culture and customs.

### 8. Confrontation with anti-social forces

The "K" Line Group will resolutely confront anti-social forces or organizations which may threaten social order and public safety.

## CSR Promotion System

We have set up the CSR & Environmental Committee, which is chaired by the president. This Committee discusses and develops systems for promoting the CSR activities of the "K" Line Group and takes responsibility for operating the "Environmental Management System" developed pursuant to the "K" Line Group's Environmental Charter. Under this Committee we have set up two sub-committees: the CSR Sub-Committee and the Environmental Sub-Committee. In addition, the CSR & Compliance Division of the General Affairs Group, which serves as the secretariat of the CSR & Environmental Committee, promotes CSR activities in cooperation with the Environment Management Division and other divisions of the company. These organizations are integrated into our corporate governance structure. (See page 10 for details of the corporate governance structure.)

## column | Raising awareness of CSR toward "Synergy for All and Sustainable Growth"

The activities of our company as a corporate citizen are accompanied by social responsibility. We should remain constantly aware of the need for compliance with laws and regulations and the improvement of the wealth of all people. I understand that people working for our company are busy doing their immediate tasks. But please think of the great oceans. Can you see a ship? Can you see a ship with a red funnel sailing across the vast ocean towards a bright future for both our Company and our stakeholders?



**Ryoichi Ikeda**  
Manager, CSR & Compliance Division  
General Affairs Group

## Relationship with Our Stakeholders

The businesses of the "K" Line Group operate on a global scale and are based on its relationship with an array of stakeholders, including shareholders, customers, suppliers, and local communities. Through our shipping business, we are striving to fulfill our corporate social responsibility to share prosperity and synergy with our communities.

Stakeholders	Basic Policy	Main Opportunities to Communicate with Stakeholder (FY2010 Results)
Customers	We do our best to respond to customer needs by developing systems for ensuring timely shipping and striving to provide our customers with a wide range of information. We will improve the quality of our services by maintaining safe navigation and cargo operations to transport the cargo entrusted to us by our customers safely and surely.	<ul style="list-style-type: none"> <li>Regular Performance Review Meeting with key customers of containership services (every month, every quarter, etc.)</li> <li>Regular Performance Review Meeting with key customers of our Car Carrier Services (transportation of assembled vehicles)</li> </ul>
Shareholders and Investors	We have adopted an IR policy designed to meet the expectations of our shareholders and investors. Under this policy, we strive to improve our corporate value further by properly disclosing corporate information on a timely basis and communicating with our shareholders and investors at briefings of every kind, for example.	<ul style="list-style-type: none"> <li>Meetings with corporate investors and financial analysts (259 meetings in Japan and 30 overseas)</li> <li>Explanatory meeting for general investors (1 meeting in Japan)</li> <li>Facility tour (3 tours in Japan)</li> <li>*June: OHI container terminal</li> <li>January: Training center in Machida</li> <li>March: OHI container terminal</li> </ul>
Business Partners	We do business based on our Purchasing Policies. These policies are written to ensure compliance and are aimed at maintaining fair and constructive relationships with our business partners. We thus strive to build trust with our business partners and coexist with them as good partners.	<ul style="list-style-type: none"> <li>Technology exchanges (Total: 28 times) and roundtable conference of managers (3 times) with ship builders and ship equipment manufacturers</li> <li>Technology exchanges with the classification society (2 times)</li> </ul>
Staff Members	We respect the basic human rights of our employees and develop training programs to maximize the ability of each. We also strive to enhance benefit programs and improve working environments to enable each employee to work vigorously with a sense of safety.	<ul style="list-style-type: none"> <li>Job-class-specific training (12 times)</li> <li>Terminal and ship tours for families of employees (2 times)</li> <li>Roundtable conference between the president and employees (8 times)</li> </ul>
Local Community Global Society	We contribute to society as a good corporate citizen and work with people around the world toward development.	<ul style="list-style-type: none"> <li>Provision of free ocean transportation services (2 times)</li> <li>Educational materials and used cars for a car mechanics' school in an impoverished area of Peru.</li> <li>Materials for medical relief tents used for victims of the Chile earthquake.</li> <li>Donation of relief money (4 times)</li> <li>Pakistani flood, severe rainstorms in China and Brazil, and the Great East Japan Earthquake</li> </ul>

# Fulfilling Our Social Responsibilities

## Fiscal Year 2010 CSR Highlights and Fiscal Year 2011 Objectives

We set targets for our CSR activities to encourage each of our staff members to become more aware of these activities. The CSR highlights of the preceding fiscal year and objectives for the current fiscal year are as follows:

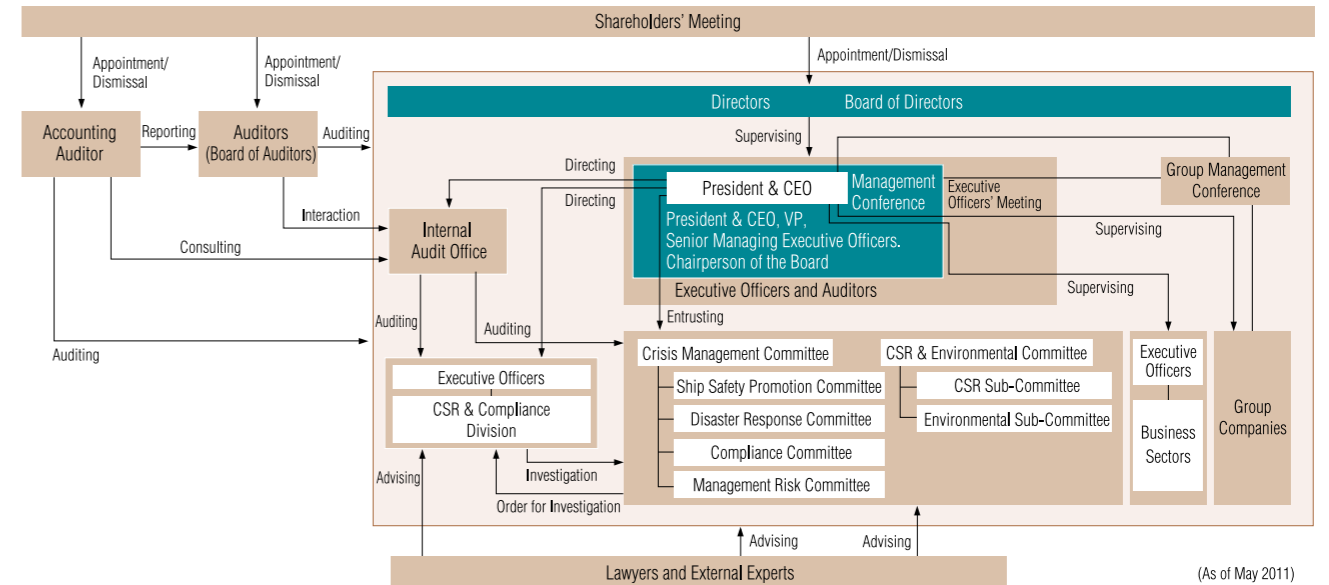
Field	Targets	FY2010 Objectives	Status of the achievements	FY2011 Objectives
Corporate Ethics and Compliance	<ul style="list-style-type: none"> <li>Providing education and training in CSR, compliance, and environmental issues</li> </ul>	<ul style="list-style-type: none"> <li>Running campaigns to prevent insider trading</li> <li>Conducting follow-up activities on the European Union Competition Law, etc.</li> <li>Continuing with e-learning</li> <li>Continuing independent environmental training, provided to Group companies as well</li> </ul>	<ul style="list-style-type: none"> <li>Provided group training for Executive officers on insider trading regulations (December).</li> <li>Provided training for staff members on insider trading regulations using e-learning. (March)</li> <li>Continued with a seminar on European Union Competition Law (December)</li> <li>Developed our own e-learning system (January)</li> <li>Held training sessions concerning the Ship Recycling Convention, EMS, greenhouse gas reduction, and biodiversity (February, May, September, and October)</li> </ul>	<ul style="list-style-type: none"> <li>Promoting education and awareness-raising activities within the "K" Line Group on compliance risks</li> <li>Conducting follow-up activities on the European Union Competition Law, etc.</li> <li>Providing e-learning on compliance and CSR</li> <li>Continuing environmental training, which is to be provided to Group companies as well.</li> </ul>
Disclosure	<ul style="list-style-type: none"> <li>Improving the Social and Environmental Report</li> <li>Planning the renewal of web pages (related to CSR and the environment)</li> </ul>	<ul style="list-style-type: none"> <li>Reviewing the structure to enhance the content</li> <li>Enhancing the content of web pages (related to CSR and the environment)</li> </ul>	<ul style="list-style-type: none"> <li>Further enhanced the contents by reviewing the structure.</li> <li>Updated the contents of the web pages, but did not renew the pages.</li> </ul>	<ul style="list-style-type: none"> <li>Creating a more reader-friendly Social and Environmental Report</li> <li>Renewing the web pages</li> </ul>
Human Rights and Work Environment	<ul style="list-style-type: none"> <li>Employing diverse human resources proactively and promoting equality in career opportunities as a business organization that respects human rights</li> </ul>	<ul style="list-style-type: none"> <li>Continuing to provide corresponding consulting services</li> <li>Exchanging and sharing information among personnel managers from major Group companies.</li> </ul>	<ul style="list-style-type: none"> <li>Provided consultation services on sexual harassment and power harassment via a dedicated consulting center</li> <li>Addressed mental health issues at an early stage using consultation service</li> <li>Exchanged and shared information and issues with HR personnel from major Group companies.</li> <li>Revitalizing dedicated consulting services</li> </ul>	<ul style="list-style-type: none"> <li>Providing training on the latest trends in human rights and improvement of the work environment for HR personnel, including those from Group companies</li> <li>Taking steps to promote employment of persons with a disability.</li> <li>Revitalizing dedicated consulting services</li> </ul>
Environmental Preservation	<ul style="list-style-type: none"> <li>Expanding the use of the Environmental Management Program</li> <li>Cutting CO<sub>2</sub> emissions by 10% compared to 2006 by the mid 2010s</li> </ul>	<ul style="list-style-type: none"> <li>Improving green accounting and monitoring environmental investments</li> <li>Continuing to base operations and maintenance on energy conservation</li> </ul>	<ul style="list-style-type: none"> <li>Reviewed green accounting items and calculated values estimated taking into consideration the effect of the due response to the treaties expected to come into force in the future.</li> <li>Studied and implemented measures leading to energy conservation based on CO<sub>2</sub> emission factor.</li> </ul>	<ul style="list-style-type: none"> <li>Improving green accounting and monitoring environmental investments</li> <li>Continuing to base operations and maintenance on energy conservation</li> </ul>
Safety and Quality	<ul style="list-style-type: none"> <li>Ensuring safety at offices</li> <li>Participating in disaster planning activities such as emergency drills</li> </ul>	<ul style="list-style-type: none"> <li>Consistently holding emergency response drills that reflect the lessons of previous drills</li> </ul>	<ul style="list-style-type: none"> <li>Conducted an emergency drill at the Miyazaki-dai Dormitory (September 14).</li> <li>Participated in an emergency drill organized by the local government of the city where the Head Office is located (September 9).</li> <li>Conducted an internal emergency drill (November 12).</li> </ul>	<ul style="list-style-type: none"> <li>Consistently holding emergency response drills that reflect the lessons of previous drills</li> <li>Improving flaws in the emergency response system that became apparent in the wake of the Great East Japan Earthquake</li> </ul>
	<ul style="list-style-type: none"> <li>Continuing marine casualty response drills</li> </ul>	<ul style="list-style-type: none"> <li>Consistently holding marine casualty response drills</li> </ul>	<ul style="list-style-type: none"> <li>Conducted a casualty response drill assuming a large-scale oil leakage (November 15).</li> </ul>	<ul style="list-style-type: none"> <li>Consistently holding marine casualty response drills</li> </ul>
	<ul style="list-style-type: none"> <li>Promoting training and information sharing through KLMA</li> </ul>	<ul style="list-style-type: none"> <li>Instituting the KLMA Career Path Plan</li> <li>Instituting and refining the KLMA Cadet Training Program</li> </ul>	<ul style="list-style-type: none"> <li>Raised awareness of the KLMA Career Path Plan among "K" Line Group's crew members and created a structure that enables this</li> <li>Continued to institute and refine the KLMA Cadet Training Program</li> </ul>	<ul style="list-style-type: none"> <li>Instituting the KLMA Career Path Plan</li> <li>Instituting and refining the KLMA Cadet Training Program</li> </ul>
Social Contribution	<ul style="list-style-type: none"> <li>Undertaking environmentally friendly activities</li> </ul>	<ul style="list-style-type: none"> <li>Promoting the use of renewable energy</li> <li>Continuing to join the Clean Cargo Working Group.</li> </ul>	<ul style="list-style-type: none"> <li>Used green electricity at facilities abroad.</li> <li>Participated in the Clean Cargo Working Group.</li> </ul>	<ul style="list-style-type: none"> <li>Promoting the use of renewable energy</li> <li>Continuing to join the Clean Cargo Working Group</li> </ul>
	<ul style="list-style-type: none"> <li>Enhancing scholarship and internship programs</li> </ul>	<ul style="list-style-type: none"> <li>Recruiting and training marine technical personnel and providing scholarships.</li> <li>Providing onboard training to students of nautical colleges.</li> </ul>	<ul style="list-style-type: none"> <li>Continued with explanatory meetings and an internship program for recruiting marine technical personnel as well as disseminating a mariner mindset.</li> <li>Provided onboard training to students of nautical colleges (April – September).</li> </ul>	<ul style="list-style-type: none"> <li>Recruiting and training marine technical personnel and providing scholarships.</li> <li>Continuing to provide onboard training to students of nautical colleges.</li> </ul>
	<ul style="list-style-type: none"> <li>Providing support for disaster victims and collecting donations at all Group Companies including overseas subsidiaries</li> </ul>	<ul style="list-style-type: none"> <li>Promoting the provision of support to victims of disasters such as free transportation of relief supplies</li> </ul>	<ul style="list-style-type: none"> <li>Implemented three aid projects for disaster victims outside Japan, including donations of relief money.</li> <li>Donated relief money for victims of the Great East Japan Earthquake. Provided free transportation of relief materials to be delivered to the affected area.</li> <li>Provided free transportation of cargo containing materials for temporary medical facilities used for victims of the major earthquake that struck Chile.</li> <li>Provided free transportation of supplies for assisting self-support programs for people in poverty-stricken areas of Peru.</li> </ul>	<ul style="list-style-type: none"> <li>Continuing to give support for victims of the Great East Japan Earthquake</li> <li>Continuing free transportation of relief supplies and other support for disaster victims</li> <li>Stepping up social contributions linked to our main business</li> </ul>

# Management

We take comprehensive measures to ensure that all "K" Line Group companies adhere to corporate ethics. We have also established an effective corporate governance structure and a system for handling management risks, and are continuing these efforts to improve our corporate brand value.

## Corporate Governance Structure

Structure of Our Business Operation, Management Monitoring, and Internal Control



## Structure of Business Operation

### Striving to improve corporate value under a governance structure

We apply the Executive Officer System, under which we streamline our management through the transfer of authority and prompt decision-making.

### Board of Directors

The Board of Directors meets at least once every month. At the Board, our Directors make decisions on basic management policies, matters stipulated by laws and regulations, and other significant management issues. They also supervise the performance of duties by Executive Officers and our staff members. Of the 14 Directors, two are Outside Directors stipulated by the Companies Act of Japan.

### Executive Officers' Meeting

This Meeting is held twice a month, in principle, and is attended by Executive Officers and Auditors. Participants help the President to make decisions through frank discussions, in addition to sharing information and ensuring compliance.

### Auditors / Board of Auditors

Three of the five Auditors are Outside Auditors specified in the Companies Act of Japan. The audit policy, audit plans, and other related matters are determined by the Board of Auditors, aiming for a fast, functional auditing process. Among other activities, auditors

attend meetings of the Board of Directors and other important meetings and inspect documents showing final decisions, auditing the work of Directors as an independent organization. We also appoint dedicated staff to assist auditors.

### Management Conference

The Management Conference holds discussions and exchanges opinions every week, in principle, and is attended mainly by Senior Managing Executive Officers and higher-level Executive Officers. Depending on the agenda, others may be invited to the Conference.

## Internal Control System

### Ensuring effective internal controls

The Board of Directors, and the Executive Officers and General Managers in charge of specific business operations under the supervision of the Board establish the framework of internal controls, evaluate its effectiveness, and ensure that it functions properly. The Internal Audit Office assists Directors in performing their duties with respect to the establishment and maintenance of internal controls by providing feedback from internal audits and suggesting improvements. Auditors oversee the processes by which Directors build an internal control structure and confirm that it is functioning effectively.



## Management

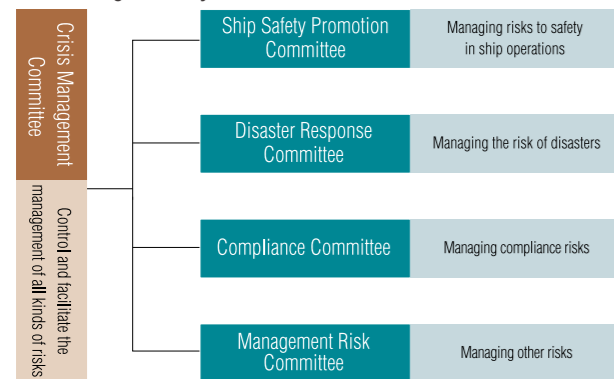
# Risk Management

### Risk management system

#### Four Committees set up for four types of risks

We need to recognize diverse management risks, prepare for them, and fulfill our corporate social responsibility when the risks become reality. To this end, we have established our own system for managing crises and risks. Specifically, we have established four Committees for responding to four different types of risks: risks in ship operations, risks of disasters, risks concerning compliance, and other risks related to management. We have also set up the Crisis Management Committee as an organization to unify the four Committees and facilitate overall risk management.

Risk Management System



### Responding to Management Risks

#### Responding to diverse risks

Management risks are not limited to those concerning ship operations, major disasters, or compliance. There are many other risks, including terrorism, threats from anti-social forces, harmful rumors, fluctuations in exchange/interest rates, fluctuations in the fuel oil price, changes to the tax systems or economic policies of major trading partners, including North America, Europe, China and Japan. The adoption of protectionist trade policies are also among the risks we confront.

To deal with the risk of terrorism, we participate in the C-TPAT<sup>1)</sup> program, a U.S. Customs' program aimed at preventing terrorism. The measures we take under this program include strict identification of persons who visit ships, the appropriate installation of fences and lights at self-managed terminals, and measures for ensuring information security.

With respect to anti-social forces, we declare in the Charter of Conduct that we will "resolutely confront" such forces. We will deal with specific incidents in cooperation with the relevant authorities and our corporate lawyers.

Concerning fluctuations in exchange rates and changes in policies, we constantly monitor the trends and hedge against risks appropriately. If our operations are likely to be affected by the risks, our Management Risk Committee will take preventive action and respond appropriately when an impact actually occurs.

<sup>1)</sup>C-TPAT (Customs Trade Partnership against Terrorism): A customs-trade initiative aimed at building cooperative relationships to prevent terrorism and ensure security. U.S. Customs encourages parties involved in trade with the United States (shipping lines, port operators, inland transporters, manufacturers, cargo owners, warehousemen, and others) to participate in C-TPAT.

### Response to Large-Scale Disasters

#### Establishing a BCP<sup>2)</sup> and data backup system, etc.

We have established BCPs for two different types of disasters: an inland earthquake in the Tokyo metropolitan area and a pandemic involving a highly virulent new influenza. We give top priority to the lives of people, and aim to continue important operations as an entity that is part of the social infrastructure by transferring operations to our domestic and overseas branches and subsidiaries or by shifting to telecommuting. Also, to avoid the loss of data in a disaster, we have set up a system in which backup data can be stored remotely. The Great East Japan Earthquake damaged an office belonging to a Group company located at a port in the disaster-hit area. However, our business continuity was not threatened by the disaster because Tokyo, where our nerve center is located, was not seriously damaged.

<sup>2)</sup>BCP: Business Continuity Plan

### column | Lessons from the Great East Japan Earthquake

*On the day of the Great East Japan Earthquake, more than 100 staff members at our Head Office in Tokyo were unable to return home. However, the situation was what we had assumed in establishing a BCP for an inland earthquake in the Tokyo metropolitan area. Consequently, we were able to use our stockpile of food, water, blankets, and other emergency goods to enable staff members to stay at the office for the night without major trouble. We also included a map for walking home in the emergency pack that had been distributed to each staff member. Many said they found the map helpful for going home on foot. However, there were also many points we must review. For example, we failed to give timely directions on evacuations and departure for home, and staff members on some floors decided to evacuate to a nearby park while those on other floors stayed in their offices. We will improve our BCP based on the lessons we learned from the earthquake.*

# Compliance

### Promotion of Compliance

#### Group-wide efforts for developing a compliance system

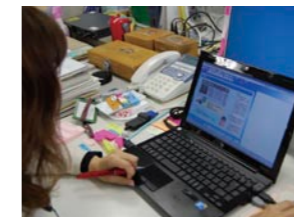
Compliance forms the foundation for our corporate governance, CSR activities, and risk management. In 2003, we set up a dedicated internal organization for compliance (now called the CSR & Compliance Division), established the Compliance Committee as the organization responsible for investigating and responding to alleged compliance violations, and introduced the Hot Line System, which also involved seven Group companies (later increased to nine companies, including "K" Line). In 2004, we set up the Internal Audit Office, which helps to ensure compliance.

Group companies are obliged to report their compliance issues to "K" Line. The Compliance Committee handles compliance issues of Group companies as well as those of "K" Line and submits an activity report to the Board of Directors every quarter.

### Compliance Training

#### Striving to give training to all staff members

As training on insider trading, we gave a seminar to Executive Officers in December 2010. We also started to provide staff members with training sessions using e-learning<sup>3)</sup> in March 2011, and a total of 541 staff members had completed the training as of May 2011. We started general training on compliance using e-learning in FY2009 and are planning in the near future to introduce it to domestic Group companies as well. We are also preparing to give training on competition law, such as the Antimonopoly Act of Japan and European Union Competition Law, both in Japan and overseas.



Training on compliance using e-learning

<sup>3)</sup>Training using e-learning: A method of training using the internet, which permits trainees to study in the office or at home whenever it is convenient for them.

### Response to Violations

#### Response by the Compliance Committee

If an alleged compliance violation has occurred, whether at "K" Line or at a Group company, the issue is referred to the Compliance Committee, which is chaired by the President. Following the "Detailed Rules for Responding to Compliance Matters," which sets out the procedures to be followed, the Compliance Committee conducts an investigation and then issues instructions to correct or cease the violation, in the name of the Chairman of the Committee. If necessary, the Committee will report to government authorities.

If the issue concerns "K" Line, the Executive Officer in charge of personnel affairs will propose any disciplinary action to be taken under the working regulations. Note that we never disclose the names, departments, or any other information that would permit identification of the persons involved in the matter, and we protect their rights by permitting them to consult with attorneys, for example. Under the "Rules on Operation of Compliance Committee," the Compliance Committee is obliged to keep strictly confidential the names of whistle-blowers and the details of deliberations. In FY2010, two new issues were handled by the Compliance Committee.

### Whistle-Blowing System

#### An external contact set up in February 2011

"K" Line has introduced a whistle-blowing system called the "Hot Line System."

This system encompasses nine companies, including our Company and other "K" Line Group companies. Under the system, internal personnel (including Executive Officers, employees, contract/dispatched workers, and contractors) of member companies are able to be whistle-blowers. In the past, the information would be received only by the Chairman and President of our Company and the head of the General Affairs Group. In February 2011, however, a law firm was designated as an additional external contact for whistle-blowing. Whistle-blowers are permitted to remain anonymous, but if they use the external contact, their names will not be disclosed to internal personnel even if they don't remain anonymous.

Instead of making judgments on their own, the recipients instruct the Compliance Committee to investigate the problem and determine how to deal with it.

Some Group companies have their own whistle-blowing systems, and those that don't are encouraged to introduce appropriate systems on their own.

<sup>WEB</sup> A Flowchart of the Hot-Line System is available at our website. [CSR > Corporate Governance](#)

### Initiatives for Protecting Personal Information

#### Privacy policies established

To comply with the "Act on the Protection of Personal Information," we have developed a set of privacy policies and a personal information management code. Details of the privacy policies are disclosed on our website. We identify and classify information that we will handle as personal information. We also undertake related training and education to further refine our system for protecting personal information.

# Ensuring safety and passing on skills

*We must maintain safety in navigation and cargo operation to ensure the safety of our crew members, not to mention that of cargo entrusted to us by our customers.*

*When transporting cargo on ships, we travel an ocean that has elements that are beyond the limits of human knowledge.*

*It is extremely important to practice risk management, recognizing every possible risk by combining all of the knowledge and experience of everyone involved, studying them carefully, and being ready to take action in response to risks at any time. In addition, traditional practices and knowledge are also useful for avoiding risks. It is important to pass them on to the next generation.*

## Safety will not be realized in a day.

### “One Hand for Yourself, the other for the Ship”

There is a lot to do on a ship, from navigating, watching the engine, watching cargo, maintaining the ship’s hull, engine, and equipment, managing supplies and cooking, and maintaining and cleaning accommodations. The crew members on board have to solve all problems by themselves, and a ship can contain unexpected dangers. The long history of ships has produced a very common saying: “One Hand for Yourself, the other for the Ship.” This is timeless advice that we must pass on to future generations.

### Proper handover for ensuring safety watchkeeping in navigation and cargo operation

A navigational watch (including maneuvering the ship, lookout, and managing cargo) is done on a four-hour shift. When a shift ends, the person standing watch next is informed of the position, course, and speed of the ship, the courses and speeds of other vessels, distances from other vessels, and other navigation information, as well as weather and hydrographic conditions such as wind and waves, as well as cargo conditions. Incoming watch officers must not begin until they have confirmed the reports themselves and are satisfied with them. The reports must also be recorded in the Safety Management System. It is by repeating these proper handover processes that we maintain safety watch in navigation and cargo operation.

### “Repetition” to confirm that each task is completed properly

Repetition of reporting is a common and traditional practice among crew members, and is done to confirm that each daily task has been completed properly.

For example, when fuel is replenished on a ship, the distance between the surface of the oil in the tank and the upper edge of the sounding pipe (ullage) is measured using a measuring tape with a weight on top. This is performed to find how much oil has been poured into the tank. In this process, the chief engineer supervising the task on board and the person at the tank who measures the ullage communicate with each other by radio. A typical dialogue between the two persons runs as follows:

**Chief engineer:** “Measure the ullage of port tank No. 1”  
**Person at the tank:** “Roger. Measuring ullage of port tank No. 1.”  
 “Ullage of port tank No. 1 is 8 meters and 35 centimeters.”  
**Chief engineer:** “Ullage of port tank No. 1 is 8 meters and 35 centimeters. Roger.”

In this way, what to do, what has been done, or what the result is gets repeated each time it is reported, so that everyone involved will confirm that there is no error or abnormality in any of the tasks. While many tasks are manualized, repetition remains an important practice for ensuring that tasks are completed safely and properly.

## Preserving Skills

### Aiming to be an engineer who can handle any trouble without panic

I often tell young crew members that “what a ship engineer should believe at work is not only the information you received from the person who was on duty before you, but also data such as engine and equipment temperature and pressure, the laws of physics involved in the phenomena, and user instructions from the manufacturer.” While it is necessary to work based on precedent and to faithfully discharge the tasks given to them, it is essential to

confirm theories, ideas, and mechanisms to validate situations. We must remember to think “why” and “how” by assuming that anyone can misunderstand something or reach the wrong conclusion. If they maintain this attitude and develop their true capability, they can definitely be an engineer who can ensure safety in navigation and cargo operation, without being panicked by unexpected situations.

**Michio Kawai** Chief Engineer of the car carrier Indiana Highway



### Ensuring safety in navigation and cargo operation with patient patrols of sites and advice from senior colleagues

I believe that “You should work using your five senses.” You must not take it for granted that you can complete maintenance work, which start with a patrol every morning, according to the schedule. The purpose of the patrol is to discover abnormalities. Early detection of abnormalities using intuition, experience, and knowledge is essential for preventing problems. However, you must

**Kazuaki Yatsu** Third Engineer of the car carrier Indiana Highway

not proceed with maintenance work based on intuition alone. Instead, you should perform your tasks after thorough preparatory study and remembering the key words: “safe,” “secure,” and “superior.” This attitude should ensure that equipment works properly. As a third engineer who still needs more experience, I feel it is an important duty for me to seek advice and help from my senior colleagues instead of trying to solve everything on my own.





# Safety Management

Safety

Establishing and maintaining safety in navigation and cargo operation, protecting the environment, and maintaining economically efficient operations are essential in operating a shipping business. Safe navigation and cargo operations are, above all, the foundation of our business. For this reason, and to protect the environment and operate efficiently, we are committed to building, executing, and maintaining a secure system for safety in navigation and cargo operation.

## System for Managing Safety in Navigation and Cargo Operation

### Positioning of Safe Navigation and Cargo Operations

#### Safety as the foundation of international logistics infrastructure

Establishing and maintaining safety in navigation and cargo operation is essential for ensuring the safety of crew members and ships, and for safe, reliable shipping of cargo that our customers entrust to us. It is also an essential foundation of the shipping business as international logistics infrastructure that supports the economic activities and lives of people around the world.

#### A variety of measures for supporting safety

To ensure safety in navigation and cargo operation, we need to take a number of initiatives. For example, we need to improve the marine skills of crew members directly involved in ship navigation. We need to have onshore operating staff and other related people accumulate knowledge and experience, and we need to improve on-board facilities and obtain and provide appropriate information on weather and hydrographic conditions. We must be capable of appropriately handling problems and troubles that arise during voyages, cargo handling, and on-board operations. We must also be able to respond to emergency situations such as marine casualties. We therefore take diverse initiatives based on the recognition that safe navigation of ships is our mission, accompanied by social responsibility.



Cargo oil discharging rate being controlled at a tanker



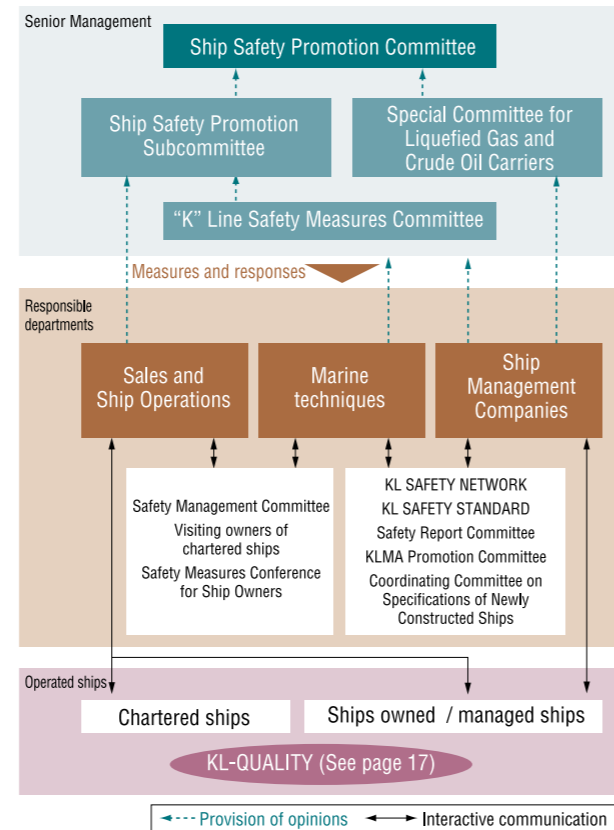
Cargo oil discharging pressure being checked at a tanker

### Establishment of the Ship Safety Promotion Committee

#### Group-wide efforts for ship safety

The Ship Safety Promotion Committee is chaired by the President and consists of Executive officers of Sales Departments and Marine Departments, and Executive Officers from Group companies responsible for ship management. The Committee meets every quarter to discuss and implement measures from every possible viewpoint concerning all matters related to safety at sea including aggregation of problems during the period under review, analysis of their causes, formulation of measures for preventing their recurrence, and responding to international treaties and laws and regulations that will be newly introduced or amended. The Committee has also developed measures against piracy in the Gulf of Aden; activity that is now expanding into the Arabian Sea and Indian Ocean. The measures vary depending on the type and characteristics of the ship. Advice is sought from the Committee and new measures are considered whenever necessary, thereby establishing and maintaining safety.

#### "K" Line Group's System for Safety Management



## Initiatives for Safety at Sea

### Safety Management System (SMS)

#### SMS as the manual for ensuring ship safety

To ensure safe navigation of ships, we need to take our own safety measures and provide different training for different kinds of ships, in addition, of course, to meet requirements of international treaties and the laws and regulations of relevant countries. The SMS summarizes steps to take concerning these requirements based on common recognition of them by crew members and ship management companies. An international treaty mandates maintaining of an SMS.



Pre-boarding briefing at a ship management company

#### Strict application of SMS

Our strict application of SMS is confirmed through internal safety audits conducted by auditors of ship management companies and through regular examinations by the classification society that certifies our SMS. We immediately take corrective measures if any matters are pointed out in the audits and examinations. The SMS is also checked at calling ports through Port State Control (PSC) to ensure its strict application.

PSC: An inspection of a foreign ship by authorities of the calling port's country. It aims at confirming there are no problems with the ship concerning safety and compliance, safety of human lives, and environmental preservation.



Confirmation of SMS application in the ship

### Safety Report System

#### Catching all small mistakes in order to prevent accidents

All accidents are caused by small mistakes, and the Safety Report System encourages us to report those mistakes. The system aims at catching the errors and thoroughly analyzing the causes and factors behind them. Those who report the errors are not blamed. Countermeasures are studied based on the results of those analyses, and each ship is informed of the details of the measures. Thus, the Safety Report System is applied to prevent recurrence of similar errors and to raise safety awareness among crew members.

### Safety Campaigns

#### Safety Campaign in winter

From December 1 to the following January 31 we conduct the safety campaign under the theme of "safety and environmental preservation." When our ship calls at a port, the persons in charge of the ship operation department and marine safety department, safety supervisors, supervisors in charge of ship management companies, and others visit the ship to conduct activities necessary for ensuring safe navigation and cargo operations, such as exchange of opinions with crew members and inspection of the ship's hull and onboard equipment. During this campaign, these activities gain further benefit from visits by our president and the board members along with strengthening of the activities. These efforts are to confirm a system for close communication among staff and to share information with them. The activities are aimed at further raising awareness of safety in navigation and cargo operation among all staff on ships and on shore.



Poster of the Winter Season Safety and Environment Protection Campaign

## Voice

### Hoping for safety at sea

The Marine Safety Administration Team collects information from international organizations and marine organizations of Japan and other countries such as on piracy, weather, and changes in international rules and provides it to our fleet, group and related companies. All of the information is extremely important for maintaining safety at sea. Instead of submitting the information as is, we first analyze it, make it understandable, reflect "K" Line's safety policy and then submit it to our fleet. I am in charge of cooperating with weather information companies

and providing all types of information. For example, if an act of piracy takes place in the Indian Ocean, I am responsible for informing ships sailing near the area immediately because this kind of information is vital for protecting the lives of those ships' crew members. I make it a principle to scrutinize the information and submit in an accurate form and promptly, instead of just submitting it sight unseen.

**Yoshiko Betsui**  
Marine Safety Team,  
Marine Safety Administration Group



## Safety Management

# Quality Management of Ship

### Securing Quality During Ship Construction

#### Construction based on a clear quality management system

Constructing a new ship is a joint operation involving the shipyard and “K” Line’s Technical Group. Since 2007, our Technical Group has been certified in quality management systems for the construction of new ships (ISO 9001). The scope of the system includes the duties of our Technical Group at the Head Office and the construction superintendent stationed in the shipyard. In this way, organizational management is undertaken by integrating the management of all operations, from planning to construction. The Group has also adopted quality management policies based on “K” Line’s principles, and has developed specific action plans based on the policies. The Group has therefore set out clear quality management procedures to be followed on a practical level while also striving to maintain and improve the standard of the quality management system.



ISO 9001 certificate

#### Uncompromising in the application of “K” Line Standard Specifications

We have adopted “K” Line’s proprietary standard specifications based on our experience in navigation, construction, maintenance, and inspection of ships, and we apply them in construction of new ships. We continually review and evaluate these specifications to prevent any overlap of functions and to avoid overcomplicating systems.

When constructing ships, we hold discussions with the shipyard and equipment manufacturers based on our original standards, started at the specification and drawing stage. Our views may differ from those of the shipyard, but when it comes to safety in navigation and cargo operation or environmental preservation, “K” Line and the shipyard both understand that they share a common responsibility, and take an uncompromising approach.

#### Construction superintendents supervising building of “K” Line ships until completion

When a new ship is built, we must examine a wide range of aspects, including whether the ship’s specifications conform to our intended use, whether there are any problems with its operational performance and cargo handling capability, whether the specifications comply with treaties and other rules, and whether our “K” Line Standard Specifications are reflected in the ship. It is thus extremely important to maintain close communication with the shipyard that is actually constructing the vessel, and our construction superintendents assume this important role.

They check the construction method and processes, confirm that equipment is installed properly, and monitor the performance in a test run. A construction superintendent also strives to improve the ship building process to ensure that the “K” Line ship under construction will be delivered on schedule.

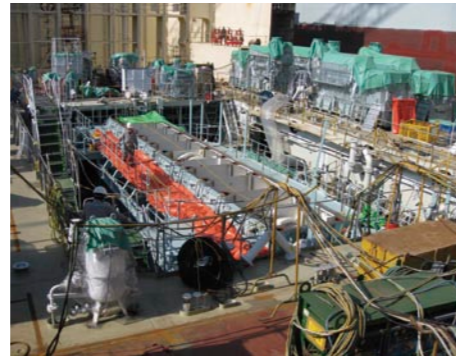
### Establishment and Maintenance of “KL-QUALITY”

#### Maintaining a high-quality ship management structure

In addition to fulfilling our legal requirements, we have established KL-QUALITY as our original guidelines for quality management. Our ship inspectors regularly visit ships in our fleet at calling part to check compliance with KL-QUALITY. Inspection results are reported to and shared with related departments. If there are any recommendations in the inspection, ship owners or ship management companies are asked to rectify them. In this way, we maintain and improve ship quality to ensure safe operation of our fleet.



A containership under construction (fore side)



Main engine being installed (the engine is assembled onboard)



A containership under construction (aft side)

# Establishing Emergency Response Capability

### Emergency Response Manual

#### Expertise accumulated through drills

In our Emergency Response Manual we have set out the actions we must take in the event of emergency. We regularly conduct emergency response drills to confirm the roles of staff members and departments. After the drills we always discuss issues regarding the application of the manual at post meetings to improve all functions in the drill. The Emergency Response Manual contains the expertise we have accumulated through these drills. Needless to say, however, it is important to operate ships safely day to day to help ensure that we never have the opportunity to actually apply the manual.

### Emergency Response Drills

#### Emergency response drill assuming a large-scale oil spill

In November 2010, we conducted an emergency response drill assuming a scenario in which our VLCC YAMATOGAWA had collided with a ferry in the Uraga Channel at the entrance of Tokyo Bay, resulting in physical injuries, an oil spill, and a vehicle fire on the ferry.

In the drill, based on the Emergency Response Manual, we set up an emergency response headquarters and then responded to the accident appropriately by studying measures based on information sent there. We responded to inquiries from outside the company and issued press releases. We also held a simulated press conference, after which we received comments from insurance companies, lawyers, consulting firms, and other experts.

An accident like the one in this case study must never take place, but we continue to take steps to prevent accidents and to respond to emergencies based on the recognition that accidents are always a possibility.



Emergency response headquarters



Simulated press conference

### column | Efforts for Eradicating Piracy

#### Efforts by the international community to eradicate piracy

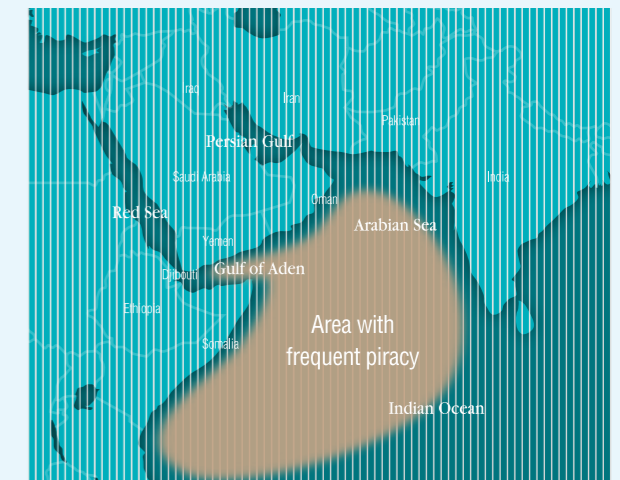
Pirates rampant in the waters off the coast of Somalia, in the Gulf of Aden, and in the Arabian Sea have now expanded their scope to the Indian Ocean, threatening the security of shipping routes connecting Asia with the Persian Gulf and Europe. These pirates are different from those in the Straits of Malacca and near the coast of West Africa who primarily aim to steal money and goods. Their aim instead is to hijack ships and obtain large amounts of ransom by taking the crew members hostage; and they use ships they hijacked as mother ships for piracy over a wide area. In response, the United Nations Security Council passed a resolution calling for uncompromising action against piracy. The International Maritime Organization has also passed a resolution requesting that nations act to eliminate the problem. Based on these resolutions, international naval forces currently provide escorts for ships passing through the area, and aircraft from various countries conduct patrols of the affected area. The international community is also performing missions to recapture hijacked ships.

#### Measures for ensuring safety of our ships that pass through the affected area

In addition to receiving escorts by the Japan Maritime Self-Defense Force and international naval forces, we take a variety of measures that give top priority to our crew members’ security. For example, we take shipping routes that allow us to avoid attacks by heavily armed pirates. We also prevent them from obstructing pirate’s skiffs

by sailing at high speed, using high-pressure water sprinklers, and installing razor wire. Crew members are made to wear bulletproof vests and helmets to protect themselves from gunfire. For low-speed ships and ones with low decks, which are vulnerable to pirate attack, our precautionary measures include avoiding affected areas and sailing around the Cape of Good Hope at the south end of Africa.

#### Area around the Gulf of Aden



# Developing Staff with Maritime Technologies and Training for Improving Skills

*“K” Line takes measures for developing maritime technical personnel who can ensure safe navigation and cargo operations and for establishing their career paths. For example, we foster crew members who navigate ships and onshore office staff who work to ensure safe navigation and cargo operations in daily ship operations. We have established a companywide crisis management system. We have also developed maritime technologies required for new businesses.*

## Development of Maritime Technical Personnel and their Career Paths

### “K” Line Maritime Academy (KLMA)

#### KLMA for developing maritime technical personnel and improving their maritime technologies

KLMA is the aggregate of maritime technical personnel training programs, educational, training, and development programs including career path programs and training facilities in Japan and overseas. At KLMA, we train maritime technical personnel based on the KLMA Master Plan, designed to pass “K” Line Group’s many years of accumulated maritime technologies on to the next generation. We thus strive to build an awareness of our safety standards, safety in navigation and cargo operation, and environmental preservation, improve maritime technologies, and pass them on to future generations. To maintain and improve “security, safety, and reliability”—the most important aspect of the “K” Line Group’s activities—we need to educate our human resources in ways that ensure onboard operations including ship navigation are undertaken appropriately and that help eradicate marine accidents which have great impact on society and the environment, such as oil spills. To this end, our Group companies work together to foster outstanding crew members.

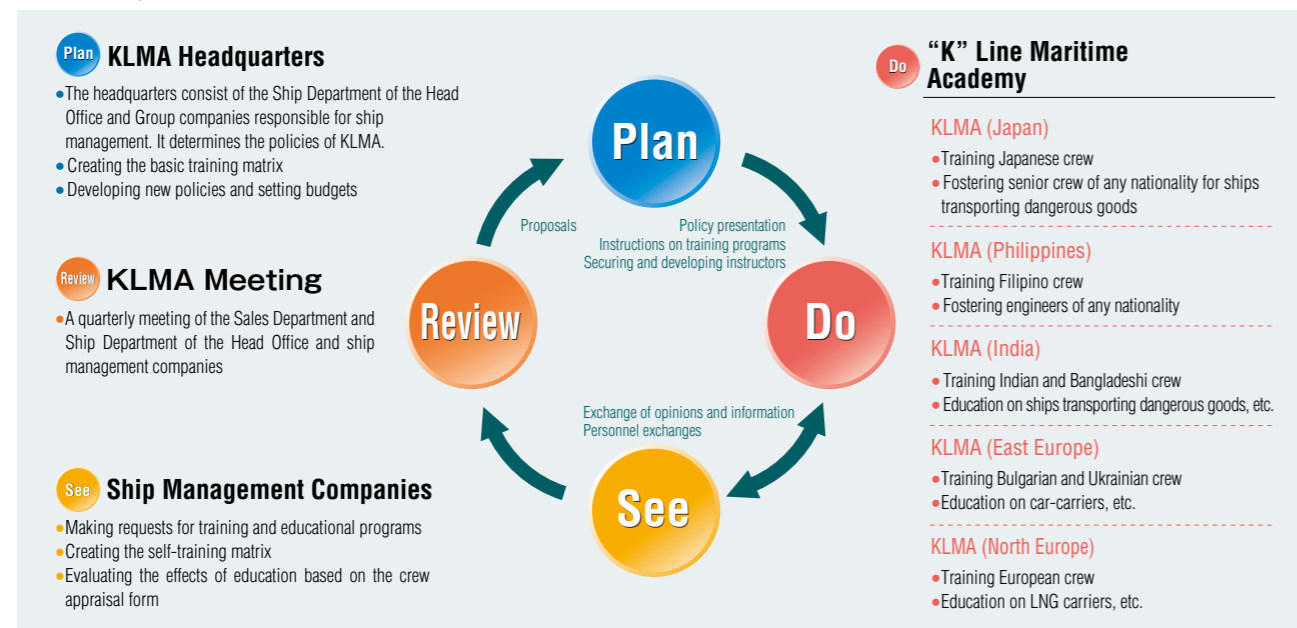
### Education and Training Aimed at Developing the Career Path

#### A range of training programs, focusing on safety and the environment

At the KLMA, the education and training are undertaken in accordance with the basic training matrix and in consideration of the type of job, career, and other elements of each crew member. The pre-boarding trainings include safety instructions and trainings on how to load and unload cargo and how to handle the engine. While the crew members are onboard, they receive on-the-job training from senior crew and dedicated instructors and teach themselves using computer-based educational programs. After disembarking, they also learn how to handle problems using a simulator and receive other training to reinforce what they have learned and experienced onboard.

When crew members are promoted to more senior positions, they receive more advanced training, including education in leadership and stress management, as important skills for people in management positions. In this way, crew members master the maritime technologies that will enable them to operate ships with an emphasis on safe navigation and cargo operations and environmental preservation.

The KLMA System

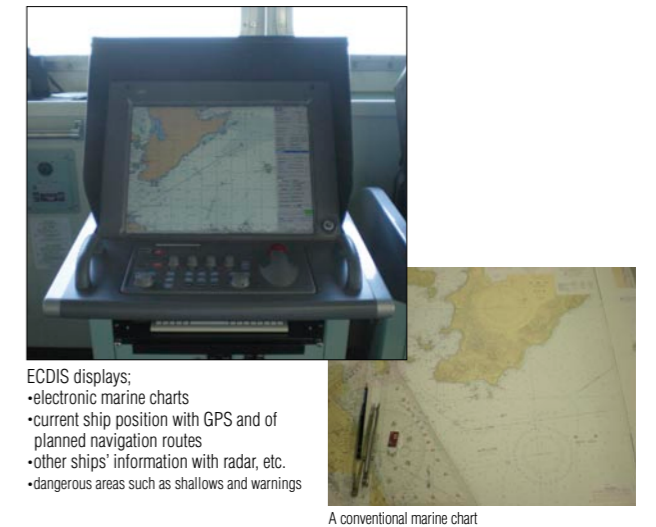


### Acquisition of Latest Knowledge and Technology

#### Using new technology

Technical advances have led to, among many other changes, the computerization of ship equipments, electronic control of engines, generation of higher-voltage power by power generators to accommodate the increasing size of ships, and the use of the Electronic Chart Display and Information System (ECDIS). Accordingly, crew members these days are required to have new knowledge and response capabilities. The ability to use such state-of-the-art equipment is essential for ensuring safe navigation and cargo operations.

Crew members are required to use equipment properly and safely while onboard. We therefore provide them with training to acquire the requisite knowledge and skills in new technologies before they board the ship. This prevents confusion onboard and ensures safety at sea.



### column | Marine Technologies for Offshore Energy Development Business

#### Expansion of business into the upstream energy-related business segments

Energy resources such as oil, liquefied natural gas (LNG), and liquefied petroleum gas (LPG) are essential for our daily lives. In the energy-related segments, “K” Line Group was formerly involved only in cargo transport, which is called the downstream segment. We have now entered offshore businesses, specifically the offshore development and production of energy resources for the upstream energy-related segments related to oil fields and gas field development and for the midstream segments represented by production and refining. Our main businesses in these segments include the Mobile Offshore Drilling Unit (MODU) business, or drilling of oilfields and gas fields, the LNG FPSO business, or offshore liquefaction and production of natural gas taken from a gas field, the

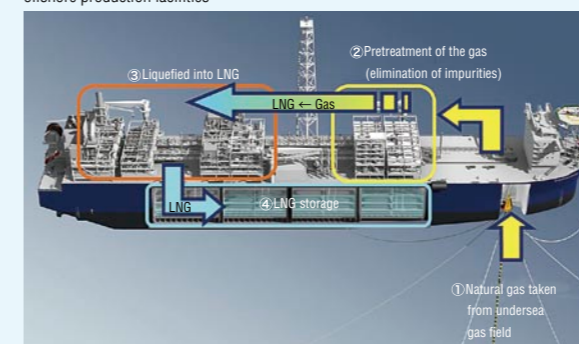
offshore support vessel business, including installation of offshore development facilities and transportation of materials for them, and the CNG carrier business, or transport of compressed natural gas that is not liquefied.

#### Maritime technologies specific to offshore energy development businesses

Some of “K” Line’s maritime technologies accumulated in its cargo transport business are applicable to offshore energy development businesses. Yet there are also technologies and know-how specific to offshore energy development businesses. For example, specialist knowledge and experience is required to operate the dynamic positioning system (DPS), which is used to run drilling vessels, staying in the same position for long periods. Other technologies specific to offshore energy development business include drilling vessels, liquefaction of natural gas at LNG FPSO, towing by offshore support vessels, and handling of anchors. We therefore need to recruit and foster maritime technical personnel who are highly experienced and who excel in these skills.

#### Safety and environmental considerations and sharing of information

Safety in navigation and cargo operation and environmental preservation, which are always required in the cargo transport business, also need to be considered in operating offshore energy development businesses. To prevent accidents, we need to ensure safe operation from every possible perspective and strive to master new technologies required for eco-friendly operation, thereby establishing a system for safe navigation, safe operations, and environmental protection. In entering a new business segment, we hold internal seminars and briefings to share the knowledge, technologies, and information needed to operate the business so they can be applied in future initiatives. In this way, we strive to establish an integrated system involving upstream to downstream segments of the energy development business.



# “K” Line’s Response to the Ballast Water Management Convention

*When we operate a ship, ballast water plays an important role in maintaining the strength of the hull and stability of the ship. However, there is a concern that when ballast water is discharged, marine life contained in it, such as planktons, may impact the eco-system indigenous to the area where it is discharged. Efforts to protect eco-systems and maintain biodiversity are undertaken internationally. The International Marine Organization (IMO) adopted the International Convention for the Control and Management of Ships' Ballast Water and Sediments (Ballast Water Management Convention). Based on this Convention, efforts have been made to develop ballast water treatment systems that eliminate marine life from the water to be discharged.*



## Protection of the Marine Environment as a Mission of a Shipping Line

### Installations of ballast water treatment systems

The Ballast Water Management Convention will make it mandatory to install ballast water treatment systems in individual ships. However, because the systems are large, it is important to secure spaces for installing them. Treatment capabilities and power consumption also need to be considered. In addition, a heavy burden of retrofit work may arise depending on the time when the Convention comes into effect. Accordingly, research and development efforts are needed to find a fast, efficient method of installation.

### Experimental operation on a large bulk carrier

When a ballast water treatment system has been installed on a ship, its crew members play the key role in operating the system. Because it is new equipment, crew members need to learn how to handle it, how it works, the timing and method of maintenance, and how to troubleshoot. It is also important to ensure cooperation between navigation officers, who feed and discharge ballast water, and engineers, who manage the ballast water treatment system. This requires actually operating the system while it is installed on a ship, as

this is how problems are identified and solved. We are running a project\* for experimental operation of the system installed on our large bulk carrier (a coal carrier).

\*This is a joint project with IHI Marine United Inc., JFE Engineering Corporation, and SEA Soken Inc. The project is supported by Nippon Kaiji Kyokai (ClassNK) through a joint research scheme

### Accumulating and applying the results of the experimental operation

This is the world’s first project involving the installation and operation of a ballast water treatment system on a large bulk carrier in service. We will apply the knowledge and experience obtained from this project to other ships. Ocean transport is the most energy-efficient method of transportation. We remained determined to make it an even more eco-friendly method by identifying and overcoming issues.

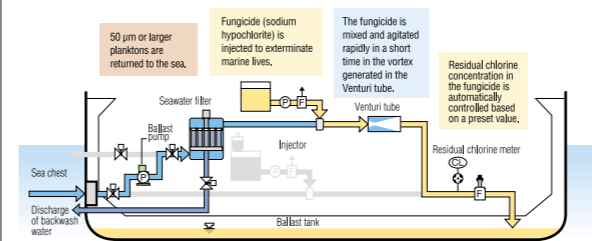
**Hideki Yamauchi**  
Technical Support Team, Technical Group



## Flow of Ballast Water Treatment under the Project

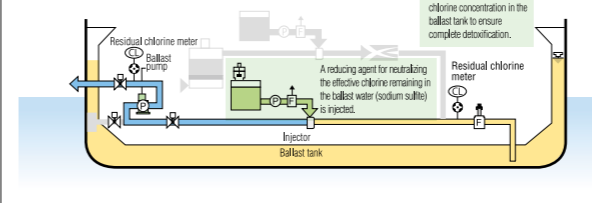
### While ballast water is being fed to the ship (discharging cargo)

- ① While ballast water is being fed into the ship, precision filters (seawater filters) are used to return as many marine lives as possible to their original habitats.
- ② Small planktons and bacteria such as coli bacteria contained in the filtered water are eliminated using an appropriate fungicide and through mixture and agitation in a Venturi tube.



### While ballast water is being discharged (loading cargo)

- ① The tiny amount of residual fungicide in the treated ballast water is neutralized and detoxified with a reducing agent before the water is discharged to the sea.



### Ballast water and its function

Ballast water is sea water carried in a ballast water tank of a ship when the ship is not loaded or when the cargo weight is light. Ballast water is essential for safe navigation and cargo operations, because it keeps the ship stable by controlling its position (adjusting the longitudinal and lateral tilts). It is also highly important for maintaining hull strength. The volume of ballast water fed to or discharged from the tank is calculated based on the loaded cargo and amount of fuel carried by the ship. It is also discharged when necessary. (See page 33 for a conceptual rendering.)

### Effectuation of the Ballast Water Management Convention

The Ballast Water Management Convention has been “adopted” by the IMO, but has not “come into effect” yet. The text and provisions of the Convention have been determined, and periods when installations of ballast water treatment systems are required have been determined based on the maximum volume of ballast water carried by the ship. However, if the Convention would come into force, the requirements stipulated by the Convention need to be met. As of May 31, 2011, these requirements have yet to be fulfilled, so installation of ballast water treatment systems are not mandatory. But we have started preparations for the installations in anticipation of effectuation of the Convention and for environmental preservation.

# Environmental Management

*The "K" Line Group recognizes that its business activities impose a burden on the environment, and has expressed its determination to minimize its environmental impact in its Environmental Charter. We are pursuing numerous initiatives. Under our Environmental Management System (EMS), we determine specific activities for environmental preservation, sets numerical targets, and makes improvements based on the extent to which the targets were achieved.*

## "K" Line Group's Environmental Charter

We consider that it is an integral management assignment of eternal importance to address the issue of preservation of the earthly environment. We recognize in a proper manner that those exhaust emissions and wastes created by consumption of power sources necessitated directly and indirectly by business activities in the logistics industry can result in an increasingly heavy burden on the limited amount of resources of both our earthly and marine environment. We also recognize the importance of prevention of marine pollution caused by marine accidents. In order to contribute to society in general through our diligent and consistent efforts for preservation of the earthly environment, we, everyone throughout the entire "K" Line Group, hereby commit ourselves that we will personally, fairly and severely observe environment-related treaties/conventions and rules/regulations, and make utmost efforts to eliminate and minimize any adverse environmental impact.

### Directions

#### 1. In carrying out business activities

- We will seek for perfection in safety of navigation and cargo operations in order to preemptively prevent the spillage of fuel, cargo oil and/or any other hazardous substances from ships during operation or at the time of any marine accident.
- We will properly manage exhausts and wastes deriving from both ship and shore operations. We will thereby try to exert our utmost efforts for the recycling of any such items.
- Through an upgrade in ship operation and work performance, we will encourage maximum conservation of energy and resources.

#### 2. On development and introduction of environmental technology

- For the purpose of reduction in exhaust emissions which cause air pollution and global warming to be incurred, we are committed to the study and improvement of ship and shore facilities and fuel oil, and to the development and introduction of the most sophisticated equipment and related technology.
- We will refrain from using ship hull paints containing substances hazardous to marine life and also from using any ozone-depleting substances.

#### 3. For the purpose of encouragement of environmental preservation

- We will implement restructuring of organizations with greater emphasis on studying/educating/training about safe navigation and environmental affairs.
- We will elevate awareness and understanding of all prevailing environmental issues among each member of the entire "K" Line Group.
- We will practice information disclosure appropriately in relationship to the environment.
- The "K" Line Group will support and participate in social activities contributing and dedicated to present and future preservation of our earthly environment.

Established in May 2001

## Environmental Management Systems

### Establishing an Environmental Management System (EMS)

#### Using EMS for environmental preservation

We have established EMS based on ISO 14001<sup>1)</sup> and operate it to identify the environmental impact and minimize it constantly. In February 2002, we obtained certification for our EMS from a third-party organization, Nippon Kaiji Kyokai, and began operating it. Since then, we have been striving to enhance our environmental activities by confirming through reviews conducted annually and at the time of renewals to ensure that our EMS complies with the ISO 14001 standard, is conducted in line with the PDCA cycle, and is improved and corrected accordingly.

<sup>1)</sup> ISO 14001 is an international EMS standard set by the International Organization for Standardization (ISO). Requirements for the EMS are stipulated in ISO 14001.

#### Environmental policies as guidelines for operating EMS

The environmental policies set out in the EMS serve as guidelines for determining the basic policies and setting specific targets for the appropriate operation of EMS under the Environmental Charter. Based on these policies, we pursue constant improvement in our environmental activities by establishing a PDCA cycle, that is, setting specific environmental targets and goals, making plans for achieving them, and evaluating our activities for making improvements.

It is also important to understand our environmental impact based on data on ship navigation developed through SPAS (see page 28) as well as results of regular examinations and records prescribed in our EMS. We use the information as basic data for achieving our environmental policies and minimizing our environmental impact.

 See our website for our Environmental Policy.  
Environment > Green Management

### Position of EMS in our Management Plan

#### Initiatives for environmental protection as a fundamental of management

In our medium-term management plan, "K" LINE Vision 100 – New Challenges, protecting the environment is positioned as a critical mission along with safety in navigation and cargo operation. We have also set in our EMS specific targets for minimizing the environmental impact of our business activities. In executing these policies and initiatives, we recognize that we must evaluate their results and effects thoroughly and review and correct them if any deficiencies are found. We appreciated that this task has a significant impact on our management.

### Environmental Sub-Committee

#### A place for confirming the PDCA Cycle

Our EMS stipulates that the Environmental Sub-Committee should meet twice a year. At the meeting, the senior manager who has been appointed EMS superintendent, the Executive Officer in charge of environmental affairs, environmental managers, and deputy environmental managers gather to prepare basic plans and set goals on environmental matters for the "K" Line Group, monitor progress towards the goals, evaluate the results, and reconfirm or review the goals.

The Environmental Sub-Committee is also incorporated in our corporate governance structure. Matters determined in the Sub-Committee and its activities are undertaken and utilized for business conduct within this structure. (See page 10 for details of our corporate governance structure.)

## Environmental Education and Environmental Awareness

### Environmental Training

#### Environmental awareness raised through environmental trainings and seminars

Our EMS is operated by everyone involved in marine transportation services. All of these people are given environmental training and attend seminars as an opportunity to acquire knowledge, raise awareness, and obtain information on EMS and environmental issues. In addition, our internal portal site contains environmental activity reports and the materials used for training and seminars as well as our Environmental Charter, manuals and documented procedures on environmental management, and a list of environmental managers. We enhance the information given at site to make it useful as a portal on environmental affairs.

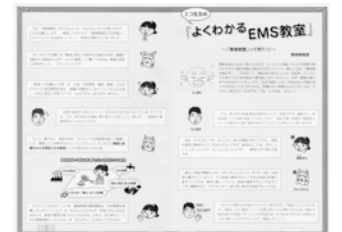


Environmental training

### Raising Environmental Awareness with "K" Line News, Our Company Newsletter

#### "Professor Eco's Class for Easy Understanding of EMS"

Every issue of "K" Line News, our monthly newsletter, includes a feature article titled "Professor Eco's Class for Easy Understanding of EMS." Aimed at deepening readers' understanding of EMS, this article explains the environmental terms and matters required for operating EMS, in addition to giving basic information such as "What is EMS?" Readers learn together with Professor Eco and other characters.



March 2011 Issue of the "K" Line News

## Voice

### Environmental seminar for fostering environmental awareness

Very likely you often hear or read news on the environment, such as reports on global warming and the destruction of ecosystems. However, the media gives so much information that we can easily become confused about what is important and what we should do. At the Environment Management Division, we hold "environmental seminars" each year for people at all Group companies, including "K" Line. Participants at these seminars receive explanations on environmental issues and exchange opinions. Starting from

the Tokyo Head Office, these seminars are given at branches of "K" Line (Japan) and even at "K" Line Ship Management (Singapore) Pte Ltd, dealing with environmental issues pertaining to ship navigation and even familiar issues including how the preset temperatures of air conditioners affect the environment. We aim to make these seminars useful and informative for the "K" Line Group's environmental activities.

Seiji Inoue, Environment Management Division





# Results of Our Environmental Activities in 2010 and Targets for 2011

<sup>1/</sup>VOC stands for volatile organic compounds, which are regulated as atmospheric pollutants by law.

<sup>2/</sup>Vapor Emission Control System (VECS) is a device that collects the gas generated in a tank when the cargo oil is loaded on the ship and transfers the collected gas to an onshore facility. The transferred gas is collected as crude oil or otherwise treated appropriately.

Environmental Charter / Direction	Environmental Objectives	Environmental Targets (Medium-term)	Environmental Targets for 2010
Preventing marine pollution by safety in navigation of the ships	Preventing marine pollution	Operating with no major incident causing marine pollution for the fifth consecutive year, which is to be achieved by exhaustively ensuring safe navigation and cargo operations	<ul style="list-style-type: none"> <li>● Implementing Safety Management System (SMS) appropriately to eliminate leaks from ships</li> </ul>
		Continually practicing ballast water exchange in open waters Considering the introduction and development of technologies for making ballast water harmless and minimizing the quantity of ballast water onboard	<ul style="list-style-type: none"> <li>● Undertaking ballast water exchange in open waters</li> <li>● Considering the installation of ballast water treatment systems to prepare for the introduction of the Ballast Water Management Convention</li> </ul>
		Achieving a ratio of double-hull tankers in operation at 100%	<ul style="list-style-type: none"> <li>● Maintaining the 100% ratio of double-hull tankers in the fleet</li> </ul>
		Preventing leakages and spills from fuel tanks	<ul style="list-style-type: none"> <li>● Adopting overflow pipes to prevent oil spills from fuel tanks</li> </ul>
Properly managing waste and recycling	Preventing pollution by drainage water	Properly managing drainage water at onshore offices	<ul style="list-style-type: none"> <li>● Properly managing drainage water at onshore offices</li> </ul>
	Properly managing and reducing waste	Reducing waste at onshore offices	<ul style="list-style-type: none"> <li>● Reducing waste from onshore offices from the previous year</li> </ul>
		Promoting green procurement	<ul style="list-style-type: none"> <li>● Increasing the ratio of green procurement from the previous year</li> </ul>
	Preventing environmental pollution	Promoting the separation of waste materials generated onboard and recycling them on land	<ul style="list-style-type: none"> <li>● Separating more waste materials generated onboard and recycling more of them on land, etc. than in the previous year</li> </ul>
		Reducing the use of packaging materials in deliveries to ships	<ul style="list-style-type: none"> <li>● Continuing to encourage manufacturers and suppliers to reduce packaging materials</li> </ul>
		Preventing environmental pollution when demolishing ships	<ul style="list-style-type: none"> <li>● Cooperating in developed-country-type domestic demolition projects led by the Ministry of Land, Infrastructure, Transport and Tourism</li> </ul>
Encouraging maximum conservation of energy and resources through upgrades to ship operation and work performance	Reducing the consumption of natural resources	Reducing the use of office paper by 3% per employee compared with FY2006 (to be achieved by FY2011)	<ul style="list-style-type: none"> <li>● Reducing the use of office paper by 1% per employee from the previous year</li> </ul>
		Reducing power consumption at onshore offices by 3% per employee compared with FY2006 (to be achieved by FY 2011)	<ul style="list-style-type: none"> <li>● Reducing electric power consumption per employee at onshore offices from the previous year</li> </ul>
		Reducing the use of tap water in onshore offices	<ul style="list-style-type: none"> <li>● Reducing the use of tap water per employee at onshore offices from the previous year</li> </ul>
		Continuously reducing fuel and lubricating oil used for ships (5% cut from the FY2006 level on a per ton-mile basis to be achieved in FY2011)	<ul style="list-style-type: none"> <li>● Reducing fuel used for ships from the previous year on a per ton-mile basis</li> <li>● Reducing the quantity of lubricating oil used for ships from the previous year on a per ton-mile basis</li> <li>● Introducing the Fuel Additive Dosing System</li> <li>● Promoting the Eco Slow Steaming (sailing at reduced speed)</li> </ul>
		Reducing CO <sub>2</sub> emissions by 10% from the FY2006 level on a per ton-mile basis (to be achieved by the mid 2010s)	<ul style="list-style-type: none"> <li>● Reducing CO<sub>2</sub> emissions from the previous year on a per ton-mile basis</li> </ul>
		Reducing SO <sub>x</sub> emissions by 10% from the FY2006 level on a per ton-mile basis (to be achieved by the mid 2010s)	<ul style="list-style-type: none"> <li>● Reducing SO<sub>x</sub> emissions from the previous year on a per ton-mile basis</li> </ul>
Reducing emissions causing atmospheric pollution and global warming, committing to the study and improvement of ship and shore facilities and fuel oil, and to the development and introduction of sophisticated equipment and related technologies	Preventing atmospheric pollution	Reducing NO <sub>x</sub> emissions by 10% from the FY2006 level on a per ton-mile basis (to be achieved by the mid 2010s)	<ul style="list-style-type: none"> <li>● Reducing NO<sub>x</sub> emissions from the previous year on a per ton-mile basis</li> </ul>
		Reducing the average sulfur content in fuel used for ships to 2.5% or lower	<ul style="list-style-type: none"> <li>● Reducing the average sulfur content in fuel used for ships to lower than the actual level of the previous year</li> </ul>
		Responding to regional regulations and requirements	<ul style="list-style-type: none"> <li>● Use of fuel oil that meets regional requirements</li> </ul>
		Participating in voluntary activities	<ul style="list-style-type: none"> <li>● Reducing speed voluntarily in harbors and coastal areas</li> </ul>
		Reducing atmospheric pollutants and greenhouse gases from berthed ships	<ul style="list-style-type: none"> <li>● Reducing emissions of black smoke, PM, CO<sub>2</sub>, SO<sub>x</sub>, and NO<sub>x</sub> from berthed ships</li> <li>● Controlling VOC<sup>1/</sup> emissions from tankers</li> </ul>
		Encouraging the adoption of energy-saving cargo-handling devices	<ul style="list-style-type: none"> <li>● Encouraging the adoption of energy-saving cargo-handling devices</li> </ul>
		Reducing noise	<ul style="list-style-type: none"> <li>● Installation of noise-reduction devices and associated research</li> </ul>
		Encouraging use of more environmentally-friendly paints	<ul style="list-style-type: none"> <li>● Expanding the adoption of non-toxic paints including non-metal paints</li> <li>● Encouraging the adoption of tar-free paints</li> </ul>
		Continuing marine surveys	<ul style="list-style-type: none"> <li>● Continuing marine surveys</li> </ul>
		Participating in social contribution activities	<ul style="list-style-type: none"> <li>● Participating in at least three activities for social contributions in the year</li> </ul>
Implementing studies/education/training to elevate awareness and understanding Disclosing information properly Supporting social contributions and other activities	Making a social contribution Educating employees of the company and Group companies Expanding the acquisition of environmental certifications	Providing job-class-specific training and education to employees	<ul style="list-style-type: none"> <li>● Providing environmental seminars and education</li> <li>● Providing training and education to crew members</li> </ul>
		Having more Group companies, including overseas subsidiaries, acquire environmental certifications	<ul style="list-style-type: none"> <li>● Continuing to request and encourage companies to obtain certifications</li> </ul>

Results in 2010	Environmental Targets for 2011
There were two cases of minor oil leaks into the sea.	<ul style="list-style-type: none"> <li>● Implementing Safety Management System (SMS) appropriately to eliminate leaks from ships</li> </ul>
Conducted in accordance with ballast water management plan Studied for each type of ship together with shipyards	<ul style="list-style-type: none"> <li>● Undertaking ballast water exchange in open waters</li> <li>● Considering the installation of ballast water treatment systems to prepare for the introduction of the Ballast Water Management Convention</li> </ul>
The 100% ratio of double-hull tankers has been maintained since September 2008.	<ul style="list-style-type: none"> <li>● Maintaining the 100% ratio of double-hull tankers in the fleet</li> </ul>
The measures were incorporated in 18 newly built ships.	<ul style="list-style-type: none"> <li>● Adopting overflow pipes to prevent oil spills from fuel tanks</li> </ul>
No problem was cited.	<ul style="list-style-type: none"> <li>● Properly managing drainage water at onshore offices</li> </ul>
Reduced by 11.4%	<ul style="list-style-type: none"> <li>● Striving to reduce waste from onshore offices and undertaking recycling onsite</li> </ul>
The ratio for 2010 was 57.6%, up 1.4 percentage points from the previous year.	<ul style="list-style-type: none"> <li>● Increasing the ratio of green procurement</li> </ul>
The amount recycled (landed) increased by 0.5%.	<ul style="list-style-type: none"> <li>● Promoting separation of waste generated onboard and recycling them on land, etc.</li> </ul>
We encourage the use of non-plastic cushioning materials. We also encourage suppliers to bring back packaging materials.	<ul style="list-style-type: none"> <li>● Continuing to encourage manufacturers and suppliers to reduce the use of packaging materials</li> </ul>
We offered our car carrier New York Highway for the projects.	<ul style="list-style-type: none"> <li>● Creating inventory</li> </ul>
Reduced by 2.9%	<ul style="list-style-type: none"> <li>● Reducing the use of office paper by 1% per employee from the previous year</li> </ul>
Reduced by 26.0%	<ul style="list-style-type: none"> <li>● Reducing electric power consumption per employee at onshore offices from the previous year</li> </ul>
Increased by 3.9%	<ul style="list-style-type: none"> <li>● Reducing the use of tap water per employee at onshore offices from the previous year</li> </ul>
Reduced by 1.8%	<ul style="list-style-type: none"> <li>● Reducing fuel used for ships on a per ton-mile basis</li> </ul>
Reduced by 10.7%	<ul style="list-style-type: none"> <li>● Reducing lubricating oil used for ships on a per ton-mile basis</li> </ul>
Introduced to 11 ships	<ul style="list-style-type: none"> <li>● Introducing the Fuel Additive Dosing System</li> </ul>
Construction work for ensuring navigation at reduced speed (reduced use of turbochargers) was undertaken for 34 ships.	<ul style="list-style-type: none"> <li>● Promoting the Eco Slow Steaming (sailing at reduced speed)</li> </ul>
Reduced by 1.8%	<ul style="list-style-type: none"> <li>● Reducing CO<sub>2</sub> emissions on a per ton-mile basis</li> </ul>
Reduced by 5.6%	<ul style="list-style-type: none"> <li>● Reducing SO<sub>x</sub> emissions on a per ton-mile basis</li> </ul>
Reduced by 6.2%	<ul style="list-style-type: none"> <li>● Reducing NO<sub>x</sub> emissions on a per ton-mile basis</li> </ul>
The result for 2010 was 2.73% while that for the previous year was 2.76%.	<ul style="list-style-type: none"> <li>● Reducing the average sulfur content in fuel used for ships to lower than the actual level of the previous year</li> </ul>
We comply with rules in the North Sea and Baltic Sea and the regulations of California.	<ul style="list-style-type: none"> <li>● Use of fuel oil that meets regional requirements</li> </ul>
We voluntarily reduced speed at the Port of Long Beach in the United States in 202 out of 203 entries to/ departures from the port.	<ul style="list-style-type: none"> <li>● Reducing speed voluntarily in harbors and coastal areas</li> </ul>
We continued to provide shore-side electrical power at the Port of Long Beach, and Kawasaki Kinkai Kisen continued to provide shore-side electrical power to ships at berth.	<ul style="list-style-type: none"> <li>● Reducing emissions of black smoke, PM, CO<sub>2</sub>, SO<sub>x</sub>, and NO<sub>x</sub> from berthed ships</li> </ul>
We installed VECS <sup>2/</sup> in new ships. We are also considering the possibility of installing it in existing ships.	<ul style="list-style-type: none"> <li>● Controlling VOC emissions from tankers</li> </ul>
Introduced to our container terminals in Japan and overseas	<ul style="list-style-type: none"> <li>● Encouraging the adoption of energy-saving cargo-handling devices</li> </ul>
We have established a method and standard for measuring the noise level. At the time of construction, we confirm that the level is below the standard value.	<ul style="list-style-type: none"> <li>● Installing and researching noise-reduction devices</li> </ul>
We adopted non-toxic paints for 72 ships at the time of their docking.	<ul style="list-style-type: none"> <li>● Expanding the adoption of non-toxic paints including non-metal paints</li> </ul>
Being undertaken with our bulk coal carrier, Chubu Maru	<ul style="list-style-type: none"> <li>● Continuing marine surveys</li> </ul>
We participated in seven activities.	<ul style="list-style-type: none"> <li>● Participating in at least three activities to contribute to society during the year</li> </ul>
An environmental seminar was given to 300 employees and training was provided to 107 crew members.	<ul style="list-style-type: none"> <li>● Providing environmental seminars and education</li> <li>● Providing training and education to crew members</li> </ul>
Not achieved in 2010	<ul style="list-style-type: none"> <li>● Continuing to request and encourage companies to obtain certifications</li> </ul>



# The "K" Line Group's Relationship with Society and Environment

The "K" Line Group plays a role in the international logistics infrastructure while having close links to global society and the environment.

We take steps to comprehend and minimize the environmental impact of our business activities and strive to maintain and enhance the logistics infrastructure under the banner of "security, safety and reliability."

## Links of our Business Activities to Society and the Environment

### Supply chain as the foundation of people's lives and industries

The supply chain, or system for transportation and distribution of goods, is essential for people's lives and industrial activities. The "K" Line Group contributes to maintaining this system through our shipping business, including transportation of raw materials, energy resources, and consumables.

### Climate changes

Consumption of petroleum-based fuel and electricity for maneuvering ships, terminal equipment, and vehicles emits CO<sub>2</sub> as a greenhouse gas. We strive to curb CO<sub>2</sub> emissions while maintaining the quality of our services, by improving the efficiency of energy use to minimize fuel consumption.

### Air pollution

Operation of engines and boilers results in emission of sulfur oxide (SO<sub>x</sub>) generated through combustion of sulfur content of fuel, nitrogen oxide (NO<sub>x</sub>) generated during combustion, and particulate matter (PM). We apply a variety of measures to reduce these emissions, including the use of low-sulfur fuels, development and the introduction of equipment that reduces NO<sub>x</sub>, and combustion improvers.

### Marine pollution

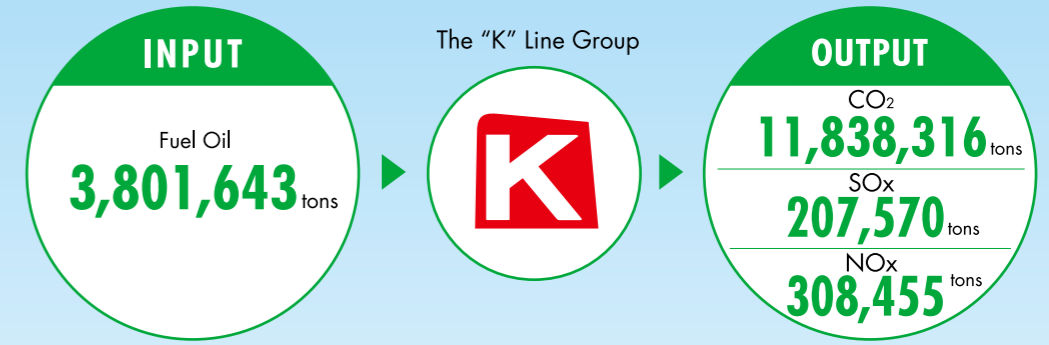
Serious marine pollution can be caused if crude oil or petroleum-based products as cargo or fuel or lubricant oil used for ship navigation leak into the sea. We apply diverse measures for preventing leakage of oil, including adoption of structure and equipment for preventing leakage and use of equipment that does not use hydraulic power.

### Biodiversity

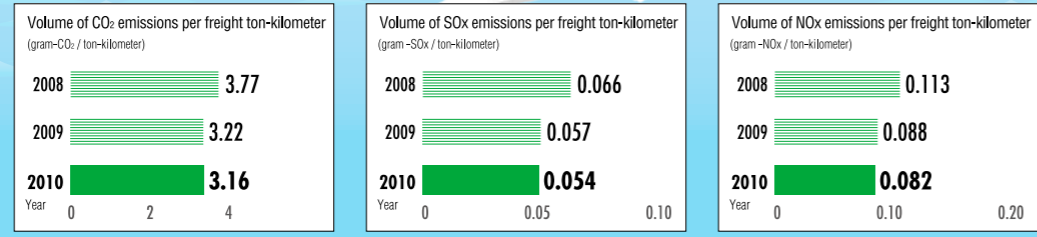
Marine organisms adhering to the ship's hull surface or contained in the ballast water can move to other areas with the ship and influence other ecosystems there. We help marine life and ecosystems remain as they are through a variety of measures for preserving biodiversity.

### Resources recycling and conservation

We strive to use resources efficiently and reduce waste during voyages and in onshore offices. We also undertake measures for recycling iron and non-ferrous metal from scrapped ships.



### Changes in the Environmental Footprint



Note: The values above were calculated per ton-mile basis and converted into ton-kilometer. (1 nautical mile = 1.852 kilometers)

### Visualization of Environmental Burdens with the Ship Performance Analyzing System (SPAS)

The SPAS creates a database by collecting comprehensive data on the ships in our fleet, including the noon position, distance sailed, average speed, amount of fuel consumed and waste generated, and ballast water replacement status of each ship every day. This system stores the data in a server on land via a satellite communication. The data are monitored and used for performance analyses based on the expertise accumulated through our many years of operation. The functions of the SPAS have been bolstered several times since it was first introduced in 2001. The latest version is capable of collecting and analyzing environmental data during a voyage, such as CO<sub>2</sub> emissions per ton-mile. This makes it easy for anyone to recognize the environmental impact at any time. The "K" Line Group makes use of this system for visualizing and reducing its burden on the environment.

# Initiatives for Protecting the Environment

*We introduce environmentally friendly equipment and facilities and adopt structures that help prevent environmental pollution even if an accident should occur. We place top priority on safe navigation and cargo operations and environmental protection and take numerous steps to keep the logistics infrastructure highly energy-efficient and friendly to the global environment.*

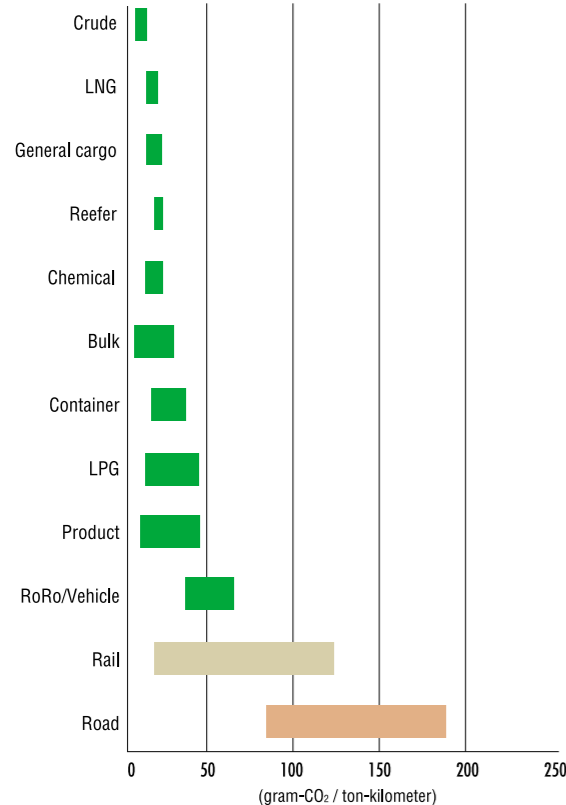
## Measures Against Climate Change

### Aiming for efficient use of energy

#### Ocean transport: a highly energy-efficient mode of transport

The amount of fuel consumed for transporting a ton of cargo over a distance of one kilometer is used as an index of energy efficiency. The smaller the value, the more energy-efficient is the transport. Ships are suited for transporting large volumes of cargo with on-board large fuel-efficient diesel engines. Therefore, ocean transport is the most energy-efficient among many modes of transport and is also effective for reducing CO<sub>2</sub> emissions. To allow this efficient mode of transport to continue to exist in the future, we are committed to continuing to improve our ships' energy efficiency and to reviewing our operating systems to maximize the efficiency of our entire fleet.

Typical range of ship CO<sub>2</sub> efficiencies compared to rail and road

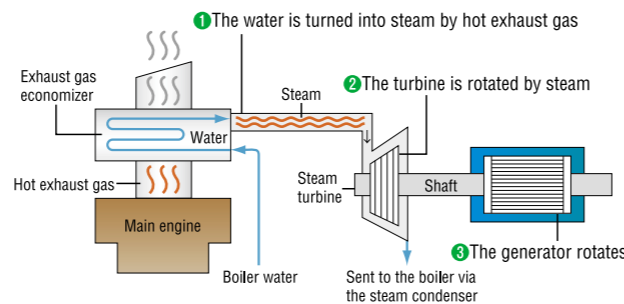


Source: Second IMO GHG Study 2009

#### Use of waste heat energy of exhaust gas

The fuel combusted in the engine and converted into energy for maneuvering the ship is discharged into the atmosphere as exhaust gas. The thermal energy of this high-temperature gas is collected by the exhaust gas economizer to generate hot, high-pressure steam. The steam is sent to turbo generators driven by the steam turbine and used to generate electricity for use on board, saving fuel for generators. Thus, the system uses energy of the exhaust gas, which would normally be wasted, to generate electricity. This improves a ship's energy efficiency, or the transport's energy efficiency, enabling reduction of CO<sub>2</sub> emission.

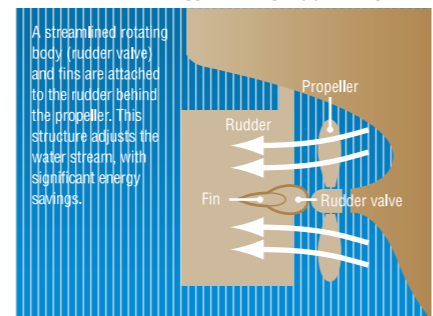
#### Exhaust Gas Economizer and Turbo Generator



#### Use of energy from water stream generated by the propeller

The rudder that maintains and changes the ship's direction is continually subject to the water stream it generates. A spherical bulge and horizontal fins attached to the rudder convert the propeller's water stream into propulsion power. The extra power permits lower fuel consumption and reduces CO<sub>2</sub> emissions, while maintaining the service speed of the ship.

#### Structure of Energy-Saving Appendages



#### Introduction of state-of-the-art autopilot

A ship is navigated to the destination port by following the course specified in the voyage plan. However, because a ship is subject to disturbances such as wind, waves, and ocean current, it needs to be steered frequently to stay on course. An autopilot is a system that automatically steers the ship. It is used in areas where multiple ships do not converge, such as in mid-ocean. The latest type of autopilot is capable of learning the degree and duration of those disturbances and makes use of the data for the next steering, thereby minimizing unnecessary operations. This reduces fuel consumption by about 1% compared with conventional units. We are striving to reduce the amount of CO<sub>2</sub> emissions by continuing to install this state-of-the-art system in our ships.



Steering stand with autopilot

#### Using heat shield paint to improve air-conditioner efficiency

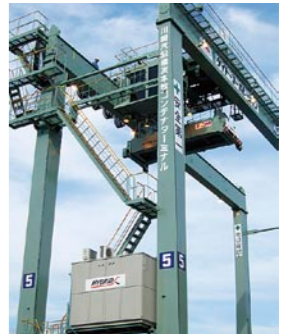
Crew members' onboard accommodations and the bridge for navigational watch are air-conditioned. However, ships are made of metal, which readily transfers heat, and walls and ceilings become hot or cold respectively from solar heat or outside temperature. This reduces the cooling/heating efficiency of air conditioners. We therefore use heat shield paint for outer plates of the accommodations and bridges to improve air conditioning efficiency, and this reduces the power needed for cooling and the amount of steam used for heating, which in turn means lower CO<sub>2</sub> emissions.



Heat shield paint is highly effective for a car carrier because the accommodations and upper part of the bridge are wide.

#### Collecting energy generated when containers are set down

"K" Line has introduced eco-friendly, energy-saving hybrid transfer cranes<sup>1)</sup> at its self-managed container terminals in Tokyo and Yokohama. These cranes, which are used at a terminal to sort out containers by destination, feature use of a regenerative brake. The brake stores and reuses electric power generated when hoisted containers are set down. This cuts fuel consumption and CO<sub>2</sub> emissions in half compared with conventional cranes. The improved engines of the cranes also permit a significant reduction in noise.



Hybrid transfer crane

<sup>1)</sup> A transfer crane is a self-propelled crane used for moving containers at a container terminal.

#### Promoting the purchase of renewable energy

"K" Line America, Inc. (KAM) has affirmed its environmental commitment by purchasing renewable energy credits from Renewable Choice Energy since 2008, to offset office electricity consumption. KAM offset 60% of office electricity in 2008 and 80% in 2009. In 2010, KAM expanded its environmental commitment to a 100% offset level. This renewal also allowed it to remain a U.S. Environmental Protection Agency (EPA) Green Power Partner.



Green Power Partner mark entitled by the EPA



Renewable Energy certificate

## Voice

### Verification test of LED lights

LED lights are now in the penetration phase and ships are no exception. We are taking steps to introduce the energy-saving lights to our ships to contribute to energy conservation. However, the usage environment on board is different from that of general households. For example, the lights will be subject to vibration, heat, cold, and high humidity during a voyage. Installation of those lights also requires approval from the classification society. We are therefore undertaking a verification test in the accommodation and cargo hold of a car carrier. We also need to check whether the LED light, which has different

properties from fluorescent lighting, will influence the car stowage operations. Use of LED lighting will reduce electricity consumption by 15% compared to fluorescent lights. It will also help reduce waste because LEDs have a much longer service life. We therefore will continue to strive for wide usage of LED lights for ships by cooperating with manufacturers and shipyards.



**Yasunori Yamada**  
Manager, Technical & Quality Management Team,  
Car Carrier Business Group





## Activities for Environmental Preservation

# Measures for Preventing Air Pollution

### Protecting the Atmospheric Environment

#### Green Flag awarded from the Port of Long Beach

As a measure for reducing the total amount of exhaust gas emissions from ships and improving the surrounding atmospheric environment, the Port of Long Beach (California, US) is running a program encouraging ships entering and leaving the port to sail at 12 knots or less within 20 nautical miles (approx. 37 kilometers) or 40 nautical miles (approx. 74 kilometers) of the harbor. The Green Flag is awarded to shipping lines that have achieved high rates of compliance with this program and had a large number of ships call at the Port. "K" Line actively participates in this program, achieving an extremely high rate of compliance every year. In 2010, we were awarded the "Green Flag" from the port authority for the sixth consecutive year.



The Green Flag Award ceremony

#### Response to the Tier 3 regulations over newly built ships

Ships to be built in and after 2016 will be required to reduce nitrogen oxide (NOx) emissions by at least 80% compared with the emissions level of the Tier 1 regulations that came into effect in 2000. "K" Line contributes to development of technologies for responding to the regulations. For example, we are undertaking a verification test of water emulsion fuel, which helps reduce NOx.

#### Reduction of sailing speed at Ise Bay and Mikawa Bay in Japan

We voluntarily reduce the speed of our car carriers to 12 knots or less when passing in Ise Bay and Mikawa Bay. This enables us to reduce the impact of ship navigation on the surrounding atmospheric environment, both on land and at sea. We also control emission of PM (including soot) while ships are in harbor by eliminating soot from the boiler before entering a port. After entering a port, we make the diesel-powered generator load appropriate to maintain a good combustion state.

#### Providing shore electricity power to ships at berth

We have facilities for supplying electricity from land (6,600V/60Hz) to ships berthing at the self-managed container terminal at the Port of Long Beach. The electricity is converted into 440V onboard, making it possible to supply all power to be used by ships at berth. This enables securing diesel-powered generators of ships at berth and reduces exhaust gas to zero, improving the air condition in the surrounding area.



Shore electricity power being supplied to the containership Genoa Bridge



Connection box for shore power supply cables installed on the quay



Power supply cables dropped from the ship (to be connected to the connection box)

# Measures for Preventing Marine Pollution

### Preventing Pollution by Oil and Waste

#### A fleet of double-hull tankers

Our tankers feature a double-hull structure, which prevents the leakage of cargo oil into the sea if the ship is damaged in a collision, for example. Transportation by single-hull tankers will be prohibited in 2015 under the MARPOL Convention.

The MARPOL Convention is an international convention that sets out rules for preventing marine and air pollution caused by ship operations, etc.



Large double-hull tanker (VLCC) YAMATOGAWA

#### Use of electric powered deck equipments

We are introducing to our new ships electrically driven deck equipment, such as mooring winch and ramp ways, instead of hydraulic powered equipment. This has eliminated the risk of hydraulic oil leaks.

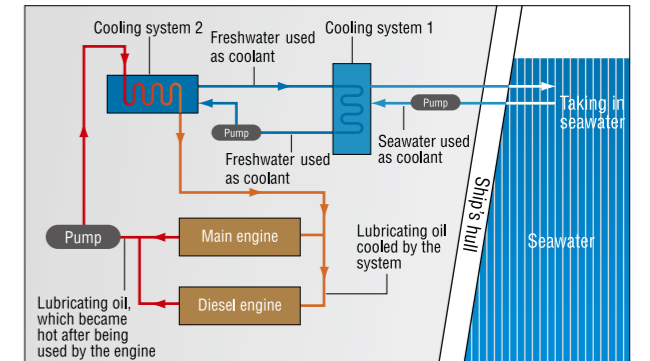


Electric mooring winch and mooring lines (forward deck)

#### Central Cooling System (Indirect Cooling System)

The Central Cooling System cools the engine coolant and lubricating oil indirectly by exchanging heat with seawater via dedicated freshwater. Use of this system prevents leakages or spills of lubricating oil into the sea, because seawater does not become contaminated with lubricating oil in this system. In the event of the cooling system failure, leaked lubricating oil remains in the freshwater circuit only and never contaminates seawater and is never discharged into the sea.

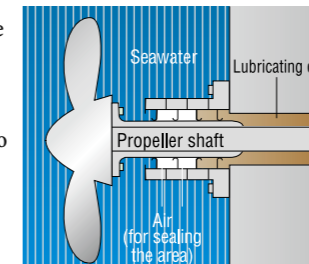
#### Central Cooling System



#### Using the Air Seal for the Stern Tube

We apply an air seal for the stern tube of our ships. An air seal is a device that continuously sends compressed air into the space in the stern tube where the propeller shaft penetrates out of the ship. This creates a sealed area inside the stern tube, which prevents leakage of lubricating oil and stops seawater from getting into the ship.

#### The "Air Seal" for the Stern Tube



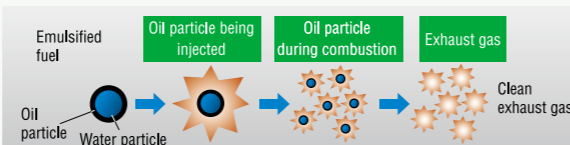
### column Use of Water Emulsion Fuel

#### Water emulsion fuel and its properties

Water emulsion fuel is a mixture of fuel oil and water that has been agitated to disperse minute water particles within the fuel oil. Water emulsion fuel for diesel engines has been found to result in an approximately 20% reduction of nitrogen oxide (NOx) contained in the exhaust gas. We are undertaking a verification test of equipment for using water emulsion fuel by installing it in ships operated by the "K" Line Group.

#### Combustion reaction of water emulsion fuel

Combustion reaction of the water emulsion fuel is illustrated on the right.



- The water particle is contained in an oil particle.
- When the water emulsion fuel is injected into the engine, the water evaporates before the oil particle is ignited.
- Evaporation of the water causes the fuel particle to disperse into even smaller particles.
- The extremely small particles of fuel are highly combustible, so the probability of perfect combustion increases.
- Combustion efficiency is improved, resulting in cleaner exhaust gas.

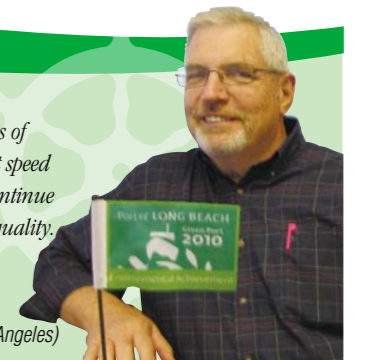
## Voice

### Social responsibility fulfilled with the Green Flag

It is a pleasure to work for a company that takes corporate citizenship seriously and has allowed me to make the Port of Long Beach's "Green Flag" program a requirement for all K Line ships that call at our Southern California ports. As a company, we have participated from the inception of the program and have won awards

every year. A very big "thanks" goes to the captains of our ships who have faithfully slowed to the 12 knot speed required by the "Green Flag" program. We will continue to comply with this program to improve local air quality.

Dave Pritzos, General Manager, Marine Operations, "K" Line America, Inc (Los Angeles)





## Activities for Environmental Preservation

# Measures for Preserving Biodiversity

### Considerations for the Eco-system

#### Promoting the use of environmentally friendly paints

The adherence of marine organisms to the surface of a ship increases fuel consumption and CO<sub>2</sub> emissions, since they increase the resistance of the ship's surface against seawater. The organisms are also introduced into remote waters, which may affect local eco-systems. The use of paints containing tributyltin (TBT) is a highly effective way to prevent the adherence of marine organisms. However, we pioneered the use of tin-free paints, which do not contain TBT, since TBT was found to be harmful to eco-systems. We also promote the use of non-toxic silicone paints and polymer paints.

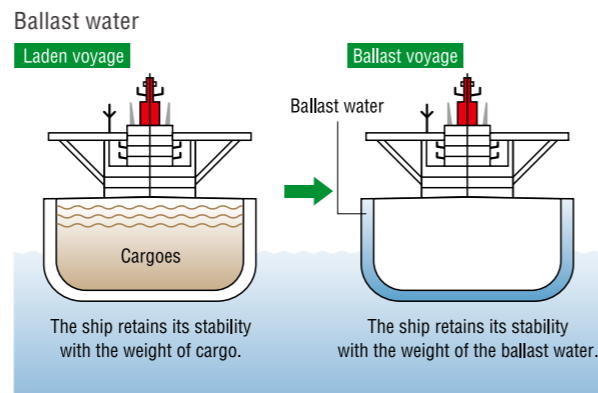


A ship being coated with silicone paint (the red colored part) at the dry dock.

#### Managing ballast water properly

Ballast water, which is used to retain the stability of the ship, contains marine life and may influence the eco-system in the area where it is discharged. We minimize the influence by replacing ballast water in ocean areas with less marine life, while ensuring the stability and safety of ships.

We are also studying ballast water treatment systems, installation of which will be mandatory after the Ballast Water Management Convention comes into effect. Meanwhile, we are taking other steps to minimize the impact on eco-systems, such as the introduction of large container ships that use the smallest possible volume of ballast water and car carriers with fixed ballast made from concrete.



### column | Ship Recycling

#### Ship demolition with safety and environmental considerations

Ships that have completed all their missions are demolished and utilized effectively as iron resources. Most demolition work, however, is done manually because it is hard to mechanize or automate. Consequently, occupational health and safety and environmental burden need to be considered in ship demolish work. It is also important to recognize in advance which parts of the ship contain substances harmful to the human body and/or the environment.

#### Inventory of the car carrier New York Highway

Built in 1985, this ship used asbestos, TBT, and CFC (specified chlorofluorocarbon), substances that are now banned. Asbestos was used for gaskets tucked into connections of portions that become hot, including the engine's exhaust system, boiler furnace, and steam piping. TBT, which at the time was not banned, was used for the paint for the ship bottom. TBT paint is permitted to be sealed off by coating the painted surface with another paint not containing TBT. CFC was used for the freezer for cooling down the large amount of CO<sub>2</sub> serving as fire extinguisher for the cargo hold, where cars are loaded. An inventory is a document that includes drawings and a detailed list of portions where these substances are used, along with the amount of each substance. Information contained

in the inventory can be referred to for collecting the harmful substances safely without letting them disperse, which prevents impact on the surrounding area.

#### Taking part in the Muroran Project

A pilot project for establishing a safe, efficient, advanced ship recycling system was launched under the initiative of Japan's Ministry of Land, Infrastructure, Transport and Tourism. This project involved a demonstration ship demolition experiment, which was undertaken in Muroran, Hokkaido, from February-October 2010. The ship used in this experiment was the New York Highway, a car carrier formerly operated by "K" Line. The experiment results yielded a great deal of knowledge needed for demolition. As much as 13,732 tons of iron was also collected as a resource.



The funnel of the New York Highway that was removed (front) and the ship being demolished (back)

# Measures for Recycling and Conserving Resources

### Measures Taken at Offices

#### Efforts for minimizing and recycling waste

At onshore offices, we make efforts to use resources efficiently and minimize consumption. For example, printers are set to print contents on both sides of each sheet and/or to print contents for two pages at reduced scale on each page. We also segregate waste from offices to recycle it into resources.

#### Promoting procurement of eco-friendly goods

For office products, we use an ordering system that gives priority to products complying with the Act on Promoting Green Purchasing, and Eco Mark-certified products. To further promote this measure, we calculate the green procurement ratio every month and announce it to the entire company, thereby raising awareness among staff members. We also encourage our staff members to prevent wasteful procurement.

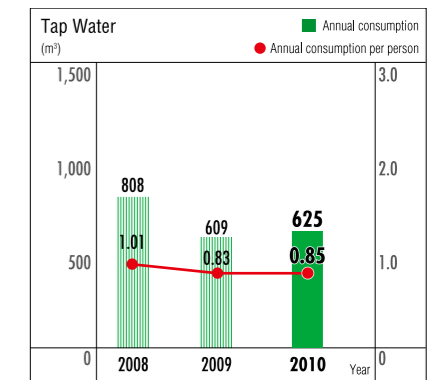
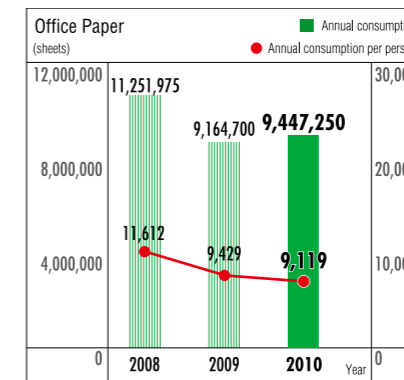
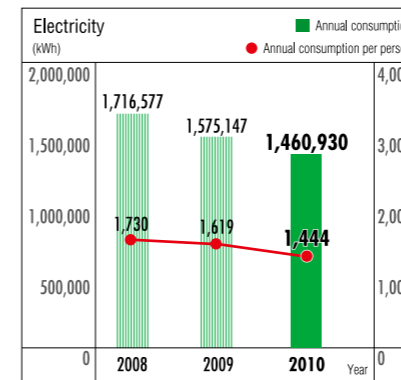
#### Efforts for saving electricity consumption

To save electricity consumption, we ensure appropriate air conditioner temperature settings and turn off unneeded lights. We have strengthened these daily efforts in response to the reduction of electricity supply due to the impact of the Great East Japan Earthquake. We respond to social demand in ways such as turning off lights near windows, reducing the number of lights we use, and turning lights off wherever unnecessary.

#### Paperless recording of reefer container temperature control

Temperature control of reefer containers is a critical task. We continually monitor the temperature control status by recording temperature changes in a container during transportation. Traditionally, a sheet of paper for recording the temperature would be attached to each container and then removed and stored after transportation. In 2009, we switched to a system for downloading electronic data from temperature controllers and abolished the use of recording paper. This saves us about 100,000 sheets of paper each year.

#### Changes of Environmental Burdens at Our Offices



## Voice

### Expanding eco-friendly activities with creative ideas

"K" Line (Japan) Ltd. is a general sales agent of "K" Line in Japan, dealing mainly with the company's containership services. Since we specialize in sales activities, our company consists of people and offices. We believe that creative ideas allow us to identify a wide variety of office activities for preserving the environment, in addition to efforts for reducing paper use, waste, and electricity consumption; steps we should naturally take. For example, we promote a campaign at our Head Office and branches to use your own cup in order to reduce use of paper cups. This campaign helped us achieve a 100% reduction in paper cup usage at our branches. In 2010,

the Ecocap movement for recycling plastic bottle caps was started at our Head Office in Tokyo. We were able to collect as many as 6,040 caps in one year, thereby preventing 48 kilograms of CO<sub>2</sub> emissions. We have also stopped using shredders for disposing of shipping documents because paper recycling is impossible with this method of disposal. We now use confidential document dissolving treatment services, which enable safe recycling of shipping documents. A few ideas lead to eco-friendly activities. We would like to continue pursuing further ideas.

**Asami Wada**

General Affairs and Human Resources Group, "K" Line (Japan) Ltd.



# For Better Onboard Lives

*Life onboard spans a long period. Once crew members go aboard their ship, they will live on it for several months. They have to remain healthy both mentally and physically during the voyage. Even if the ship has arrived at port, crew members are not always able to go ashore. They will have to perform their duties including cargo work watch and equipment maintenance work, possible only when the ship is in port. "K" Line has introduced a variety of programs for keeping crew members motivated to work without harming their health.*



## Creating an environment where crew members can live with a sense of security

Captains and crew members engage in daily voyages with support from various divisions onshore. However, since direct support cannot be expected at sea, all crew members must discharge their duties perfectly to ensure the safety of the cargo, ship, and themselves. This requires that all crew members obtain knowledge and skills sufficient to complete their duties and that they maintain good mental health onboard. To this end, we provide our crew members with a variety of training programs, such as at the "K" Line Training Center.

For crew members, the ship is workplace as well as home. People working onshore can go home after work, but crew members onboard naturally remain on the ship even after work, although they have their own rooms. After work, they need to refresh themselves for work on the following day. To help them do this, we maintain recreation rooms on ships. We are also improving, albeit gradually, methods of communicating with families in step with technological progress, for instance by introducing V-SAT. The

company will continue its commitment to supporting the physical and mental health of crew members, which is essential for safety at sea.

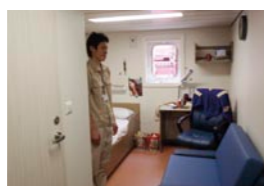


**Tadashi Shiraishi** (Chief Engineer)  
Manager, Marine Personnel Team,  
Marine Human Resources Group

**Q** What's it like living on board a ship?

**A** It's good, complete with a private room for each crew member.

Each crew member is provided with a private room furnished with a bed and linen, desk, storage furniture, and other goods. Room sizes differ depending on the crew member's position or duty. Facilities such as a dining room, recreation room, laundry room, dryer room, gymnasium, and bathhouse (available on some ships) are also essential for good onboard living. Crew members spend their leisure time on hobbies such as watching DVDs and reading books, because TV broadcasts are usually not available at sea. We sometimes hold karaoke parties and enjoy games together to help establish a friendly relationship among crew members.



Accommodation for a cadet furnished with a toilet and shower room

**Q** Are there any difficulties living onboard with people with diverse nationalities?

**A** It's exciting to learn about different cultures.

Japanese crew often have opportunities to sail with Filipino crew members, whose naturally cheerful disposition often creates a lively onboard atmosphere. Living onboard with people of other nationalities can sometimes create puzzlement because of differences in culture and national character, but these differences do not affect onboard operations at all since we share the same objectives and mindset concerning safety in navigation and cargo operation. We have chief cooks of various nationalities. Some are surprisingly good at cooking Japanese dishes, providing us a great deal of pleasure in onboard life.



Cooking in the galley

**Q** Can women work onboard?

**A** We set up a comfortable working environment on board for female crew.

We recruit both men and women as navigation officers and engineers. As with our male crew, women work on all types of ships. They also work onshore using their abilities as marine technical personnel. We prepare medical supplies for women on our ships and have created guidelines for their living environment, using these to raise awareness among crew members of our ships. We have set up a consultation service and hold meetings with female crew at head office to exchange opinions during their breaks onshore to further improve the working environment for women. These are a part of our efforts for establishing a structure that helps women work successfully onboard.



Eri Noguchi, Chief Officer  
(Currently belongs to the Technical and Quality Management Team of the Car Carrier Business Group)

**Q** Can crew members see their families during voyage?

**A** We have introduced a range of programs for families.

We provide our crew members with opportunities to reunite with their families at ports of call in Japan and overseas. We also help families with travel and accommodation costs. Recently, our crew members have fewer opportunities to call at ports in Japan, and consequently chances for families to visit crew members onboard are decreasing. We have introduced a program that allows crew members to board ships together with their families (spouses and children). This is aimed at reducing the time crew members spend apart from their families and at helping their families better understand their work at sea and lives onboard. The program applies not only to voyages within Japan but also overseas (spouses only).



Third Engineer Ikuma Kurihara and wife Megumi  
(At the machinery control room of our containership BROOKLYN BRIDGE)

# Creating Comfortable Workplaces

*We respect the basic human rights of those working for the "K" Line Group and provide a variety of training programs to maximize each person's capabilities. We have been establishing a range of systems and improving the working environment to allow our employees to work comfortably every day.*

## Respect for Human Rights

### Respect for Human Rights and Compliance with Laws and Regulations

#### Raising awareness of respect for human rights within the entire Group

Awareness is increasing of respect for human rights as a global social issue. In response, we strive to create safe, comfortable workplaces by respecting the human rights, personality, and values of people working for the "K" Line Group, and eliminating discrimination based on race, gender, disabilities, and other attributes.

### Preventing Harassment

#### Dedicated consulting services for Group workers

We do not tolerate sexual or power harassment - conduct that violates our employees' human rights. To counter these problems, we have introduced dedicated consultation services for our employees. These services are designed to promptly eliminate harassment with maximum consideration for employees' privacy.

## Human Resource Development

### Development of Onshore Workers

#### OJT and OFF-JT as key means of development

We evaluate our staff members fairly based on the extent to which they have achieved their personal goals. Evaluation results are fed back to each staff member to improve the transparency of evaluation process and to encourage his/her development. We assist this development, primarily with two programs: on-the-job training (OJT) for mastering knowledge, skills, and procedures on-site, and job-class-specific group training (OFF-JT). Other training programs we offer include in-house and overseas language training, training at our overseas subsidiaries, and assistance for employees taking correspondence courses for personal development. We also provide onboard training for our onshore workers; a program specifically tailored for shipping companies. This helps individual participants improve their skills by providing them with a variety of opportunities, including experiencing work performed by seafarers on ships at sea.

### Respect for Diversity

#### Helping staff members to work successfully with respect for diversity

We have stepped up recruitment of female staff members and allocate our personnel in ways that allow all of them to work globally, irrespective of their gender. We have also enhanced our employment systems, including a system for reemploying retired employees, in accordance with a related law.

#### Promoting human resource exchanges on a global level

We strive to strengthen our human resources and organizational power by providing staff members with opportunities to work globally. For example, we accept trainees from our overseas Group companies and transfer human resources between Group companies.

#### Labor-management communications

To maintain and improve our working environment, we apply ideas given in constructive labor-management dialog to our systems (including support for maintaining work-life balance).

#### "K" Line University

Staff members of the "K" Line Group from all over the world are invited to our training sessions called "K" Line University, which are held at one of our three bases - Tokyo, London, or Richmond (Virginia, USA). This training, held several times a year, deals with themes such as the "K" Line Group's visions and its future business development. "K" Line University provides participants with a valuable opportunity to speak face to face with people they would normally only communicate with by phone or e-mail, and to deepen their shared understanding. In 2010, a total of 54 staff members around the world participated in "K" Line University.



"K" Line University being held in Tokyo

### Development of Seafarers

#### Developing specific career path plans

Our seafarers are global workers, both on land and at sea. Because of this, they are required to have a high level of expertise. To help them master the required knowledge and skills, we provide training programs and correspondence courses designed to improve their abilities at a level suited to their stage of employment. We develop specific career path plans for individual seafarers, enabling them to

understand what the company expects of them. Career plans for seafarers in their initial days at the company - the fostering period - provide them with work experience on as many types of ships as possible and enable them to develop a broader outlook. Plans for subsequent career improvement period aim to encourage the acquisition of overall knowledge about the shipping business, in addition to specific skills required for marine technical personnel. This is done by having them work alternately on shore and at sea as much as possible. (See also pages 19 and 20.)

## Work-Life Balance

### Systems for Comfortable and Fulfilling Working Experiences

#### Support systems for maintaining work-life balance

We help our employees maintain work-life balance by establishing systems that enable them to work in various ways. As the table at right shows, we provide programs that far exceed the legally required levels. In FY2011 we also introduced a leave plan for employees who receive advanced infertility treatment, part of our effort to encourage the development of the next generation.

Major programs	Outline
Childcare leave	Available until the child turns three
Nursing care leave	Leaves of absence for up to two years are available.
Loan program for employees on childcare or nursing care leave	During leave of absence: Support for employees on leave has been strengthened with a loan program. After returning to work: Employees can work reduced hours until their child completes the third grade of elementary school.
Flexible working hours	Introduced by various divisions with a core time of 10 a.m. to 4 p.m.
Refreshment leave	Available in one's 11th and 21st years at the company

\*This section applies to Kawasaki Kisen Kaisha, Ltd. and its employees.

## Safety and Health Considerations

### Health Care

#### For sound mental and physical health

Our Health Management Committee takes the initiative for improving the health status of employees by cooperating with industrial physicians, certified social insurance labor consultants, and the labor union. The Committee is also strengthening action to prevent overwork, for instance by providing managerial workers with explanations on the connection between overwork and health. In particular, the Committee is striving to establish a structure for continuous education of managers on their duty to care for their workers' health and safety.

#### Maintaining physical and mental health as the first step for ensuring safety at sea

For seafarers, the ship is both a place to work and to live. In consideration of this special work environment, we provide our seafarers with training in mental health care to help them provide sufficient care for their subordinates and themselves to ensure healthy onboard lives and sound operations. We also conduct appropriate labor management. We introduced the labor management and reporting system, aimed at preventing overwork by considering the appropriate amounts of work to be assigned to each worker.

## Voice

### Welcome V-SAT (Fleet broadband)

*In April 2011, V-SAT was installed in BROOKLYN BRIDGE, the container ship I work on, while it was at the Port of Tokyo. Originally intended for communications for ship operations, V-SAT enables the Internet to be accessed wherever the ship is, anywhere around the world. Now we can search the Web and send e-mail just like we do onshore.*

*The system allows us to obtain the latest news on current affairs, not to mention world and maritime issues. Crew members have a lot to talk about, which leads to better integration of the onboard community. V-SAT will definitely make onboard lives more enjoyable.*

**Aya Haryu**, Second Officer



HIGHLIGHT Responsibility as a Shipping Line **IV**

# Contributing to Society by Using Our Resources as a Shipping Business

*As a good corporate citizen, the "K" Line Group contributes to society through a range of activities. Some of these are undertaken by using resources specific to a shipping company. This article gives two real examples of these activities – weather observation and reports by our ships – and how we are supporting reconstruction of areas affected by the Great East Japan Earthquake.*



Vane anemometer



Observing clouds



Measurement of atmospheric pressure

Measurement of temperature and dew point (humidity)

## Weather Observation and Reports by Ships

### Promoting weather observation and reports by ships

Needless to say, ship navigation and weather are closely related. It is possible to say that weather observation technologies evolved together with navigation skills and that weather forecasts were first started for the sake of safety of ships at sea. All "K" Line ships observe weather and report the data to the Meteorological Agency. The Meteorological Service Act of Japan requires that ships be equipped with necessary meteorological instruments, observe meteorological and hydrological phenomena, and report the results to the Director-General of the Japan Meteorological Agency. The World Meteorological Organization (WMO), a specialized United Nations agency, also asks its member nations to encourage ships to observe and report meteorological phenomena, and the nations act accordingly. Observed data reported by ships of various nations are shared via the international telecommunications line on a real-time basis and used by meteorological organizations and other such parties all over the world. The data are used primarily for helping ensure safe navigation of ships and referred to for analyzing and forecasting weather and ocean

waves, along with data from meteorological satellites, weather radar, and onshore observations. Data obtained through ships' weather observations are essential as the basis for analyzing and forecasting weather and ocean waves and declaring warnings, even though advanced meteorological satellites and weather radar are now available. Data from ships also play an important role in preventing and alleviating climatic hazards not only for ships at sea but also to onshore industries, transportation facilities, and other such parties. In recent years, response to climatic changes such as global warming is an urgent issue commonly shared by everyone on the planet. Results of observations in the ocean, where weather is not observed frequently, are playing an increasingly important role in monitoring climate changes on the global level.

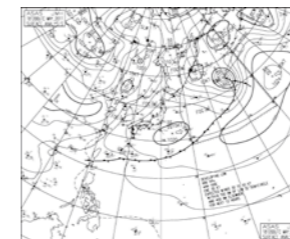


**Yusuke Yamamoto**  
Marine Safety Team,  
Marine Safety Administration Group

## A Message from a Stakeholder

### Utilization of data for monitoring global warming

Cooperation by commercial ships is essential for collecting meteorological data across the vast oceans. Data sent from ships all over the world in 2010 totaled approximately 1.7 million reports. The information is used by weather bureaus of various countries for conducting weather and marine forecasts and declaring warnings. It is also used for monitoring global warming. In 2010, we received more than 8,000 weather observation reports from ships managed by ship management companies of the "K" Line Group ("K" Line Ship Management Co., Ltd., Taiyo Nippon Kisen Co., Ltd., and Escobal Japan Ltd.). We would appreciate the continued cooperation of "K" Line Group.



Meteorological chart (Source: Japan Meteorological Agency website)

**Marine Division,  
Global Environment  
and Marine Department,  
Japan Meteorological Agency**

## "K" Line Group's support for the areas affected by the Great East Japan Earthquake



We provide free transport of relief supplies for the disaster-hit areas, including marine transport of materials for constructing temporary houses, along with everyday commodities for victims. We also support the recovery efforts behind the lines. For instance, we cooperate with the Japan Ground Self-Defense Force in transporting troops engaged in relief and recovery activities in the affected areas and the vehicles they use, and we offer our reefer containers for storing food for the troops in their garrisons. The "K" Line Group will continue to proactively take part in relief activities by using our resources as a shipping company so the victims can return to normal lives as soon as possible.

# The "K" Line Group's Social Contribution Activities

*The "K" Line Group operates globally in seeking to achieve mutual benefit with local communities in different countries. We do this through steady accrual of small efforts, including contributions to society with resources as a shipping business, development of the next generation, and participation in volunteer activities.*

## Fundamental Policy

### Mutual Benefitting Society

#### Contributing to society as a good corporate citizen

As a responsible member of society, the "K" Line Group makes use of its expertise and technologies to proactively engage in social

contribution activities. For instance, in times of disaster or marine accidents we transport goods and equipment.

We also participate in volunteer activities in local communities and support development of human resources who will take charge in the next generation.

## Development of the Next Generation

### Cooperating in Internship Programs

#### Cooperation in the human resource development of the travel industry

Every year "K" LINE TRAVEL, LTD. accepts interns from Bukkyo University in the Hanshin (Osaka/Kobe) area and from Dokkyo University in the Tokyo area.

When we first accepted interns, we sometimes wondered what to do for these students who were sparing their valuable time for the program. But we can give them opportunities to experience onsite work in the travel industry, which is impossible without joining an internship program.

We believe the significance of an internship program lies in the fact that students can experience working for companies before they graduate, which is later instructive for their job hunting. It is also significant for companies because it gives them opportunities to exchange information with universities and students. We will continue these activities in the hopes that this program will help develop human resources who become responsible for the future of the travel industry.



Staff members of Kobe Office of "K" LINE TRAVEL, LTD.

## Support for Local Communities

### Baskets Containing Gifts for Senior Citizens

#### KAM's support for senior citizens

"K" Line America, Inc. (KAM) sent 15 baskets to Senior Connections, a non-profit organization supporting senior citizens based in Richmond (Virginia, USA), where the company's head office is located. KAM began this activity in 2004. KAM staff members fill each basket with preserved foods, toiletries, and other daily commodities purchased at stores and pack the baskets with care before sending them to senior citizens.



KAM staff members filling baskets

### Exchange Meeting with Children

#### Activities to bring smiles to children

In December 2010, the "K" Line Maritime Academy Philippines (KLMA Phil) invited 30 children from impoverished homes in Pasay, where the company is located. Staff members of "K" Line Group companies residing in the city, including those of KLMA, met with the children, had lunch together, and gave them bags containing stationery. Children enjoyed singing and dancing and all the participants had a good time together. Through this activity, which was in its third year, KLMA brought smiles to the children's faces and cheered them up.



Pasay children with KLMA staff members

### Creation of Small Dams in a National Park

#### KTL Walk Rally 2010

Every year, K Line (Thailand) Ltd. (KTL) holds Walk Rally, an event aimed at promoting good health of staff members and preserving the natural environment. In 2010, 400 staff members participated in this event and created small dams for preventing soil runoff due to rain at Kaeng Krachan National Park in a southwest suburb of Bangkok. Located in a mountain range canyon, this park

provides habitat for a wide variety of flora and fauna, including wild elephants. To protect the rich natural environment, KTL cooperated with the park's administration bureau and created as many as 10 small dams with only human power by collecting stones and wood and piling them up with impermeable soil.



Staff members creating a small dam

## Other Support Activities

### Disaster Relief

#### Providing aid for reconstruction in areas hit by major disasters

The "K" Line Group has been assisting disaster-hit areas through donations and cooperating in transportation.

In 2010, a huge earthquake that registered magnitude 8.8 on the Richter scale hit central Chile, and was followed by a tsunami. This resulted in a great disaster that took lives of many people over a wide area including the capital of Santiago. REPRESENTACIONES

MARITIMAS KAWASAKI CHILE LTDA. provided free transport of relief supplies in two 40-foot containers, including preserved foods and clothing.



Staff members loading containers with relief supplies

### Cooperating in Ocean Transport of Relief Supplies

#### Contributing to society with our expertise

"K" LINE SHIPPING (SOUTH AFRICA) PTY LTD. (KLSSA) cooperates with the South African Primary Education Support Initiative (SAPESI), a non-profit organization supporting education of South African children. KLSSA provides free ocean transport and domestic land transport of educational materials for children.

The first shipment took place in March 2011, when a "K" Line-operated ship loaded with 1,000 English books and stationery for children arrived at the city of Durban.



KLSSA staff members (two people on the right) handing over transported cargo to the SAPESI representative.

### Volunteer Activities

#### Participating in volunteer activities with "K" Line Group staff

In June 2010, "K" Line Group staff and their families (38 people in total) participated in an annual cleanup of the beach in Odaiba, Tokyo.

In November of the same year, staff from "K" Line and four Group companies (Kawasaki Kinkai Kisen Kaisha, Ltd., "K" Line Ship Management Co., Ltd., Escobal Japan Ltd., and KMDS Co., Ltd.) and their families (30 people in total) participated in the Umi-no-Mori [Sea forest] tree-planting activity in Tokyo. Sweating from their efforts, they enjoyed planting trees for the first time in their lives. We hope that the planted trees will grow up, turn into a lush green sea forest in 10 to 20 years, and help prevent global warming by absorbing carbon dioxide.

## Voice

### Participation in activity for preserving the marine environment

*I feel very happy and proud to be involved in the Artificial Coral Plantation at Ko Kham, Chonburi province by K Line (Thailand) Ltd. which I believe is beneficial to society and helps restore nature. Moreover, I'm proud that the company's contribution to society has continued for many years with great cooperation of all staff and management. In addition to the above-mentioned activity, the company also helped with other social activities such as flood donations, creation of small dams, donation of unused desk calendars to the foundation for the blind and so on.*

**Anchasa Middelburg**, Manager, Payroll & Welfare Section, K Line (Thailand) Ltd.



## Green Accounting

In accordance with the Ministry of the Environment's Green Accounting Guidelines 2005, we have aggregated the figures for January to December 2010. The figures below are from the companies that comprise the Environmental Management System (EMS) of the "K" Line Group. The amount of investment is the total cost for purchasing equipment used for carrying out the measures in each item. The amount of expenses is the total cost for maintaining this equipment, treating waste, maintaining the EMS and other measures. The amount of expenses also

includes depreciation and amortization costs, and the method of depreciation and amortization and service life comply with our financial accounting methods.

The results of our environmental accounting for 2010 are as follows. The total amount of investment was ¥3.05 billion, while that of expenses was ¥1.01 billion, with an economic effect of ¥6.03 billion.

Note: Figures in the tables below are rounded up or down to the nearest thousand. Accordingly, the sum of the values may differ from the total amount.

### Costs for Environmental Preservation

Category	Details of Main Measures	Investment	Expenses
<b>1 Costs directly related to shipping and logistics business</b>			
1. Prevention of pollution	Prevention of air pollution <sup>1)</sup>	376,000	61,147
	Prevention of water contamination	—	188
2. Preservation of the global environment	Prevention of global warming <sup>2)</sup>	1,939,766	443,262
	Prevention of marine pollution <sup>3)</sup>	469,611	158,076
3. Recycling of resources	Efficient use of resources <sup>4)</sup>	265,000	69,942
	Recycling of industrial waste	—	852
	Waste treatment cost	—	185,669
<b>2 Upstream and downstream costs</b>			
1. Procurement of services that help reduce environmental impact	Recycled and eco-friendly products	—	733
<b>3 Management costs</b>			
1. Maintaining and operating EMS	Maintaining EMS	—	63,122
2. Disclosure of environmental information, environmental advertising	Issuance of Social and Environmental Report	—	6,670
3. Monitoring of environmental impact	Collection of environmental data by ships	—	6,158
4. Environmental training, etc. for employees	Environmental seminars and training	—	6,873
<b>4 Research and development costs</b>			
1. Research and development of products that contribute to environmental preservation	Development of environmentally friendly ship equipment	—	10,204
<b>5 Costs for social activities</b>			
1. Protection of natural environment, greening, beautification, and maintenance of landscape	Social contributions	—	62
<b>Total</b>		<b>3,050,377</b>	<b>1,012,960</b>

• Primary measures we take for our ships are as follows:

- Cold ironing and devices for collecting dust from exhaust gas
- Exhaust gas economizers, turbo generators, electronically controlled engines, devices for injecting combustion improver, reduced use of turbochargers
- Stern tube air seals, central cooling systems, use of electric-powered deck equipment, installation of pipes and tanks for preventing overflow, use of environmentally friendly paint for ship bottoms
- Electronically controlled cylinder lubricators

### Environmental Preservation Effects

Effect Details	Effect Indexes	Index Values			
		2010	2009	Effect	
Effects corresponding to costs directly related to shipping and logistics business	① Effects concerning resources invested on business activities	Input of energy			
		Fuel oil (gram/ton-km)	0.97	0.91	0.06
	Lubricating oil (ml/ton-km)	0.010	0.011	-0.001	
	② Effects concerning environmental burdens and waste generated by business activities	Atmospheric emissions, etc.			
		CO <sub>2</sub> (gram -CO <sub>2</sub> /ton-km)	3.16	3.22	-0.06
		SO <sub>x</sub> (gram -SO <sub>x</sub> /ton-km)	0.054	0.057	-0.003
		NO <sub>x</sub> (gram -NO <sub>x</sub> /ton-km)	0.082	0.088	-0.006
		Waste generation, etc.			
		Bilge (m <sup>3</sup> /ship-month)	21.1	21.8	-0.7
		Sludge (m <sup>3</sup> /ship-month)	10.7	11.1	-0.4
Garbage onboard (m <sup>3</sup> /ship-month)		4.6	4.8	-0.2	

### Economic Effects of Environmental Measures (substantial effects)

Effect Details	Amount
Energy cost savings by use of energy-saving equipment	5,919,644
Energy cost and port charge savings by sailing at reduced speed in waters off Long Beach	82,921
Energy cost savings by reducing sailing speed in Ise and Mikawa Bay	10,986
Energy cost savings by cold ironing	19,334
<b>Total</b>	<b>6,032,886</b>

## Human Resources Data

• This section concerns Kawasaki Kisen Kaisha, Ltd. and its employees.

### Number of Employees (as of the end of each fiscal year)

	FY2006		FY2007		FY2008		FY2009		FY2010	
	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer
Male	304	156	317	166	308	182	322	186	<b>323</b>	<b>181</b>
Female	109	1	115	2	109	3	111	4	<b>114</b>	<b>5</b>
<b>Total</b>	<b>413</b>	<b>157</b>	<b>432</b>	<b>168</b>	<b>417</b>	<b>185</b>	<b>433</b>	<b>190</b>	<b>437</b>	<b>186</b>

### Number of New Employees (Including Mid-Career Employees)

	FY2006		FY2007		FY2008		FY2009		FY2010	
	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer
Male	34	16	30	17	17	21	13	19	<b>20</b>	<b>14</b>
Female	7	1	5	1	10	1	7	1	<b>11</b>	<b>2</b>
<b>Total</b>	<b>41</b>	<b>17</b>	<b>35</b>	<b>18</b>	<b>27</b>	<b>22</b>	<b>20</b>	<b>20</b>	<b>31</b>	<b>16</b>

### Average Length of Service (as of the end of each fiscal year)

	FY2006	FY2007	FY2008	FY2009	FY2010
Comprehensive work onshore	13.2	13.9	13.7	13.9	<b>13.5</b>
Clerical work onshore	16.3	20.1	20.8	21.2	<b>19.4</b>
Seafarer	13.5	13.8	15.0	11.5	<b>11.9</b>

### Turnover Rate of Employees 30 or Younger

	FY2006		FY2007		FY2008		FY2009		FY2010	
	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer
	1.52	0.73	1.43	0.35	2.04	0.34	1.42	0	<b>1.53</b>	<b>3.30</b>

\* Turnover rate of employees 30 or younger = (Number of employees departing the company at 30 or younger) ÷ (Number of employees 30 or younger engaging in comprehensive or clerical work)

### Number of Employees Taking Childcare Leave

	FY2006		FY2007		FY2008		FY2009		FY2010	
	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer
Male	1	1	0	0	0	0	0	1	<b>0</b>	<b>0</b>
Female	6	0	1	0	2	0	4	0	<b>6</b>	<b>0</b>

### Percentage of Eligible Female Employees Taking Childcare Leave

	FY2006		FY2007		FY2008		FY2009		FY2010	
	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer
	100	—	100	—	100	—	100	—	<b>100</b>	<b>—</b>

\* Percentage = Number of female employees taking childcare leave ÷ Number of female employees giving birth

### Number of Employees Using the Shorter-Working-Hour Program

	FY2006		FY2007		FY2008		FY2009		FY2010	
	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer
Male	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
Female	0	0	0	0	4	0	1	0	<b>1</b>	<b>0</b>

### Number of Employees Taking Nursing Care Leave

	FY2006		FY2007		FY2008		FY2009		FY2010	
	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer
Male	0	0	0	0	0	0	0	1	<b>0</b>	<b>0</b>
Female	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>

### Rate of Employment of Persons with Disabilities (as of the end of each fiscal year)

	FY2006	FY2007	FY2008	FY2009	FY2010
	2.69	2.56	2.05	2.12	<b>1.60</b>

\* Regarding the rate of employment of persons with disabilities, we comply with the provisions of the Act on Employment Promotion etc. of Persons with Disabilities. Accordingly, we applied an exclusion rate of 90% in calculating the rate for crew members (excluding those working onshore).

### Number of Retired Employees Reemployed by the Company (as of the end of each fiscal year)

	FY2006	FY2007	FY2008	FY2009	FY2010
	21	26	33	35	<b>17</b>

### Number of Industrial Accidents

	FY2006		FY2007		FY2008		FY2009		FY2010	
	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer	Onshore	Seafarer
	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>

\* Accidents during commuting are excluded.

# Results of Questionnaire on Social and Environmental Report 2010

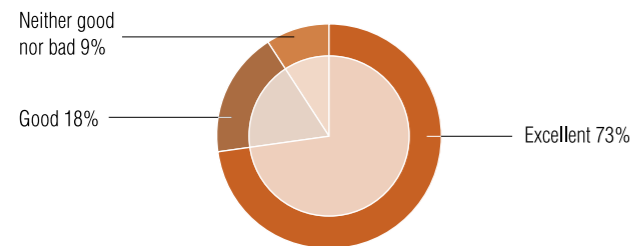
We are grateful for your answers to the questionnaire on Social and Environmental Report 2010.

With your comments as a basis, we will strive to expand our CSR activities, report on the details and improve the report's readability and understandability.

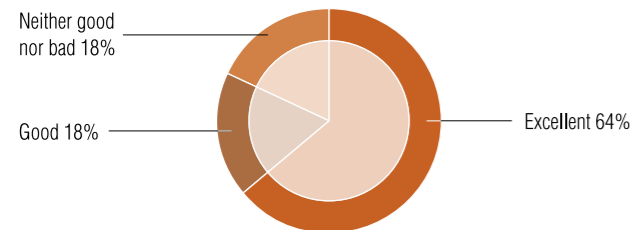
Note: Values in the graphs may not total 100% because numbers are rounded.

## Q1 What is your opinion about the contents of this report?

### Entire content

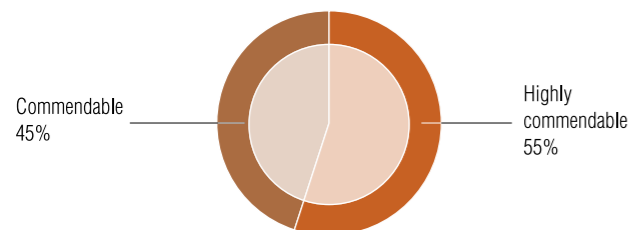


### Design (layout, photos, graphs, etc.)

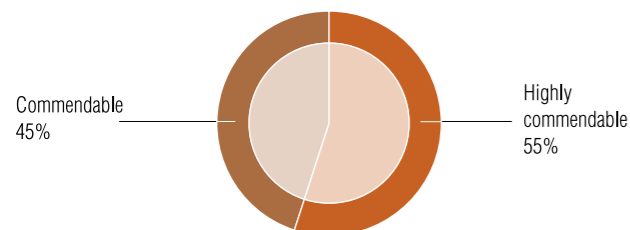


## Q2 How did you find the initiatives of the "K" Line Group?

### Safety in navigation and cargo operation



### Environmental preservation



## Q3 Which sections were impressive for you?

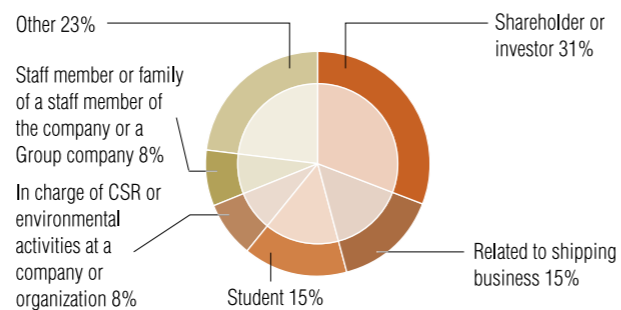
### Items that respondents found interesting

- Initiatives at Sea
- Message from the President
- Initiatives for Safety in Navigation and Cargo Operation
- Results of Our Environmental Activities in 2009 and Targets for 2010
- The "K" Line Group's Relationship with Society and Environment
- Initiatives at Terminals
- Creating Comfortable Workplaces

### Items found to have insufficient content

- Corporate Principles of the "K" Line Group and Vision
- Fulfilling Our Social Responsibilities
- Management
- Results of Questionnaire

## Q4 Which of the following applies to your position?



## Q5 Please share with us any other comments or opinions.

- It is good that the company is closely related to China, a BRICs country. I'm looking forward to seeing if the company will continue to develop its relationships with other countries.
- If the "Message from the President" included opinions for international organizations such as the IMO and reference to international frameworks such as the United Nations, the report would better show the company's attitude toward global issues concerning CSR and the environment.
- The "Working Together with Our Business Partners" section should show opinions from your business partners.
- You should conduct satisfaction surveys for the "Working Together with Our Business Partners" and "Working Together with Our Staff Members" sections and show the survey results in these sections.
- I think that the air seals for the stern tube are a good, environmentally friendly type of equipment.
- "Continuing marine surveys" does not tell us what specific surveys you conduct.
- I saw the project with the New York Highway on a TV program and thought it was interesting. So I was happy to find this ship recycling project introduced in the report.
- I want to know the "Third Party View" of multiple people.
- I look forward to reading this report every year.

## Third-Party View



**Yoshinao Kozuma**

Professor, Faculty of Economics,  
Sophia University, Japan

### 1. Strong Will to Ensure Safety in Navigation and Cargo Operation

Needless to say, ensuring safe navigation of ships is an extremely important corporate responsibility for a company engaging in the shipping business. The "K" Line Group approaches this issue on a management strategy level, beyond the scope of mere risk management. This is evident from the fact that the company refers to "a secure system for managing safety in navigation and cargo operation" as a priority issue in its medium-term management plan, "K" LINE Vision 100. This plan was formulated in 2008 and revised in 2010 and 2011. Safety in navigation and cargo operation has remained at the core of the plan together with environmental preservation, and the company remains aware of its importance.

Above all, I would like to strongly praise the company for implementing strategic safety measures such as strengthening of quality control during ship construction and recruitment and development of marine technical personnel, which is combined with initiatives for operations including enhancement of the system for managing safety in navigation and cargo operation and strict application of the Safety Management System. These medium- and long-term perspectives offer an indication of the "K" Line Group's strong will to ensure safety in navigation and cargo operation. This high safety awareness seems to be shared across the entire company. This is strongly demonstrated by the fact that the company has had zero industrial accidents for five consecutive years. Yet the company is not free from issues to be resolved, because minor leakage of hydraulic oil from ships took place for some consecutive years. I hope that the company will strengthen management further so that accumulation of minor accidents will not lead to a major accident.

### 2. Response to Climate Change

Ship transportation is known to be the most low-carbon mode of transport. However, approximately 3% of all the world's carbon dioxide

(CO<sub>2</sub>) emissions are said to be attributed to the shipping business. To promote reduction of CO<sub>2</sub> emissions, the European Union (EU) is considering introduction of certain systems for regulation, including emissions trading. Reduction of ships' CO<sub>2</sub> emissions is therefore an urgent management issue in the shipping industry. The "K" Line Group set a medium-term target of, by the mid-2010s, cutting CO<sub>2</sub> emissions by 10% per ton-mile compared to 2006. It seems that this target has already been achieved. However, fiscal year targets of the Group are year-on-year reductions, while its disclosed results are CO<sub>2</sub> emissions per ton-mile. As a result, the relationship among the medium-term target, fiscal year targets, and results is difficult to understand. I hope the Group will disclose data in a way that enables easy understanding of how the Group responds to climate change.

### 3. Promotion of Mutual Benefits

"K" LINE Vision 100 includes mutual benefits with society as one of its main themes. Most remarkable among the company's initiatives for promoting such benefits is its proactive stakeholder engagement. The "K" Line Group has multiple communication channels with its customers, shareholders and investors, business partners, employees, local communities, and global society, applying different engagement styles for different stakeholders. Of course, the company still has room for improvement, such as further diversification of the channels and increasing the frequency of engagement. The company is expected to fine-tune its engagement style for each stakeholder and make steady progress toward mutual benefits, which cannot be obtained through sporadic dialog.

### 4. Concern for Work-Life Balance

"K" Line's programs for supporting work-life balance feature a rich level of content that far exceeds legal requirements. In FY2011, the company introduced a leave plan for employees receiving advanced infertility treatment, thereby establishing an industry-leading support system. I hope that the company will try to strengthen these initiatives further by considering disclosure of such information as Group-based personnel data, number of working mothers, number of employees working flexible hours, and rate of use of paid leave.

### Reply to the Third-Party View

*I would like to thank Professor Kozuma for his valuable perspective.*

*We are proud and it gives us great confidence that our companywide efforts for strengthening measures for safe navigation and cargo operation were highly acclaimed as strategic safety measures. Instead of this making us self-satisfied, we would like to continue our patient efforts, including measures for eliminating minor accidents, as pointed out by Professor Kozuma.*

*The matters concerning our environmental measures and engagement with stakeholders are attributed to our insufficient information disclosure and lack of skills. We take these points seriously and strive to "visualize" our responses to all of our stakeholders without becoming complacent.*

*Each of our staff members will refer to Professor Kozuma's opinions and act in accordance with the Group's corporate principles to contribute to society. We will thus strive to have society recognize "K" Line as a good corporate citizen.*



**Masami Sasaki**

Director, Managing Executive  
Officer in charge of  
Marine Sector



Hibiya Central Building,  
2-9, Nishi-shinbashi 1-chome, Minato-ku,  
Tokyo 105-8421, Japan

Enquiries:

**CSR & Compliance Division, General Affairs Group**

Phone: (+81) 3-3595-5092

E-mail: [kljtyocsrkd@jp.kline.com](mailto:kljtyocsrkd@jp.kline.com)

**Environment Management Division**

Phone: (+81) 3-3595-5667

E-mail: [kljtyoemd@jp.kline.com](mailto:kljtyoemd@jp.kline.com)

We also provide extensive information on our website:

**[http://www.kline.co.jp/index\\_e.html](http://www.kline.co.jp/index_e.html)**

In addition to this Report, we regularly publish the following materials:

- Corporate Profile (Japanese/English)
- Annual Review (Japanese)/Annual Report (English), published annually
- Company Newsletters (Japanese/English), published monthly (bimonthly in English)
- Shareholders' Newsletter (Japanese; issued in August, November, and February)