



ClassNK

ANNUAL REPORT
2009

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ClassNK

PROFILE

Founded on 15 November 1899, Nippon Kaiji Kyokai, better known as ClassNK or simply NK, is a ship classification society dedicated to safeguarding life and property at sea and to preventing marine pollution. ClassNK offers a broad spectrum of services as a totally independent third party, non-profit organization. The principal work of the Society's expert technical staff is to conduct surveys of new and existing ships and other marine structures, including hull structures, propulsion systems, electrical and electronic systems, safety equipment, and cargo handling gear, among numerous other areas, to ensure their full compliance with classification rules developed by the Society. It also conducts a wide range of statutory surveys on behalf of more than 100 flag States around the world. Other activities include the audit and certification of safety management systems based on the ISM Code, quality and environmental system assessments based on ISO standards, technical consulting, and an extensive range of cutting-edge R&D projects.

Since its founding 110 years ago, ClassNK has worked tirelessly to fulfill its mission of protecting human life, maritime property and the marine environment. An unmatched commitment to technical excellence and providing the highest level of service has made the Society a world leader in ship classification. As a result, by the end of 2009, the NK register listed 7,188 ships totaling nearly 169 million gross tons. This number represents more than 20% of the world's merchant fleet under class.

Although based in Japan, ClassNK has global representation through a network of 109 exclusive surveyor offices. ClassNK's surveyors work in shipbuilding and repair yards and at ports around the world, wherever they may be called upon to examine the condition of a ship, to ensure that all of the Society's services are available 24/7, worldwide.





The NK Mission

ClassNK is dedicated to ensuring the safety of life and property at sea, and to preventing pollution of the marine environment. To achieve this mission ClassNK will :

- Focus on delivering the highest quality classification services, by the highest quality personnel while maintaining its totally independent third party, non-profit status;
- Focus on the development of relevant rules, guidances and procedures, and maintain and develop its commitment to scientific and technological research and development; and
- Maintain and develop its global operations in line with the needs of those using its services.

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Chairman's Message

Welcome to the 2009 Annual Report.



Although 2008 was marked by the maritime industry's unprecedented decline as a result of the global financial crisis, 2009 brought with it the first signs of recovery. Even as the first part of the year saw continued newbuilding cancellations, delivery delays, and stagnant demand for new ships, by the second half of the year, maritime freight volumes were once again on the rise.

Despite these many challenges, thanks to enduring support and cooperation of our partners and others in the maritime community, ClassNK last year celebrated the 110th anniversary of its founding. For ClassNK to have developed and risen to these great heights over the past 110 years, even as the maritime industry has swung back and forth between periods of incredible growth and extreme hardship, is a special achievement worthy of celebration.

Looking back on the growth of our class register, which remains the foundation of our business, ClassNK has achieved almost continuous growth through the years since classifying its very first ship in 1920. Since then, our register reached 10 million gross tons in 1965, 50 million gross tons in 1975, and in 1997 broke the 100 million gross ton mark. Just twelve short years later, the number of new ships classed with the Society in 2009 reached 678, or some 18,495,000 million gross tons, setting a new record for the seventh straight year in a row. At the end of 2009, the total tonnage registered with the Society exceeded 168 million gross tons, accounting for about 20% of the international merchant fleet under class.

We have kept pace with the growth of our fleet by expanding our service network, which is essential for servicing vessels as they travel around the globe. This has included establishing new survey and audit offices at seven locations overseas during the year alone, including Ghana in West Africa, thus strengthening our network to 109 offices across the globe. Moreover, we have also developed and carried out rigorous training programs to develop better surveyors both abroad and in Japan in order to improve the quality of our service even further. We have made especially large strides in China and Korea, where we have both increased the number of surveyors and greatly strengthened our organizational system overall.

In order to increase our presence internationally, we have not only increased our participation in international conferences and exhibitions, but we are holding more technical seminars and committee meetings, and taking an active role



at IACS and the IMO. In 2010, ClassNK will become the Chair of the IACS Council, and as leader of this esteemed organization, we will contribute even further to the growth and development of the world maritime industry.

This past year, we also pursued our research and development activities more aggressively than ever before. This has included establishing a new Practical R&D Promotion Division in April 2009 to coordinate all of our research and development activities in order to more effectively meet the needs of industry. The new Division is tasked with not only overseeing the strategic goals and coordinating the planning of research and development activities within the Society as a whole, but also analyzing technical trends and requests from our industry partners, managing the execution of the R&D work done by different departments within the Society, and conveying the results of this work to the maritime industry and other interested parties. In line with the development of this new research organization, we have also recommitted ourselves to carrying out more practically focused R&D and contributing ever more proactively to the future of the maritime industry.

Every industry around the world has been called upon to confront environmental issues in recent years, and the maritime industry is no exception. Now, more than ever, we are also seeing greater emphasis being placed on the importance of Corporate Social Responsibility (CSR). Many companies and organizations are seeking to do more than just satisfy basic international convention requirements and are making use of new technologies to help prevent marine pollution, air polluting emissions, ecosystem destruction, as well as global warming. For its part, ClassNK now offers a new "Environmental Awareness" notation for ships that have adopted certain environmental measures onboard that exceed minimum statutory requirements and meet the evaluation standards set in the Society's "Environmental Guideline" published last May. In order to meet the growing demand for new environmentally friendly technologies, ClassNK also established a new Marine Environment Section in our Research Institute last year to investigate and research new technologies for realizing cleaner, greener seas.

While I am proud of these achievements, it is all the more gratifying to note that no ship classed with the Society suffered a major casualty or catastrophic loss attributable to any survey errors last year. As the Society celebrates its 110th anniversary of service to the maritime industry, every member of our staff, from each board member to each new employee, has rededicated to him or herself to improving his or her technical skills and offering the highest quality of service to our clients possible.

Finally, allow me to express my sincere gratitude again to all our clients and partners within the maritime industry. We hope that you will provide us with your continued support and understanding now and in the future.

Chairman and President Noboru Ueda





NK at a Glance

Service Network Expansion

In order to further improve customer service and expand its worldwide service network, ClassNK established seven new exclusive surveyor sites in 2009. By the end of the year, the number of ClassNK exclusive surveyor sites grew to 109 in total, including 88 outside Japan.

- January 1 – Algeciras (Spain)
Local Area Representative established
- March 1 – Dammam (Saudi Arabia)
Local Area Representative established
- April 1 – Nantong (China)
Office established

- September 1 – Fujairah (UAE)
Local Area Representative established
- December 1 – Dahej (India)
Local Area Representative established
- December 25 – Accra (Ghana)
Local Area Representative established
- December 31 – Tehran (Iran)
Sub-office established

Record Newbuildings

The number of newbuildings classed with the Society reached a total of 604 ships amounting to 16,703,104 gt in 2009, setting a new record for the Society both in



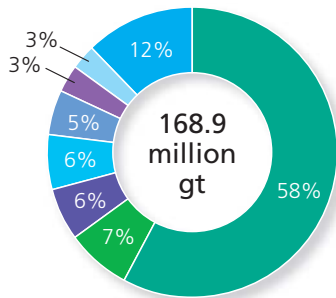
terms of the number of newly built ships registered and in total newbuilding tonnage.

110th Anniversary of Foundation

ClassNK celebrated the 110th anniversary of its foundation in November 2009, thanks to the longstanding and excellent support of the maritime community. Parties to celebrate the 110th anniversary were held in Tokyo as well as in many key offices around the world.

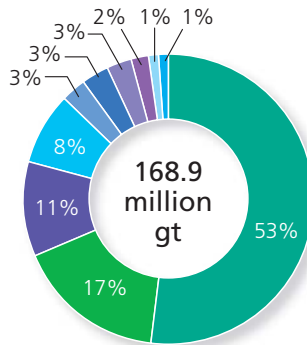


■ Breakdown of NK Fleet by Flag

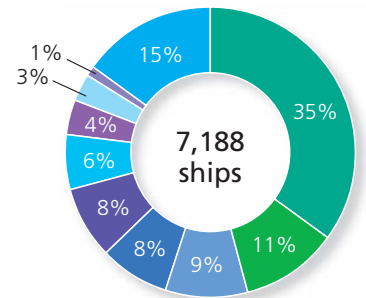


Panama	58%
Japan	7%
Liberia	6%
Singapore	6%
Hong Kong	5%
Marshall Islands	3%
Bahamas	3%
Others	12%

■ Breakdown of NK Fleet by Ship Type



Bulk Carrier	53%
Oil Tanker	17%
Container Carrier	11%
Vehicle Carrier	8%
General Cargo	3%
Chemical Tanker	3%
LNG Carrier	3%
LPG Carrier	2%
Refrigerated Cargo Carrier	1%
Others	1%



Bulk Carrier	35%
Oil Tanker	11%
General Cargo	9%
Chemical Tanker	8%
Container Carrier	8%
Vehicle Carrier	6%
LPG Carrier	4%
Refrigerated Cargo Carrier	3%
LNG Carrier	1%
Others	15%



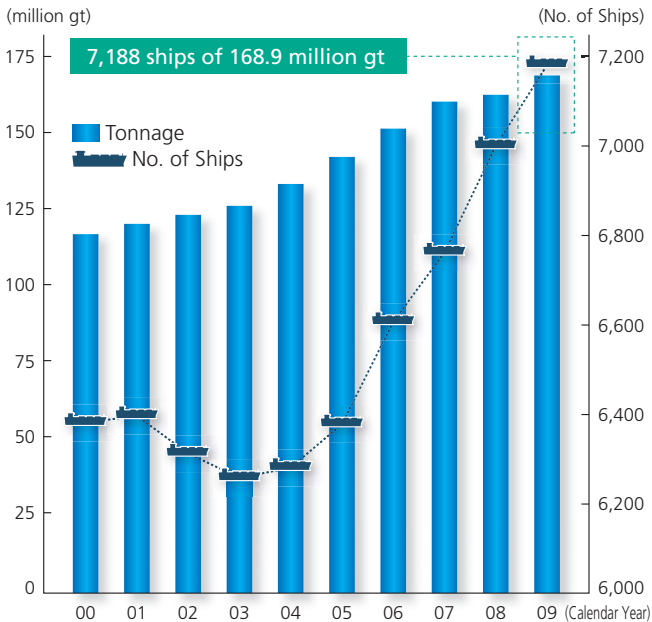
International Exhibitions

The Society participated in fourteen major international maritime exhibitions in 2009:

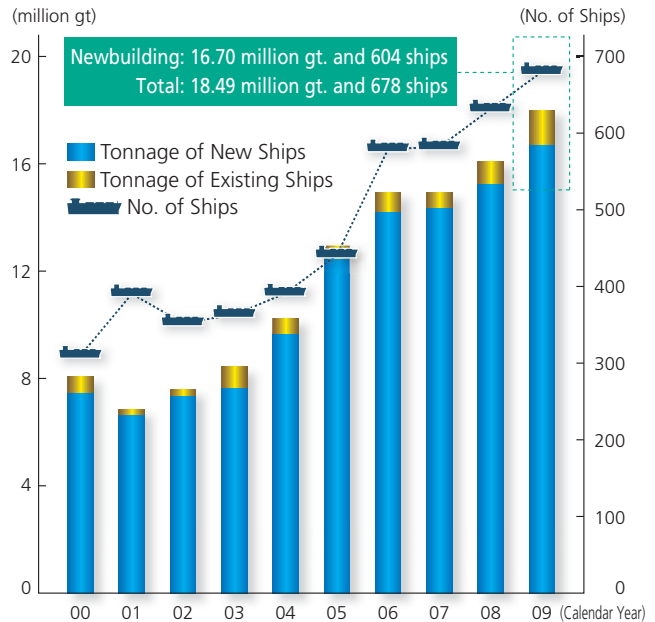
- Maritime Vietnam 2009 (February 25-27/Ho Chi Minh, Vietnam)
- CMA Shipping 2009 (March 23-25/Stamford, Connecticut, USA)
- Europort Istanbul 2009 (March 25-28/Istanbul, Turkey)
- Sea Asia 2009 (April 21-23/Singapore)
- Ship Tek 2009 (May 6-7/Singapore)
- Tokyo Tanker Event 2009-Intertanko (May 13-15/Tokyo, Japan)
- BARI-SHIP (May 21-23/Imabari, Japan)
- Gastech 2009 (May 25-28/Abu Dhabi, UAE)
- Nor-Shipping 2009 (June 9-12/Oslo, Norway)
- INMEX India 2009 (September 24-26/Mumbai, India)
- Middle East Workboats (October 5-7/Abu Dhabi, UAE)
- XXI COPINAVAL 2009 (October 18-22/Montevideo, Uruguay)
- KORMARINE (October 21-24/Busan, Korea)
- Marintec China 2009 (December 1-4/Shanghai, China)



■ ClassNK Fleet



■ GT and No. of Ships Newly Classed





Winner of the “Best Classification Award” at the International Maritime Video & Excellence Awards 2009

The third International Maritime Video & Excellence Awards ceremony was held in Singapore on 7 May 2009. The extent and excellence of the activities of the Society during period leading up to the award were highly regarded, resulting in ClassNK being awarded the “Best Classification Award”.



New Technical Guidelines

As part of its ongoing efforts to improve the safety

and reliability of ships at sea, the Society published numerous new technical guidelines in 2009, including those listed below. These and other guidelines can be downloaded from the “PDF Publications” page of the ClassNK website.

http://www.classnk.or.jp/hp/download/dl_pdf.asp

- Environmental Guideline
- Guidelines on Brittle Crack Arrest Design
- Risk Assessment Guidelines
- Guidelines for Navigating Ice Covered Seas in Russian Territorial Waters
- Guidelines for Container Stowage and Securing Arrangements
- ClassNK Technical Bulletin Vol. 27
- Guidelines on Shipboard Wireless LAN Systems





NK in Action

The Classed Fleet

As of the end of December 2009, ClassNK listed a total of 7,188 ships under class, a net increase of 148 ships over the year-end total for 2008. The total tonnage on the NK class register as of the end of 2009 was 168,864,285 gross tons, a net increase of 7,384,885 gt over the end of 2008. The average age of the NK fleet lessened slightly to 10.2 years.

The number of ships added to the NK register during 2009 rose to 678 ships, a new record for the Society. In terms of gross tonnage, 18,494,843 tons was added to the register during the year, also a new record for the Society.

By the end of 2009, the number of NK classed ships flagged outside of Japan stood at 6,211 vessels, or some 86% of the ships registered with the Society. These ships comprised 157,496,119 gross tons or 93.3% of the Society's total fleet. Ships registered with the Society continue to bear the flags of many different nations and territories, with NK classed ships registered to 71 different flag administrations.

A total of 604 newly built ships were added to the NK class register in 2009. These newbuildings comprised 16,703,104 gross tons, a significant increase over the previous year's record total of 15,358,075 gross tons. In terms of ship numbers, newbuildings accounted for



89.1% of all ships added to the register in 2009. On a gross ton basis, these newbuildings accounted for 90.3% of the total gross tonnage added to the register.

Domestic Newbuilding Highlights

With newbuilding registrations reaching record levels again in 2009, it was no surprise that ClassNK's 21 offices in Japan had a very busy year. Though it would be not be possible to list all of the newbuildings constructed under the auspices of our Japanese offices in this annual report, a brief overview of the year's highlights is presented below.

Tokyo

Although the ClassNK Tokyo Branch Office mainly conducts surveys for ships in service, the Office did oversee the construction of 17 newbuildings totaling 884,468 gross tons in 2009. Among the many impressive ships built under the watchful eye of the surveyors of the Tokyo Branch Office was the NORD PROGRESS, a 56,119 dwt bulk carrier built to the Common Structural Rules (CSR) by Mitsui Engineering & Shipbuilding Co., Ltd. Chiba Works for NORDEN Shipping (Singapore) Pte. Ltd.

Nagoya

In 2009, the Nagoya Branch Office oversaw the construction of 14 newbuildings totaling 849,912 gross tons. Notable newbuildings in the region include the SHIN KORYU, a 207,991 dwt bulk carrier built by Universal Shipbuilding Company's Tsu Shipyard for Biko Kisen K. K., the DIONYSOS LEADER, a 21,438 dwt, 6,430 unit vehicle carrier built by Shin Kurushima Toyohashi Shipbuilding Co., Ltd. for NYK Line, and the CRESTED EAGLE, a 55,989 dwt bulk carrier built based on the CSR by IHI Corporation's Aichi Works for Crested Eagle Shipping LLC.

Kobe

The Kobe Branch Office oversaw the construction of 14 newbuildings totaling 271,251 gross tons in 2009. Universal Shipbuilding Corp.'s Maizuru Shipyard built the MARCO, an 81,393 dwt bulk carrier for Lucy Enterprises Corp. Elsewhere in the region, Kanagawa Shipyard built the 318 dwt tugboat DOLPHIN NO. 10, for Mundra Port and Special Economic Zone Ltd, while the Kawasaki Shipbuilding's Kobe Shipyard built the 55,476

dwt bulk carrier AFRICAN KINGFISHER for Moon Rise Shipping Co., S.A.

Onomichi

2009 was another busy year for NK's Onomichi Office. The Office oversaw the construction of 50 newbuildings totaling 1,899,003 gross tons in 2009. Among the many newbuildings that the office surveyed was the C. S. OLIVE, an 82,175 dwt bulk carrier built by Tsuneishi Holdings Corporation, Tsuneishi Shipbuilding Company for Caribstar Shipping, S.A.

Hiroshima

In 2009, the Hiroshima Branch Office oversaw the construction of 31 newbuildings totaling 1,447,548 gross tons. IHI Marine United Inc. Kure Shipyard built the SETAGAWA, a 299,998 dwt VLCC, for Kawasaki Kisen K.K. and the HAMMERSMITH BRIDGE, an 8,212 TEU container carrier, for Primavera Montana S.A.

Sakaide

The Sakaide Branch Office oversaw the construction of 58 newbuildings totaling 2,135,567 gross tons. Kawasaki Heavy Industries, Ltd. Sakaide Works built the LNG JUPITER, an 81,950 dwt, a newly designed LNG carrier with a cargo tank capacity of 159,999m³ for Lloyds TSB Equipment Leasing (No. 7) Ltd. Elsewhere in the same region, Tsuneishi Holdings Corporation, Tsuneishi



PLEIADES DREAM

a 180,140 dwt bulk carrier built by Imabari Shipbuilding Co., Ltd., Saijo Shipyard for IBJ Leasing Company, Limited.



DIONYSOS LEADER

a 21,438 dwt vehicle carrier built by Shin Kurushima Toyohashi Shipbuilding Co., Ltd. for Nippon Yusen Kabushiki Kaisha.

Shipbuilding Company, Tadotsu Factory built the CANOPUS LEADER, a 17,382 dwt, 5,100 unit vehicle carrier, for Leo (PCTC) Pte. Ltd., and Shin Kochi Jyuko Co., Ltd. built the DAIHATSU MARU No. 2 for Kokoku Kaiun K.K.

Imabari

In 2009, the Imabari Branch Office oversaw the construction of 89 newbuildings totaling 2,215,421 gross tons. Imabari Shipbuilding Co., Ltd. Saijo Shipyard built the PLEIADES DREAM, an 180,140 dwt bulk carrier, for IBJ Leasing Company, Ltd. and the HAKKAISAN, a 309,916 dwt oil tanker, for Cygnus Shipping Maritime S.A. Also in the same region, Shin Kurushima Dockyard Co., Ltd. built the NORTHERN HIGHWAY, a 12,856 dwt vehicle carrier, for Bright Carrier S.A.

Kita Kyushu

In 2009, the Kita Kyushu Branch Office oversaw the construction of 9 newbuildings totaling 227,780 gross tons. The Kumamoto Dock Co. built the 9,106 dwt oil tanker GISELLE for Searights Maritime Services Pte. Ltd. In the same region, Mitsubishi Heavy Industries K.K. Shimonoseki Shipyard built the SILVERSTONE EXPRESS, a 15,154 dwt vehicle carrier, for Sinagtala Maritime

Management, Inc., and the Fukuoka Shipbuilding Co., Ltd. built the CARIBBEAN ORCHID, a 19,998 dwt chemical tanker, for Shinwa (Singapore) Pte. Ltd.

Usuki

In 2009, the Usuki Branch Office oversaw the construction of 31 newbuildings totaling 527,898 gross tons. Among the ships constructed under survey from the Society's Usuki Office was the GOLDEN WILLING, a 13,000 dwt chemical tanker built by Miura Shipbuilding Co., Ltd. for Clear Sailin Shipping S.A.

Nagasaki

Nagasaki is an area well known in Japan for its shipbuilding industry, and in 2009, the Nagasaki Branch Office oversaw the construction of 16 newbuildings totaling 950,832 gross tons. One of the notable ships constructed in this area in 2009 was the TOYOKUNI, a 297,584 dwt very large ore carrier built for Kawasaki Kisen Kaisha, Ltd. at Universal Shipbuilding Corporation's Ariake Shipyard based on the so-called the Unimax Ore design. The Nagasaki Branch Office also oversaw the construction of the 18,697 dwt, 6,200 unit vehicle carrier ZEUS LEADER for NYK Line, and the



76,939 dwt LNG carrier TAITAR No. 1 for NiMiC. No. 1 S. A. Both ships were built at Mitsubishi Heavy Industries, Ltd. Nagasaki Shipyard & Machinery Works.

Sasebo

In 2009, the Sasebo Branch Office oversaw the construction of 31 newbuildings totaling 1,735,992 gross tons. Namura Shipbuilding Company Imari Shipyard & Works built the 302,303 dwt oil tanker ATLANTIC PIONEER for Primo Shipping S.A and the 174,788 dwt bulk carrier GRY BULKER for LB Ship Owner A/S. In the same region, Oshima Shipbuilding Co., Ltd. built the UNTA, a 106,583 dwt bulk carrier, for Yakumo Maritime S.A.

International Newbuilding Highlights

As the global network of the Society continues to grow, the number of surveys, including newbuilding surveys, overseas has been steadily on the rise. A brief summary of international newbuilding highlights for some of ClassNK's 88 exclusive surveyor offices overseas is given below.

China

In 2009, the Society established a new office in Nantong, bringing the total number of survey offices in the country to ten. As in previous years, the number of newbuildings classified by NK in China has continued to grow, with a total of 35 newly built ships amounting to some 1,244,683 gross tons registered with the Society in 2009.

The Society's Zhoushan Office oversaw the construction of the CALY MANX, a 58,089 dwt bulk carrier built by Tsuneishi Group (Zhoushan) Shipbuilding Inc. for Caly Marine Ltd. and the DAI SHAN HAI, a 56,945 dwt bulk carrier built by COSCO (Zhoushan) Shipyard Co., Ltd. for Daishanhai Shipping Inc.

The Society's Nantong Office oversaw the construction of the BANGKOK HIGHWAY, first of a series of 15,306 dwt vehicle carriers built for KAW1601 Shipping S.A., and the HE TONG, a 297,633 dwt VLOC both built by Nantong COSCO KHI Ship Engineering Co., Ltd. (NACKS).

The Society's Dalian Office conducted newbuilding surveys for the 6,339 dwt barge STEEL HUB-18 and other vessels built by Dalian Shipyard Industrial Development General Corporation, Chang Xing Shipyard, for Steel Hub Co., Ltd.

Elsewhere in China, the Society's Guangzhou Office conducted a newbuilding survey for the 56,753 dwt bulk carrier BALABAN, built by COSCO (Guangdong) Shipyard Co., Ltd. for Denizcilik Sanayi Nakliyat ve Ticaret Anonim Sirketi.

Korea

The Society's offices in Korea oversaw the construction of 20 newbuildings totaling 882,000 gross tons in 2009. Hyundai Heavy Industries Co., Ltd. built the AMBASSADOR BRIDGE, a 51,314 dwt container carrier for Sinbanali Shipping, Inc. In the same region, STX Offshore & Shipping Co., Ltd. built the PRISCO ABAKAN, a



DAIHATSU MARU No. 2

a 2,157 dwt vehicle carrier built by Shin Kochijyuko Co., Ltd. for Kohkoku Kaiun K.K.



TOHO MARU

a 1,024 dwt LNG carrier built by Miura Shipbuilding Co., Ltd. for Iino Gas Transport Co., Ltd.

57,334 dwt bulk carrier for Priscobulk Shipping Co. Ltd. and the ELGIZNUR CEBI, a 57,305 dwt bulk carrier for Cebi Denizcilik ve Ticaret Anonim Sirketi. Hyundai Samho Heavy Industries Co., Ltd. built the NYK REMUS, a 65,981 dwt container carrier for NYK Line.

The Philippines

In 2009, the Society's Cebu Office oversaw the new construction of 8 bulk carriers totaling 259,032 gross tons at Tsuneishi Heavy Industries (Cebu) Inc. Representative of these were the 58,803 dwt NORD EXPLORER built for Baba Maritime S.A., and the 58,761 dwt NEW PRIDE built for New Confidence Line S.A.

Malaysia

ClassNK's Offices in Malaysia oversaw the construction of a total of 108 newbuildings, primarily barges and tugboats, totaling 43,304 gross tons in 2009.

Indonesia

ClassNK's offices in Indonesia oversaw the construction of 29 newbuildings, also primarily barges and tugboats, totaling 38,837 gross tons in 2009.

Survey Activities and Approvals

2009 was once again an extremely busy year for ClassNK in terms of surveys and inspections. Over the course of the year, the Society carried out a total of 13,011 surveys. Of these, 3,108 surveys were conducted within Japan, while 9,903 surveys were carried out overseas.

The Society also approved 24 radio service companies around the world in 2009, bringing the total number of companies approved by the Society to 259.

The totals for other types of firms approved by the Soci-

ety in 2009 are as follows:

1. In-water survey of ships: 12
2. Thickness measurements on ships: 28
3. Maintenance of fire fighting systems and equipment: 19
4. Maintenance of life saving equipment and appliances: 8
5. Voyage data recorders: 35
6. Hatch tightness testing: 2

The respective total number of materials, machinery, and marine equipment surveys carried out by classNK in 2009 are summarized in the table shown below.

Port State Control

As with previous years, the Society continues to work with the managers and owners of detained vessels to help improve ship conditions and increase safety awareness. To this end, the Society's Survey Department published the *Annual Report on Port State Control 2008*, a compilation and analysis of PSC related statistics for the previous year, and distributed it to shipowners, shipmanagers, and other concerned parties. In addition, high-ranking members of the Society visited key maritime authorities around the world, including the Australian Maritime Safety Authority (AMSA), China MSA, Transport Canada, and the USCG during the course of the year. ClassNK also sent representatives to bilateral China-Japan and Korea-Japan meetings on inspection related matters and gave presentations on the Society's efforts being taken to reduce the detention ratio of NK classed ships.

Technical Services

During 2009, ClassNK issued Statements of Compliance to 24 vessels under the Society's Condition Assessment Program (CAP). Statements of Compliance were also issued for the ballast water management plans of 609

Survey Activities and Approvals		
Category	Item	Volume
Materials	Rolled steel	4,855,145 tons
	Cast/Forged products	298,818 tons
Machinery	Main engines	2,526
	Boilers	626
	Deck machinery	3,073
	Engine room machinery	31,099
Marine Equipment	Anchors	1,410
	Chains	12,214



ships. As of the end of 2009, the aggregate total number of Statements of Compliance issued by the Society stood at 200 for CAP and 3,559 for ballast water management plans.

In 2009, the Society's Emergency Technical Assistance Service (ETAS) team was called into action for 12 incidents related to maritime casualties to provide technical support. By the end of 2009, 1,050 vessels had registered for the Society's ETAS service, an increase of 124 ships over the 2008 total.

ClassNK Website

ClassNK has also increased the number of technical guidelines and other publications available as PDFs on its website and has upgraded the system for downloading publications in order to make it more user-friendly and easier to use.

NK-PASS (Plan Approval Status Service) Electronic Plan Approval System

The Society developed NK-PASS with the aim of providing clients with way of to determine the status of their plans during the approval process as well as a rational and streamlined system for the electronic submission, approval, and return of ship and related plans. This ser-

vice has been made it available for use by shipyards, as well as machinery and equipment manufacturers both in Japan and around the world. During 2009 the Society enlarged the format for accessing files and enhanced the security functions of the system.



HE TONG
a 297,633 dwt ore carrier built by Nantong COSCO KHI Ship Engineering Co., Ltd.



TOYOKUNI
a 297,584 dwt ore carrier built by Universal Shipbuilding Corporation, Ariake Shipyard for Kawasaki Kisen Kaisha, Ltd.



Audit and Registration of ISM Code and ISPS Code related Systems

In 2009, ClassNK had another busy year conducting ISM and ISPS code related audits as a Recognized Organization on behalf of various flag administrations. Over the course of the year, the Society registered 47 new companies in accordance with ISM requirements, bringing the total number of companies registered with the Society to 593. SMC's were issued to 743 ships in 2009, bringing the total number of vessels registered with the Society to 4,445. NK currently conducts ISM authorizations on behalf of 63 Administrations. The Society also registered 671 ships to ISPS Code requirements last year, bringing the total number of ships registered with the Society under the ISPS Code to 3,713. NK currently conducts ISPS authorizations on behalf of 49 Administrations. A breakdown of the number of vessels by flag state is shown in the following table.

Assessment and Registration of Quality and Environmental Management Systems

ClassNK also conducts registration of quality management systems under the ISO 9001 series of quality standards, as well as assessment and registration of environmental management systems under the ISO 14001 standard. In 2009, a total of 11 organizations were newly registered under ISO 9001, bringing the total

number registered with the Society to 370. The Society also registered 9 organizations to the ISO 14001 standard during the year, bringing the total number to 105.

NK Quality System Assessment

In 2009, ClassNK once again underwent a range of audits by outside authorities to assess the operations and quality systems of the Society. These assessments included an IACS Annual Audit conducted at the Head Office and 14 other locations based on the IACS QSCS (Quality System Certification Scheme). In addition, the Société Générale de Surveillance (SGS) and Raad voor Accreditatie (RvA) also conducted audits at the NK Head Office and numerous NK locations throughout the year. External government audits of the Society included audits of a number of the ClassNK's domestic offices by the Japanese Government, a Turkish Government audit of the Istanbul Office, and Dutch Government audits of the London Office and Rotterdam Office, among audits conducted by the governments of various flag states. These audits, alongside ClassNK's own internal audits, comprise part of the Society's ongoing efforts to achieve year-on-year quality improvement. The audits also play a vital role in improving the capabilities and competency of the Society's staff and ensure that the Society continues to provide its clients with service of the highest quality and reliability.

Number of ISPS Code Registered Ships

Flag	No. of Ships	Flag	No. of Ships
Panama	2,277	Dominican Republic	4
Singapore	299	United Arab Emirates	3
Hong Kong	215	Cayman Islands	3
Japan	156	Saudi Arabia	3
Liberia	129	Malaysia	3
Malta	123	United Kingdom	2
Marshall Islands	115	Kiribati	2
Bahamas	106	Gibraltar	2
Cyprus	59	Switzerland	2
Greece	46	Bermuda	2
Turkey	46	Netherlands Antilles	1
Philippines	42	Tuvalu	1
Thailand	31	The Isle of Man	1
Vanuatu	29		
Saint Vincent and the Grenadines	11	Total	3,713



Training

ClassNK actively runs and participates in a number of different training activities both for internal staff development and in cooperation with outside organizations. These training programs cover everything from surveyor training to internships, lectures, and other cooperative training programs designed to meet the needs of government agencies and the maritime industry. Some of the more notable training programs ClassNK conducted in 2009 are briefly introduced below.

Newly Appointed Surveyor Training

ClassNK conducted surveyor training for 217 newly hired surveyors (including new graduates) around the world in 2009. In addition to the training provided by the Society's Head Office, a further 48 of these surveyors underwent practical training aboard ship, notably the training vessel SEIUN MARU of the National Institute for Sea Training, or took additional survey training at one of the Society's local offices either in Japan or overseas. Practical training was also provided for NK surveyors on marine engines at the Yanmar Co. Ltd.'s Amagaseki Factory T.T. School.

Maritime Security Auditor Training

In 2009, ClassNK conducted Maritime Security Auditor training for 37 of its surveyors in Japan as well as for a further total of 38 NK surveyors at the Society's Singapore, London, and Istanbul Offices. As a result, a total of 657 currently active surveyors of the Society have undergone Safety Management Auditor training since the course was first offered in 1994, while a total of 373 surveyors have undergone Marine Management Sys-

tems Auditor training since its inception in 2004.

Lectures at the Eastern Japan Training Center for Shipbuilding Skills

At the request of the Eastern Japan Training Center for Shipbuilding Skills, the Society presented lectures on the handling of defective welding to technical staff members new to the field of shipbuilding.

Lectures at the Innoshima Technical Center

At the request of the Innoshima Technical Center, the Society presented lectures on "Case Studies of Ship Damage and Lessons Learned" to staff members at the Center.



SHIN KORYU
a 207,991 dwt bulk carrier built by Universal Shipbuilding Corporation, Tsu Shipyard for Biko Kisen Co., Ltd.



SETAGAWA
a 299,998 dwt oil tanker built by IHI Marine United Inc., Kure Shipyard for Kawasaki Kisen Kaisha, Ltd.



SUNSHINE ACE
a 18,858 dwt vehicle carrier built by Minaminippon Shipbuilding Co., Ltd. for Mitsui O.S.K. Lines, Ltd.



HAIMA

a 84,999 dwt oil tanker built by Mitsui Engineering & Shipbuilding Co., Ltd. Tamano Works for Mitsui O.S.K. Lines, Ltd.

Lectures for the Japanese Ministry of Land, Infrastructure, Transport and Tourism

In 2009 ClassNK conducted a variety of lectures at the request of the Japanese Ministry of Land, Infrastructure Transport and Tourism (MLIT). These included a lecture on “Cases Studies on Ship and Engine Damage” at the MLIT’s advanced Ship Inspectors Seminar as well as on “Principles of Ship Security Risk Assessment” at its ISPS Code Seminar.

Cooperation with the Tokyo MOU

Following a request from the Tokyo MOU Secretariat, ClassNK provided lectures on MARPOL and SOLAS at the “19th Basic Training Course for Port State Control Officers in the Asia Pacific Region” held by the Shipbuilding Research Centre of Japan (SRC).

Cooperation with JICA

Following a request from Japan International Cooperation Agency (JICA), the Society also presented lectures on the SOLAS and MARPOL conventions as well as on newbuilding surveys at the “Group Training Course in International Maritime Conventions and Ship Safety Inspection” held by the Ship Research Centre of Japan for maritime officials from various countries overseas.

Internship Training Program

ClassNK also conducts a special internship training program in cooperation with universities with leading maritime programs in the Japan. In 2009, the Society provided internship training to 17 undergraduate and graduate students at the Society’s Head Office at the request of Osaka University, Kumamoto University, Kobe University, Tokai University, Tokyo University of Marine Science and Technology, as well as Hiroshima University.

Notable Revisions to the Technical Rules of the Society

Developed based both on years of survey experience and technical research, the ClassNK rules are constantly being revised to incorporate the latest research findings, new statutory requirements, and related matters. A representative list of the numerous technical Rules and Guidances revised by the Society during 2009 is presented below.

1. Rules and Guidance for the Survey and Construction of Steel Ships

- 1) Partial revision related to IACS CSR for Bulk Carriers (Part CSR-B)



- 2) Partial revision related to IACS CSR for Double Hull Oil Tankers (Part CSR-T)
- 3) Partial revision related to IMO PSPC (Parts C and CS)
- 4) Partial revision related to Unified Interpretations to Stability Booklet (Parts C and U)
- 5) Partial revision related to The Damage Stability (Parts C, U, CS, and D)
- 6) Partial revision related to (Parts B, U, and R)
- 7) Partial revision related to Damage Control (Parts B, C, and CS)
- 8) Partial revision related to Emergency Towing Procedures (Parts B, C, and CS)
- 9) Partial revision related to Approval of Manufacturing Process of Rolled Steels, etc. (Part K)
- 10) Partial revision related to Brittle Crack Arrest Properties (Part K)
- 11) Partial revision related to Grade of High Strength Quenched and Tempered Rolled Steel Plates for Structures Loading of Timber Deck Cargo (Parts K, M, and P)
- 12) Partial revision related to the Welding Position for Welding Procedure Qualification Tests and Welding Consumables (Part M)
- 13) Partial revision related to The Safety Devices for Diesel Engines, etc. (Part D)
- 14) Partial revision related to Piping Systems (Part D)
- 15) Partial revision related to Electrical Installations of Electric Propulsion Ships (Part H)
- 16) Partial revision related to Survey for Postponement of Special Surveys (Part B)
- 17) Partial revision related to High-Expansion Foam Fire-Extinguishing Systems (Part R)

- 18) Partial revision related to The Unified Interpretation regarding the Number and Arrangement of Portable Fire Extinguishers Onboard Ships (Part R)
- 19) Partial revision related to The Approval Procedures of Fixed Fire-extinguishing Systems (Part R)
- 20) Partial revision related to Preparation for Class Maintenance Surveys (Part B)
- 21) Partial revision related to Treatment of Certificates for Laid-up Ships (Part B)
- 22) Partial revision related to Requirements of Thickness Measurements for Ships Carrying Liquefied Gases in Bulk (Part B)



STEEL HUB-18
a 6,339 dwt barge built by Dalian Industrial Development General Corporation, Chang Xing Shipyard for Steel Hub Co., Ltd.



AN PING
a 55,259 dwt bulk carrier built by Nantong COSCO KHI Ship Engineering Co., Ltd.



NORD EXPLORER
a 58,803 dwt bulk carrier built by Tsuneishi Heavy Industries (Cebu) Inc. for Baba Maritime S.A.

- 23) Partial revision related to Hull Surveys of Ships Carrying Dangerous Chemical in Bulk (Part B)
 - 24) Partial revision related to Requirements of Thickness Measurement for Dry Cargo Ships other than General Dry Cargo Ships (Part B)
 - 25) Partial revision related to the Ordinary Surveys of Coupling Bolts to Detect Cracks (Part B)
 - 26) Partial revision related to Continuous Machinery Survey (CMS) (Part B)
 - 27) Partial revision related to PMS Management Software Approval (Part B)
 - 28) Partial revision related to FPSO (Parts A, B, and P)
 - 29) Partial revision related to The Finnish-Swedish Ice Class Rules 2008 (FSICR) and other related rules (Parts B and I)
 - 30) Others
2. Regulations and Guidance for the Classification and Registry of Ships
 3. Conditions of Service for Classification of Ships and Registration of Installations
 4. Rules and Guidance for the Audit and Registration of Safety Management Systems
 5. Rules and Guidance for the Audit and Registration of Ship Security Management Systems
 6. Rules for the Approval of Manufacturers and Service Suppliers
 7. Rules and Guidance for Marine Pollution Prevention Systems
 8. Rules and Guidance for Safety Equipment
 9. Rules and Guidance for Automatic and Remote Systems
 10. Rules and Guidance for High Speed Craft
 11. Guidance for the Survey and Construction of Ships of Fibreglass Reinforced Plastics
 12. Rules for Floating Docks
 13. Rules and Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use

ClassNK Technical Seminars

Providing clients with the latest and most up to date technical information is one of the most important tasks undertaken by the Society. To this end, each year ClassNK conducts a number of technical seminars on a wide variety of timely topics. In 2009, ClassNK Technical Seminars were held in five locations across Japan,



starting with Tokyo, followed by Kobe and continuing with Imabari, Onomichi, and Hakata. The seminars drew roughly 690 attendees from across the entire spectrum of the maritime industry, including shipowners, shipyard staff, and manufacturers, among others. The seminars included an explanation of amendments to the rules covering hull structures, machinery and electrical installations, and equipment and materials, as well as a lecture covering recent activities related to international conventions and the Society's activities with regards to the "International Convention for the Control and Management of Ship's Ballast Water and Sediments" and the Society's efforts towards the control of greenhouse gases, which was widely requested. Major topics presented during the year included the following:

- Outline of Revised Rules
- Explanation of Revised Technical Rules (Machinery and Electrical Installations)
- Explanation of Revised Technical Rules (Equipment and Material)
- Explanation of Revised Technical Rules (Hull)
- Latest trends in International conventions
- ClassNK's activity with respect to the "International Convention for the Control and Management of Ship's Ballast Water and Sediments"
- NK's responses to greenhouse gas requirements

ClassNK Academy

Drawing upon its extensive expertise in the survey of ships and audit of ship management systems, ClassNK unveiled its new ClassNK Academy educational program in 2009 to provide members of the maritime industry active in ship construction, maintenance, or operation with a working knowledge of shipping and shipbuilding. During the year, ClassNK offered the ten ClassNK Academy courses listed below at five locations in Japan, including Tokyo, Imabari, Hiroshima, Kobe,



and Saeki. The courses were attended by a total of 1,970 personnel from shipowners, shipyards, and manufacturers, among others.

- Classification Societies and Statutory Issues Course
- New Shipbuilding Course (Hull)
- New Shipbuilding Course (Machinery and Electrical Installations)
- Material and Welding Course
- Damage and Maintenance Course (Hull)
- Damage and Maintenance Course (Machinery and Electrical Installations)
- Safety Equipment Course
- Port State Control (PSC) Course
- Cargo Handling Appliance Course
- Ship Management Course (Incident Investigation and Analysis, Risk Management and Internal Audits)

ClassNK Award

The "ClassNK 100 Awards" were originally established to commemorate the 100th anniversary of the Society's founding. Since renamed the "ClassNK Award", the award is presented each year in recognition of outstanding research papers prepared by students at participating universities. In 2009, the award was presented in Korea, China, and India.



ZEUS LEADER
a 18,697 dwt vehicle carrier built by Mitsubishi Heavy Industries, Ltd. Nagasaki Shipyard & Machinery Works for Nippon Yusen Kabushiki Kaisha.



BULK TITAN
a 58,090 dwt bulk carrier built by Tsuneishi Heavy Industries (Cebu) Inc. for Okouchi Kaiun Co., Ltd.



"Research on realization of blasting technology using mixed air-water jets Blast Trial (fume cleaning using high pressure water jet)" ©IHI AMTEC/ISTRA

NK in Research 2009

Overview of 2009 Research and Development Activities

In April 2009, ClassNK reorganized the manner in which research and development activities are carried out within the organization. With this reorganization, R&D work can be accomplished more effectively and efficiently than ever before as well as respond to customer needs and grasp the latest technological trends more quickly, thereby allowing the Society to better contribute to ensuring the safety of ships and protection of the marine environment.

Practical R&D Promotion Division newly established

A new Practical R&D Promotion Division was established integrating the relevant departments engaged in R&D work throughout the Society in order to promote more efficient research and development responding to customer needs. The Practical R&D Promotion Division has

also been carrying out joint research with public and private entities based on demands from industry. This not only includes R&D work concerned with conventional ship classification but also encompasses a wide range of topics related to the maritime industry as a whole.



New Marine Environment Section created in the Research Institute

The Society has also been very active in enhancing its services related to the environment. This has included the establishment of the Marine Environment Section in the ClassNK Research Institute on 1 April 2009 as part of a

reorganization of the Research Institute into three new sections: Practical Technology, Fundamental Technology, and Marine Environment.

Technical Investigation and Analysis Section incorporated into the Development Department

The Technical Investigation and Analysis Section has been incorporated into the Development Department in order to help facilitate the amendment of the technical rules of the Society based on the results obtained from careful

examination of damage information. As a result, feedback based on the lessons learned from such damage information can be reflected in amendments of rules more quickly and accurately.

File : 1

The R&D activities of the Society are being carried out with a focus on the four key R&D topics outlined below in accordance with the second phase of the Society's R&D plan formulated in 2009:

- R&D directed at classification and technical consultation services (rule development, related software, etc.);
- Practical R&D to provide solutions in the short-term to client/industry needs (damage prevention, etc.);
- R&D in new areas and fields (development of new fields such as marine environment preservation technologies, etc.); and
- Fundamental research and development (new technical developments, improved technologies, etc.).

Topic	Overview
Research on structural integrity of ultra-large containerhips (First year of two-year project)	R&D is being carried out on the following three topics arising from the increasing size of containerhips in recent years. <ul style="list-style-type: none"> ● Effects of hydroelastic response such as whipping and springing on the structural strength (longitudinal bending strength and fatigue strength). ● Hull structural strength (especially horizontal members) to withstand bow flare slamming impact loads ● Conditions for occurrence of stern slamming and its effect on hull structure
Research on the prevention of brittle fractures in ultra-large containerhips (First year of three-year project)	Based on the results of the first midterm R&D program work of 2007 and 2008 ("Countermeasures against brittle crack initiation" and "Guidelines on brittle crack arrest design"), the aim of this project is to improve the guidelines for preventing brittle fracture in a more rational and comprehensive manner for thick steel plates that are starting to be used in the construction of ultra-large containerhips.
Research on strength assessment for sloshing loads on cargo tanks of membrane LNG carriers (First year of two-year project)	The aim of this project is to develop guideline on the sloshing strength of cargo containment systems of membrane LNG carriers based on the results of investigations into sloshing impact loads due to ship motions and the structural response of insulation structures against sloshing impact loads.

Topic	Overview
<p>Research on reliable assessment of residual fatigue life using onboard monitoring devices (First year of two-year project)</p>	<p>In order to carry out effective and appropriate maintenance of ships, it is important to estimate as accurately as possible the fatigue damage accumulated during service operation. This study is intended to develop means for accurately predicting fatigue status along with applicable management procedures for ships in operation by combining various kinds of monitoring tools and sophisticated fatigue strength assessment methods.</p>
<p>Research on residual structural strength after collision (First year of two-year project)</p>	<p>This project focuses on examining the basic concepts for residual strength requirements for collision and grounding accidents that comply with IMO goal-based standards.</p>
<p>Research on verification of certification scheme of new NOx emission regulations (First year of two-year project)</p>	<p>Problems will be selected related to the authentication of NOx emission reduction technologies including SCR (Selective Catalytic Reduction) systems to satisfy increasingly more stringent NOx and SOx emission requirements (particularly tier III regulations) of MARPOL Annex VI, and pertinent proposals for improvement will be prepared. Studies will be conducted on topics related to methods for controlling sulfur content in fuel oil (use of low-sulfur oil) and on various issues that may arise because of the use of low-sulfur oil. These issues and countermeasures will be summarized as guidelines.</p>
<p>Research on practical application of technologies for reducing GHG emissions from ships (First year of two-year project)</p>	<p>The following R&D studies are being conducted focusing on the reduction of greenhouse gas (GHG) emissions from ships:</p> <ul style="list-style-type: none"> ● Study on GHG emission reduction technologies using existing energy conservation methods and preparation of related technical documentation; ● Studies on onboard ship technologies such as solar cells, secondary cells and fuel cells, and the preparation of relevant rules and guidances; and ● Establishment of EEOI (Energy Efficiency Operational Indicator) appraisal technology.
<p>Development of requirements for tooth subsurface fatigue strength of bevel gears (First year of two-year project)</p>	<p>In this project, studies are being conducted with the aim of developing requirements for the prevention of the tooth subsurface fatigue failure of bevel gears, commonly used in azimuth thrusters.</p>
<p>Safety and reliability assessment of machinery and equipment newly installed onboard LNG carriers (First year of two-year project)</p>	<p>This project examines systems and equipment constituting onboard re-gasification plants in LNG carriers with the aim of preparing guidelines that can be used as a reference when using such systems and equipment.</p>



File : 2

The Society also continued to undertake joint research to meet industry needs in 2009. Under this unique joint research scheme, the Society provides technical and financial support based on proposals or requests from various external entities in the maritime industry. Proposals are received and evaluated by the Practical R&D Promotion Division. The following projects are currently being implemented.

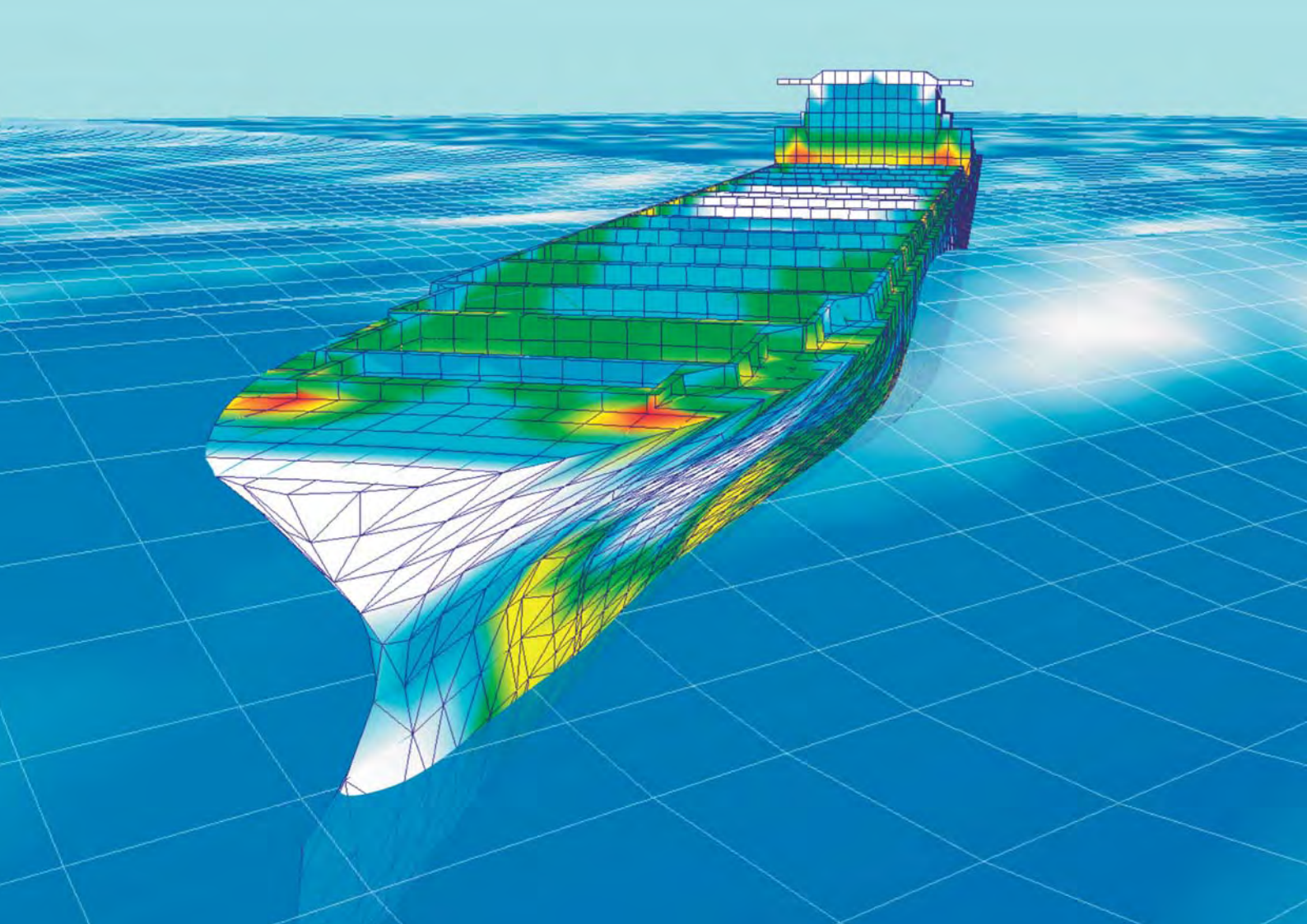
Topic	Overview
<p>Research on realization of blasting technology using mixed air-water jets</p>	<p>The aim of this project is to develop water blasting equipment that satisfies PSPC standards as well as to compile a review of treatment methods for the use of such equipment, with the aim of improving the work environment of shipyards and their surrounding environment during the two-dimensional surface treatment of blocks, as well as for maintaining and improving productivity.</p>
<p>Research on energy saving measures in the shipbuilding industry</p>	<p>This research focuses on achieving energy conservation in welding equipment and NC cutting machines in the shipyard, which consume significant amounts of power, bearing in mind the demands by society for major reductions in CO2 emissions in recent years.</p>
<p>Studies related to loading conditions and resistance using CFD</p>	<p>This topic relates to research for quantitatively grasping the relations between loading conditions and resistance using CFD calculations. Its aim is to provide documents for improving the accuracy of estimating resistance under various loading conditions. More practical self-propulsion calculation methods in the loaded condition will be proposed and their validity confirmed by tank tests.</p>
<p>Development of software to prepare PSPC/CTF (Coating Technical File)</p>	<p>PSPC requires the storage of enormous amount of data relating to the painting of ballast tanks onboard ship. This research aims to develop software in Japan for preparing CTF and data management software that can be used as a de facto standard in Asia.</p>
<p>Wind Challenger (next generation eco-friendly wind powered ship) plans</p>	<p>In order to reduce the large-scale production of CO2 and to lower the carbon footprint of the maritime industry, studies will be conducted on a new type of wind-propelled ship that has a fuel consumption of less than one third that of a conventionally powered ship with the same performance.</p>



Wind Challenger ©The University of Tokyo



©JSTRA



Special Article

PrimeShip – Total Ship Care

1. Introduction

ClassNK celebrated its 110th year of service in 2009, and has been engaged in classification services over this long period with the cooperation of maritime related industries. In its continuing efforts to provide the maritime industry with the latest and best technical services aimed at ensuring the overall safety of ships and to conserve the marine environment, with the aim of capitalizing on the abundant technical expertise and data it has accumulated through its long history of classification service. These technical services are further upgraded, enhanced, and organized under the name "PrimeShip" into an integrated and comprehensive suite of services. That is,

"PrimeShip" is the collective name of various individual service groups offered to customers, and precedes the name of each specialized service in each group.

As a ship classification society, ClassNK cooperates closely with all facets of the maritime industry to prevent pollution of the marine environment and promote the safety of ships over their entire lifetime from design to dismantling. The PrimeShip suite of services offers technical services to ensure the comprehensive safety and reliability of ships at every stage of a ship's life from inception and design through construction, operation, management, maintenance, and related activities until it is scrapped, based on the concept of "Total Ship Care," so that the



latest technical services are always offered through various stages of the ship's life.

2. History of PrimeShip

ClassNK announced the addition of the class notation DATA (Design by Application of Total Analysis concept) in 1994. This notation is assigned to those ships for which structural analyses are carried out based on the wave load calculations for that ship, and scantlings of the hull structural members are determined based on the concept of "Design by Analysis". This concept requires the provision of a series of evaluation software applications.

At that time, the Society had developed software on the premise that it was mainly for in-house use, and offered external services solely when calculations were requested. With the announcement of DATA and the advent of compact and high speed computers, the software applications that had been used in-house until then were modified to facilitate use by external users, and new software applications began to be developed specifically for external use.

To further promote such services offering software applications, the conventional calculation services that were performed on request, along with other technical support and information services were integrated under the name "PrimeShip" in 1995 and offered for external use.

Initially, information technology formed the base that totally supported PrimeShip. Various other information services offered that used these technologies were also considered a part of PrimeShip. However, with advancements in data communications technology, "information services" came to comprise separate important components, and in 1997, PrimeShip came to be limited to pure "technical services" such as software services, calculation services, and technical support services.

Later, various new services continued to be offered

capitalizing on the results of various R&D activities and related technical advances made in response to the needs of maritime related industries, so that by 2008 there were as many as 29 services (of which four are under still under development) comprising PrimeShip technical services.

The various services under the PrimeShip umbrella were reviewed, resulting in some services being integrated into the PrimeShip suite and others being discarded in 2009, with the aim of facilitating the use of the entire suite and making it easy to understand for users. The result is that today PrimeShip consists of four groups and fourteen services, as shown in Fig. 1.

3. Various services constituting PrimeShip

PrimeShip is constantly being updated based on the results of the latest technological advances and R&D activities of the Society. These services enable improved, for instance, reliability and enhanced efficiency of hull structural analysis, labor savings during various kinds of design work, faster preparation of loading plans and maintenance plans of ships in service, and so on.

3.1 HULL Group

The HULL group is used as a support for the examination of hull plans, and consists of four software services. It supports the design of hull structures and hull performance, and contributes to higher efficiency during design, thereby leading to the safe and efficient design of ships.

■ PrimeShip-IPCA:

PrimeShip-IPCA (Integrated Program for Determining Ship Performance Capability) is a Windows-based program developed by ClassNK for determining trim, stability, longitudinal strength, freeboard, grain heeling moment, and other similar factors related to ship performance capability.

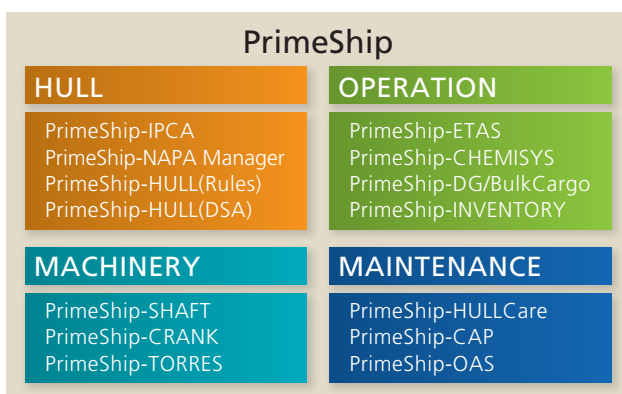
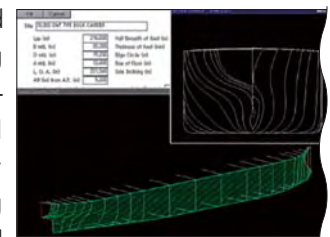
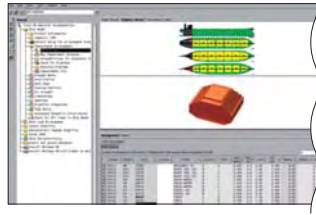


Fig. 1 Composition of PrimeShip services.

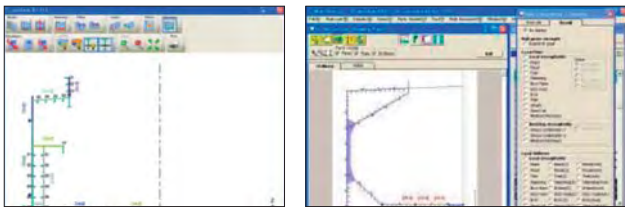
■ **PrimeShip-NAPA Manager:**

This program is an application tool developed by customizing the ship performance calculation system NAPA for ships classed by the Society. NAPA (Naval Architectural Package) boasts a sizable worldwide market share. PrimeShip-NAPA Manager can be used to carry out statutory compliance calculations on NAPA 3D models, as well as to create intact/damage stability booklets and loading manuals.



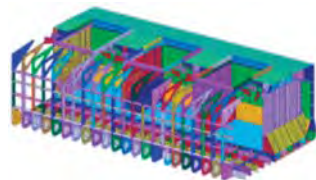
■ **PrimeShip-HULL(Rules):**

This system is a rule calculation software suite with an excellent user interface. This free software allows ship designers to quickly calculate the requirements for structural members in accordance with the IACS Common Structural Rules (CSR) and Part C of the ClassNK Rules for the Survey and Construction of Steel Ships.



■ **PrimeShip-HULL(DSA):**

PrimeShip-HULL(DSA) (Direct Strength Assessment System) is a specialized software program excellent for performing direct strength calculations of ship structures in accordance with ClassNK Rules and the IACS CSR. It helps make ship design an easy and efficient process by allowing users to quickly conduct complicated structural strength analysis for a wide variety of loading conditions.



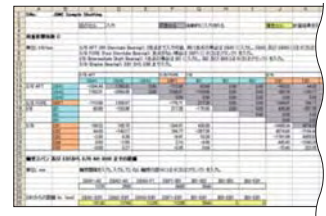
3.2 Machinery Group

The following three services are come under the Machinery Group that supports the efficient design of machinery:

■ **PrimeShip-SHAFT:**

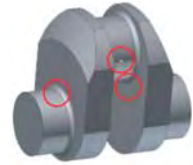
PrimeShip-SHAFT is a calculation program based on ClassNK's "Shaft Alignment Design Guidelines" that reflects the results of new research and in-depth analysis

of machinery damage. The program enables quick determination of optimum bearing positioning and shafting alignment.



■ **PrimeShip-CRANK:**

PrimeShip-CRANK is a crank shaft stress calculation service designed to evaluate the strength diesel engine crankshafts in accordance with ClassNK Rules and relevant IACS Unified Requirements.



■ **PrimeShip-TORRES:**

PrimeShip-TORRES is an analysis service used for evaluating torsional vibration items indispensable for efficient design of shafting system, such as critical rpm, carried out after performing vibration response analysis of the machinery shafting system.

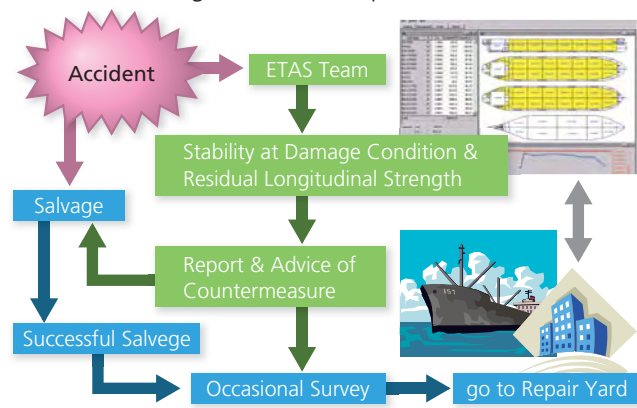


3.3 Operation Group

The Operation Group of services support various operations after a ship enters service and consists of one technical support service and three software services. This group of services not only supports safe operation of ships but also offers support for loading plan proposals, and other important functions.

■ **PrimeShip-ETAS:**

PrimeShip-ETAS is an emergency technical support service designed to help ship owners and operators ensure ship safety and prevent or minimize the effect of marine pollution in the event of a serious ship casualty such as stranding, collision or explosion.





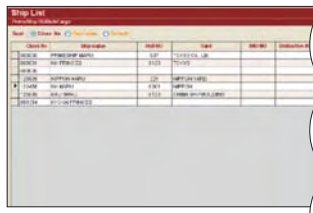
■ PrimeShip-CHEMISYS:

PrimeShip-CHEMISYS is a convenient and powerful tool for use in the design and operation of chemical carriers that offers comprehensive support to designers as well as ship owners and managers from the design stage to operation during the service life of chemical tankers.



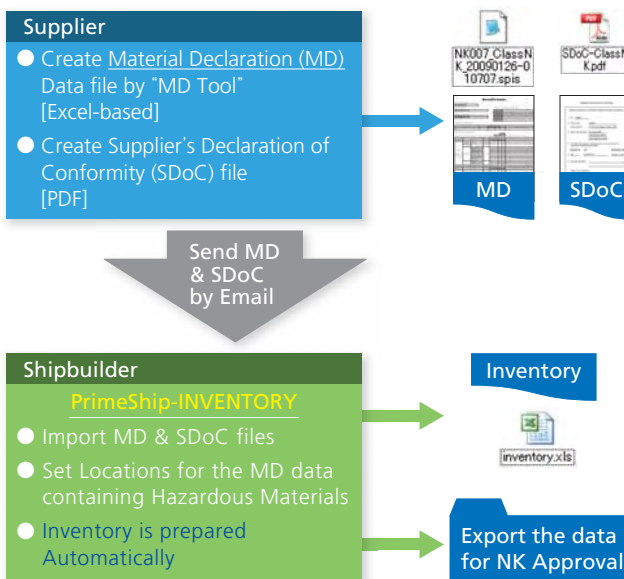
■ PrimeShip-DG / BulkCargo:

This is a program that judges cargo that can be loaded on a ship based on relevant requirements relating to the carriage of dangerous substances and solid bulk cargoes taking into account the construction and equipment of the ship.



■ PrimeShip-INVENTORY:

PrimeShip-INVENTORY is a program that can be used to electronically prepare and manage the inventory of toxic substances required by the Ship Recycling Convention.

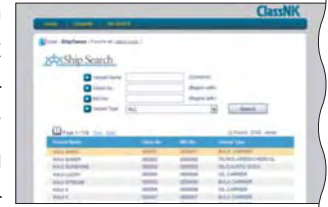


3.4 Maintenance Group

The Maintenance Group of PrimeShip services supports the maintenance of ships by providing a range of tools that can help ship managers effectively prepare and implement ship maintenance and repair plans.

■ PrimeShip-HULLCare:

PrimeShip-HULLCare is an information service that provides useful ship maintenance information for each ship after organizing and categorizing the enormous volumes of survey data accumulated from various NK survey offices across the globe.



■ PrimeShip-CAP:

PrimeShip-CAP (Condition Assessment Program) is a condition assessment service for certifying and documenting the condition of aging vessels that goes beyond the scope of regular classification and statutory regulations.



■ PrimeShip-OAS:

PrimeShip-OAS is a fuel oil analysis service based on JIS or ISO standards, as well as a stern tube lubricant analysis service carried out as part of Propeller Shaft Condition Monitoring.



4. The Future of PrimeShip

As described above, the latest technical services are offered by ClassNK based on advanced technical expertise and abundant data acquired over more than a century of service to the global maritime industry under the name of PrimeShip.

New services will continue to be offered appropriately henceforth considering maritime needs, and continual R&D activities will be conducted so as to give solid support for assisting ship designers, builders, owners and managers ensure the overall safety of their ships through their entire life times as well as for contributing to preservation of the marine environment. Watch out for further developments in PrimeShip in the future.



Ship classification is by its very nature an international industry. At the end of 2009, ClassNK maintained a global service network of 109 exclusive surveyor sites at key ports and locations around the world. However, in addition to such survey related activities, ClassNK also actively cooperates closely with a variety of rule making bodies and international organizations. A brief summary of these activities is given below.



NK in International Affairs

Participation at the International Maritime Organization (IMO)

As part of its many international activities, ClassNK contributes to the International Maritime Organization (IMO) on a wide range of technical issues. In 2009, the Society attended the IMO meetings listed below either as a member of the Japanese Government delegation or as a representative of IACS. In addition, the Society continues to have a member of its staff dispatched to the IMO secretariat on a full-time basis.

- Maritime Safety Committee (MSC) – 86th session
- Marine Environment Protection Committee (MEPC) – 59th session
- Sub-Committee on Safety of Navigation (NAV) – 55th session

- Sub-Committee on Fire Protection (FP) – 53rd session
- Sub-Committee on Ship Design and Equipment (DE) – 52nd session
- Sub-Committee on Flag State Implementation (FSI) – 17th session
- Sub-Committee on the Carriage of Dangerous Goods, Solid Cargoes and Containers (DSC) – 14th session
- Sub-Committee on Bulk Liquids and Gases (BLG) – 13th session
- Intersessional Meeting of the Working Group on Greenhouse Gas (GHG) Emissions from Ships – 2nd session
- International Conference on the Safe and Environmentally Sound Recycling of Ships

ClassNK conveys the outcomes of major meetings such as MEPC and MSC to clients of the Society through a variety



of methods, including the timely release of “NK Technical Information” bulletins and updates to the “IMO International Convention Calendar” section of the ClassNK website as well as at meetings of its various overseas committees, described below, throughout the year.

Participation in the International Association of Classification Societies (IACS)

As a member of the International Association of Classification Societies since its founding, the Society plays a continuing and essential role in the development of IACS. The Society not only participates in meetings of the IACS Hull, Machinery, Survey, and Treaty panels, but also actively contributes to IACS Small Groups and Expert Groups, as well as a wide variety of the project teams organized beneath each panel.

In advance of serving as a chairman society of IACS from 2010, ClassNK became the vice chairman in 2009, and started to provide leadership.

The IACS meetings that ClassNK attended in 2009 are shown in the list below (numbers after each item indicate the number of times that each meeting took place).

- Chairman’s Office Meetings : 3
- IACS Council : 8 (including extraordinary meetings)
- Quality Committee : 3
- General Policy Group : 4

- Panel Meetings : 8 (total for all four Panels)
- Project Team Meetings : 23
- Expert Group Meetings : 8
- Small Group Meetings : 3
- Joint Working Group with Industry : 7

International Committees

As part of its goal of improving customer service and better meeting the needs of the global maritime industry, the ClassNK holds many overseas committee meetings around the world. These meetings are an important avenue for the two-way exchange of information and advice between the Society and key industry and regional stakeholders in local regions around the world. Two new overseas committees were established in 2009, the Greek Technical Committee and Turkish Technical Committee, comprised of distinguished members of the maritime community in each respective country. A full list of the ClassNK Committee meetings held during 2009 is shown in the following table.

Committee Meetings				
Name of Committee Meeting		Date	Venue	
18th	Greek Committee	5 February	Piraeus	
14th	Indian Committee	12 February	Mumbai	
9th	Taiwan Technical Committee	24 April	Taipei	
2nd	Middle East Technical Committee	3 May	Dubai	
7th	Hong Kong Technical Committee	7 May	Hong Kong	
6th	Turkish Committee	15 May	Istanbul	
14th	China Technical Committee	4 June	Chengdu	
7th	British Committee	4 June	London	
7th	Philippine Committee	18 June	Manila	
6th	Singapore Committee	2 July	Singapore	
5th	Malaysian Committee	17 July	Kuala Lumpur	
19th	Danish Technical Committee	28 August	Copenhagen	
20th	Korea Committee	11 September	Seoul	
13th	Singapore Technical Committee	16 September	Singapore	
1st	Greek Technical Committee	8 October	Piraeus	
35th	Hong Kong Committee	21 October	Hong Kong	
16th	China Committee	29 October	Shanghai	
16th	Korea Technical Committee	11 November	Busan	
1st	Turkish Technical Committee	11 November	Istanbul	
10th	Taiwan Committee	19 November	Taipei	
7th	Thai Committee	27 November	Bangkok	
7th	Indonesia Committee	10 December	Jakarta	



NK in Committee

ADVISORY COUNCIL

Members	Chang Yung-fa	Group Chairman	Evergreen Group IMC Group of Companies LCE Consulting Pte Ltd. Regional Container Lines Group
	Frank W. K. Tsao	Group Chairman	
	Lua Cheng Eng	Chairman	
	Sumate Tanthuwani	President	

BRITISH COMMITTEE

Chairman	J. G. Davis CBE	Chairman	IMIF (International Maritime Industries Forum)
Members	F. M. Marchant MBE	Chairman Chairman Managing Director Chairman, Joint Hull Committee Technical & Upstream Assurance Manager COO London Representative Chairman Technical Director Managing Director General Manager General Manager Chairman	Andrew Weir Shipping Ltd. Anglo-Eastern (UK) Ltd. Ark Syndicate Management Limited BP Shipping Limited British Marine Plc Deutsche Schiffsbank AG Embiricos Shipbrokers Ltd. Graig Ship Management Limited International Marine Transportation Ltd. Rio Tinto Shipping Limited Shell Shipping Technology The Baltic Exchange
	Michael G. Parker		
	Douglas W. Lang		
	Peter McIntosh		
	Chris Bailey		
	Sunil Malhotra		
	Jeremy G. Hodgson		
	Epaminondas G. E. Embiricos		
	Philip D Atkinson		
	John M. Bree		
	Alastair Fischbacher		
	Jan van Dijk		
	Michael K. Drayton		

CHINA COMMITTEE

Chairman	Li Jianhong	Executive Vice President	China Ocean Shipping (Group) Company (COSCO) China Shipbuilding Industry Corporation China Shipping (Group) Company China Shipping Development Company Limited China Shipping Development Co., Ltd., Tanker Company China State Shipbuilding Corporation COSCO Container Lines Hebei Ocean Shipping Co., Ltd. JiangSu Ocean Shipping Company Ltd. Pacific King International Shipping Management Co., Ltd., Shanghai Sinotrans Shipping Limited
Members	Xu Ziqiu	Assistant President	
	Lu Yi Bin	Deputy Manager	
	Mao Shi Jia	Managing Director	
	Li Zhong	Vice Division-Chief	
	Han Chengmin	Deputy Managing Director	
	Ge En Hua	Director Vice President	
	Yang Jian Ming	President	
	Huang Zi Qiang	President	
	Tian Zhong Shan	Executive Director, General Manager	

GREEK COMMITTEE

Chairman	Charalambos N. Mylonas	Chairman	Transmed Shipping Ltd. A. M. Nomikos Transworld Maritime Agencies S.A. Chandris (Hellas) Inc. Elmira Shipping & Trading S.A. Empros Lines Shipping Co. SP. S.A. European Navigation Inc. Evalend Shipping Co. S.A. Golden Union Shipping Co. S.A. J. G. Goumas Shipping Company S.A. Kritsas Shipping S.A. Laskaridis Shipping Co., Ltd. Marmaras Navigation Ltd. Metrostar Management Corp. Navios Maritime Holdings Inc. Springfield Shipping Co. Panama S.A. Sun Enterprises Ltd. Thenamaris Ships Management Inc.
Members	Markos A. Nomikos	Director	
	Michael D. Chandris	Chairman	
	George J. Souravlas	Managing Director	
	Anna G. Dracopoulos	Director	
	Prokopis N. Karnesis	Director	
	Kriton Lendoudis	Managing Director	
	Michael E. Veniamis	Director	
	Ghikas J. Goumas	Director	
	Dimitris Z. Kritsas	President	
	Panagiotis C. Laskaridis	Managing Director	
	Diamantis P. Diamantides	Managing Director	
	Theodore P. Angelopoulos	Chairman of the Board & CEO Technical Director, General Manager	
	Angeliki Frangou		
	Thanos G. Crassaris		
	George S. Livanos	Chairman	
	Constantinos J. Martinos	Managing Director	



Panagiotis N. Tsakos
Michael M. Scufalos

President
Managing Director

Tsakos Shipping & Trading S.A.
Union Commercial Inc.

■ HONG KONG COMMITTEE

Chairman David C. C. Koo
Honorary Chairman M. H. Liang
Members Ning Pao Kun
Robert Alexander Ho
Andrew Y. Chen
Huang Shao Jie
Arthur Bowring
Frank W. K. Tsao
Steve G. Hsu
Kwai Sze Hoi
Richard Hext
C. C. Liu
M. T. Yung

Peter Cheng, MBE
Raymond Pao
Li Hua

Kenneth K.W. Lo
Edward S. C. Cheng
Sabrina S. M. Chao
Jim Nelson

Managing Director
Chairman
Deputy Managing Director
President
Chairman & Managing Director
Director & President
Managing Director
Group Chairman
Group Chairman
Chairman & President
CEO
Chairman & President
Director,
General Manager Shipping Division
Managing Director
President
Executive Director,
Deputy General Manager
Managing Director
Chairman
Deputy Managing Director
Managing Director

Valles Steamship Co., Ltd.
Island Navigation Corp Int'l Ltd.
COSCO (H.K.) SHIPPING CO., LIMITED
Fairmont Shipping (HK) Ltd & Affiliates
Grand Seatrade Shipping Company Ltd.
Hong Kong Ming Wah Shipping Co., Ltd.
Hong Kong Shipowners Association
IMC Group of Companies
Oak Maritime (H.K.) Inc., Ltd.
Ocean Longevity Shipping & Management Co., Ltd.
Pacific Basin Shipping (HK) Ltd.
Parakou Shipping Ltd.
Patt Manfield & Co., Ltd.

Peter Cheng Naval Architect & Marine Consultant Ltd.
Regent Shipping Ltd.
Sinotrans Shipping Limited

Teh-Hu Cargocean Management Co., Ltd.
Unique Shipping (H.K.) Ltd.
Wah Kwong Shipping Holdings Ltd.
Wallem Shipmanagement Ltd.

■ INDIAN COMMITTEE

Chairman Arun Mehta
Vice Chairman R. L. Pai
Members H. Ansari
R. S. Nakra
Ashok V. Chowgule
Commodore M. Jitendran
A. R. Ramakrishnan
M. P. Dhanuka
Shri D. Mehrotra

Atul J. Agarwal
Ray Stewart
S. Govindrajan
Anil Devli
K. M. Sheth
J. V. S. Rao

Chairman & Managing Director
Group Sr. Vice President
Visiting Professor
Managing Director
Executive Director
Chairman & Managing Director
Director
Executive Director
Deputy Chief Surveyor with the
Government of India-cum-Sr.DDG (Tech)
Joint Managing Director
CEO
Managing Director
Executive Director
Executive Chairman
Senior Vice President

Varun Shipping Company Limited
Reliance Industries Limited

ABG Shipyard Ltd.
Chowgule & Company Private Limited
Cochin Shipyard Ltd.
Essar Shipping Ports & Logistics Limited
GEE Limited
Government of India, Ministry of Shipping,
Road Transport & Highways, Directorate General of Shipping
Mercator Lines Limited
PIPAVAV Shipyard Limited
Progressive Shipping Consultancy Services (PVT) Ltd.
Shreyas Shipping & Logistics Limited
The Great Eastern Shipping Co., Ltd.
The Shipping Corporation of India Ltd.

■ INDONESIA COMMITTEE

Chairman Widihardja Tanudjaja
Members Choy Ngee Sheng
Johnson W. Sutjipto
Arifin Soenardjo, MH
Suhartoko
Pradiyana Nirtara
Stephen Layarda
Oentoro Surya
Andy A. Mallian

President Director
Director
Chairman
Director of Marine Safety
Senior Vice President of Shipping
President Director
Managing Director
President Director
Fleet Director

PT. Berlian Laju Tanker Tbk.
GBLT Shipmanagement Pte. Ltd.
INSA (Indonesian National Shipowners' Association)
Ministry of Transportation, Republic of Indonesia
PERTAMINA SHIPPING
PT. Adnyana
PT. Alpha Pacific Lines
PT. Arpeni Pratama Ocean Line Tbk.
PT. Arpeni Pratama Ocean Line Tbk.

Kasim Arifin
Riry Syeried Jetta
Hendrato
H. Soenarto
Antonius W. Sumarlin
Joeswanto Karijodimedjo
Henry Djuhari
Ir. Harsusanto, MM
Ibnu Wibowo
Asmari Herry

President Director
President Director
General Manager
President Director
President Director
President Director
President
President Director
President Director
Executive Director

PT. Bumi Perkasa Bahtera
PT. Dok & Perkapalan Kodja Bahari (Persero)
PT. Gesuri Lloyd
PT. Gurita Lintas Samudera
PT. Humpuss Intermoda Transportasi Tbk.
PT. Jasa Marina Indah
PT. Meranti Bahari
PT. PAL Indonesia
PT. PANN (Persero)
Samudera Shipping Line Ltd.

■ KOREA COMMITTEE

Chairman Doo-Chan Chang
Members Sang-Tae Nam
Hyon-Soo Bong
Kil-Seon Choi
Jae-Byoung Song
Moo-Soo Hwang
Jin Bang Lee
Jing-Wan Kim
Kyuho Whang
J. C. Lee

Honorary Chairman
President & CEO
Senior Executive Vice President
President & CEO
President & CEO
President & CEO
Chairman & CEO
Vice Chairman & CEO
President & CEO
Vice Chairman & CEO

KSS Line Ltd.
Daewoo Shipbuilding & Marine Engineering Co., Ltd.
Hanjin Heavy Industries & Construction Co., Ltd.
Hyundai Heavy Industries Co., Ltd.
Hyundai Mipo Dockyard Co., Ltd.
Hyundai Samho Heavy Industries Co., Ltd.
Korea Line Corporation
Samsung Heavy Industries Co., Ltd.
SK Shipping Co., Ltd.
STX Pan Ocean Shipping Co., Ltd.

■ MALAYSIAN COMMITTEE

Chairman To be determined
Vice Chairman Nordin Mat Yusoff
Members Azmi Bin Ahmad
Lim Leng-Pin
Billy Tan Gim Hoe
Dato' David Tan
Datuk Dr. Elias Kadir
Tan Sri Dato' Seri Halim Bin
Dennis Liong
Samsudin Mohd Yassin
Torbjørn J. Aaker

Vice President
Group Managing Director & CEO
Managing Director
Chairman
Managing Director
Senior Executive Director
Executive Chairman & Managing Director
General Manager
CEO
General Manager WSM Malaysia
Regional Manager WSM Asia

MISC BERHAD
MISC BERHAD
Alam Maritim Resources Berhad
Aurora Tankers Sdn. Bhd.
Ecoship Sendirian. Berhad
Everise Maritime Sdn. Bhd.
Felda Transport Services Sdn. Bhd.
Halim Mazmin Bhd.
Hub Shipping Sdn. Bhd.
Petronas Maritime Services Sdn. Bhd.
Wilhelmsen Ship Management Sdn. Bhd.

■ PHILIPPINE COMMITTEE

Chairman Arben E. Santos
Members Roy R. Alampay

Rogelio A. Torres
Ko-Lin Toh
Michael G. Bernardino
Doris Magsaysay Ho
Edgardo G. Lacson
Shinji Watadani

President & CEO
Vice President for Operations &
General Manager
Vice President
President
Vice President
President & CEO
President
President

Southwest Maritime Group of Companies
Baliwag Navigation, Inc.

Eastern Shipping Lines, Inc.
Keppel Philippines Marine, Inc.
Loadstar International Shipping, Inc.
Magsaysay Maritime Corporation
MIS Maritime Corporation
Tsuneishi Heavy Industries (Cebu), Inc.

■ SINGAPORE COMMITTEE

Chairman S. S. Teo
Members Eng Aik Meng
Tong Chong Heong
Lam Yi Young
Aloysius Seow
Kuok Khoon Kuan
Teo Cho Keng
Wong Weng Sun

President
President
CEO
Chief Executive
COO
Managing Director
Senior Executive Director
President & CEO

Singapore Shipping Association
APL, NOL Group
Keppel FELS Limited
Maritime & Port Authority of Singapore
Ocean Tankers (Pte) Ltd.
Pacific Carriers Limited
Pacific International Lines (Pte) Ltd.
Sembcorp Marine Ltd.

■ TAIWAN COMMITTEE

Chairman Loh Yao-fon
Members Huang Chin-san
Danny Wang

Assistant to Group Chairman
Chief Executive Director
Managing Director

Evergreen Group
Chang Yung-Fa Foundation
Cheng Lie Navigation Co., Ltd.



Donald K. L. Chao	President
Jei-Yuan Chen	Executive Manager
Chih-Cheng Li	President
Shang-Wen Liao	President
David Hsu	Chairman
Bill M. H. Huang	Chairman
Harvey Chiu	Chairman
Michael M. K. Hsiao	Chairman
J. D. Lan	Chairman, CEO
Mathias K. Y. Chen	Chairman
Fred C. P. Tsai	Chairman
Hrongs-Nain Lin	President
Joseph Wu	President
I. Y. Chang	Chairman
Nobu Su	CEO
C. K. Ong	President
Lin Ching Chih	Chairman
Glenn K. L. Chan	President
Chao-Hon Chen	Honorary Chairman
James Lan	Chairman
David C. H. Liu	Top-Corporate Consultant

China Steel Express Corporation
CPC Corporation, Taiwan
CSBC Corporation, Taiwan
Eastern Media International Corporation
First Steamship Co., Ltd.
Glory Navigation Co., Ltd.
Hsin Chien Marine Co., Ltd.
Mingtai Shipping Corporation
Shih Wei Navigation Co., Ltd.
Sincere Industrial Corporation
Sincere Navigation Corporation
Ta Tong Marine Co., Ltd.
Ta-Ho Maritime Corporation
Taiwan Navigation Co., Ltd.
TMT Co., Ltd.
U-Ming Marine Transport Corp.
Unison Marine Corporation
United Ocean Shipping S.A.
Wan Hai Lines Ltd.
Wisdom Marine Lines S.A.
Yang Ming Marine Transport Corp.

THAI COMMITTEE

Chairman	Sutep Tranantasin	Executive Vice President
Members	Warawan Nganthavee	Managing Director
	Bhumindr Harinsuit	Managing Director
	Wirat Chanasit	Managing Director
	Chanet Phenjati	President
	Pimook Prayoonprohm	Director of Ship Standard Bureau
	Suraphon Meesathien	Vice President
	Jaipal Mansukhani	Director
	Wittawat Svasti-Xuto	Vice President
	Voravit Visitkitjakarn	Managing Director
	Nitas Krongvanitchayakul	Managing Director
Yodchai Ratanachiwakorn	Operation Director	
Teruo Kondo	Chief Production Manager	

Regional Container Lines Public Co., Ltd.
Asian Marine Services Public Co., Ltd.
Bhureemas Navee Co., Ltd.
Italthai Marine Ltd.
Jutha Maritime Public Co., Ltd.
Marine Department
Nathalin Group
Precious Shipping Public Co., Ltd.
PTT Public Co., Ltd.
Sang Thai Shipping Co., Ltd.
Thaioil Marine Company Limited
Thoresen & Co., (Bangkok) Ltd.
Unithai Shipyard & Engineering Ltd.

TURKISH COMMITTEE

Chairman	Yalcin Sabanci	Chairman
Members	Necdet Aksoy	Chairman
	Ali Umur	President
	Kenan S. Sumra	Ship Department Manager
	Engin Ozcelik	General Manager
	Esref Cerrahoglu	Chairman
	Akin Falay	Managing Director
	H. Bulent Sener	Chairman
	Serdar Akcali	Managing Director
	Bilge Bayburtlugil	General Manager
	Cihan Ergenc	Chairman
	Orhan Karademir	Technical Manager
	Sadan Kaptanoglu	Owner
	Bedri Ince	Chairman
Murat Edip Karahasan	Chairman	
Tamer Kiran	Chairman	
Faruk Miras	Managing Director	

Yasa Holding S.A.
Akmar Holding S.A.
Aktif Shipping
Aygaz Anonim Sirketi
CEBI Maritime & Trading S.A.
Cerrahgil A.S.
Cornships Management & Agency Inc.
Delta Marine Engineering & Computer Trading Co.
Denak Ship Management & Agency
DITAS Tanker & Marine Operations Corp.
ER Denizcilik Sanayi Nak. Ve Tic. A.S.
Genel Denizcilik Nakliyatı A.S.
H.I. Kaptanoglu Shipping Group
Ince Shipping & Trading Co. Inc.
Karahasan Group of Shipping Companies
KIRAN Group of Shipping Companies
Korfez Shipping And Trading Inc.



Bayram Yusuf Aslan	President	Mardeniz & Kardeniz Mardas
Huseyin Yardimci	General Manager, Member of Board	MOLIVA SHIPPING INC.
Serif Ozdaglar	Managing Director	Nemtas Nemrut Liman Isletmeleri A.S.
Murat Dortbudak	Executive Vice President	Odin Shipmanagement
Suha Izmiriligil	President	SINOMAR S.A.
Orkun Kalkavan	Executive Board Member	Turkon Holding

■ CHINA TECHNICAL COMMITTEE

Chairman	Zhao Zhanjun	President	China Ship Design & Research Center Co., Ltd.
Members	Zhu Qingshuang	General Manager	COSCO SHIPYARD GROUP CO., LTD.
	Li Guang Min	Chief Engineer, Vice President	Bohai Shipbuilding Heavy Industry Co., Ltd.
	Feng Guo Ying	Vice General Manager	China Business Marine Co., Ltd. (SINOMARINE)
	Zhang Yongjian	Secretary of the Board	China COSCO Holdings Company Limited
	Chen Zhengjie	Director	China Ocean Shipping (Group) Company
	Luan Fukai	Senior Manager	China Ocean Shipping (Group) Company
	Li Xue Qiang	Deputy General Manager	China Shipping Container Lines Co., Ltd.
	Chen Jian	Deputy Managing Director	China Shipping Development Co., Ltd. Tanker Company
	Pu Li Fei	General Manager	China Shipping International Trading Co., Ltd.
	Wang Guorong	Deputy Managing Director	COSCO Bulk Carrier Co., Ltd.
	Cai Deqing	General Manager	COSCO Container Lines
	Hong Ying	Deputy General Manager	COSCO Shipping Co., Ltd.
	Zhao Jin Wen	Manager	Dalian Ocean Shipping Company
	Zhang Zhen De	Vice President	Dalian Shipbuilding Industry Co., Ltd.
	Yang Wei Zan	Deputy Technical Director, Senior Engineer	Dalian Shipbuilding Industry Co., Ltd.
	Wang RongLiang	General Manager	Glory Wealth Ship Management Co., Ltd.
	Li Yi Wen	Vice General Manager	Guangzhou Maritime Transport (Group) Co., Ltd.
	Zhou Zhi Hao	Senior Engineer	Guangzhou Shipyard International Co., Ltd.
	Lou Dan Ping	Deputy Chief Technical Officer	Hudong-Zhonghua Shipbuilding (Group) Co., Ltd.
	Eng. Zhang Ming Hua	General Manager, Senior Engineer	IMC SEG (China) IMC Shipyard & Engineering Group (China) Ltd.
	Hu Keyi	Technical Director	Jiangnan Shipyard (Group) Co., Ltd. TDCC Office
	Cao Zhi Teng	General Manager	Jiangsu New Yangzi Shipbuilding Co., Ltd.
	Luo Jian	Deputy Managing Director	Jiangsu Ocean Shipping Co., Ltd.
	Zhu Yue Chen	General Manager	Liaoning Bohai Shipyard
	Yu Baojun	Professor	Marine Design & Research Institute of China
	Hideaki Naoi	Vice President	Nantong COSCO KHI Ship Engineering Co., Ltd.
		Senior General Manager of Central Technical Division	
		Director, Executive Vice President	New Century Shipbuilding Co., Ltd.
	Liu Haijin	Vice General Manager	Qingdao Ocean Shipping Company
	Sun Wen Tian	Honorary President	Shanghai Merchant Ship Design & Research Institute
	Lu Zhi-Ping	General Manager	Shanghai Ocean Shipping Company
	Qiu Xin Yao	Technical Chief	Shanghai Ship & Shipping Research Institute, Ministry of Communications
	Jin Yun Long	Technical Director	Shanghai Shipyard & Chengxi Shipyard Co., Ltd.
Ye Jinwen	Chief Engineer, Senior Engineer	Shanghai Waigaoqiao Shipbuilding Co., Ltd.	
Tao Ying	Technical Director	SINOPACIFIC SHIPBUILDING GROUP CO., LTD.	
Yang Shiming	President	SITC Development Group Co., Ltd.	
Xiao Sen Yuan			

■ DANISH TECHNICAL COMMITTEE

Chairman	Preben Terndrup Pedersen	Professor	Technical University of Denmark
Members	Claus Usen Jensen	Executive Vice President	A/S Dampskibsselskabet TORM
	Niels Bjørn Mortensen	Chief Marine Technical Officer	BIMCO
	Kurt Rye Damkjær	Senior Vice President	Clipper Marine Services A/S
	Anne Skov Strüver	Head of Division	Danish Maritime Authority
	Hans Henrik Petersen	Head of Department	Danish Shipowners' Association
	Peter Justesen	Vice President	Lauritzen Kosan A/S
	Erik Moller	Fleet Manager Tankers	Lauritzen Tankers A/S
	Thomas S. Knudsen	Senior Vice President	MAN Diesel

■ GREEK TECHNICAL COMMITTEE

Chairman	Marios Stafilopatis	Owner	Byzantine Maritime Corporation
Members	P. E. Antonelos	General Manager	A. M. Nomikos Transworld Maritime Agencies S.A.
	Christos C. Hadjigeorgiou	Technical Manager	Almi Marine Management S.A.



Haris G. Giantzikis	Technical Manager	Arcadia Shipmanagement Co., Ltd.
George Kourelis	General Manager	Cardiff Marine Inc.
Demetrios Koukoulas	General Manager	Cardiff Marine Inc.
Michael D. Kapsorrachis	Technical Manager	Centrofin Management Inc.
Dionisios Kourouklis	Director Marine Operations	Chandris (Hellas) Inc.
George Alexandridis	Technical Coordinator	Dynacom Tankers Management Ltd.
George J. Souravlas	Technical Director	Elmira Shipping & Trading S.A.
Costas Petsas	Technical Manager	Empros Lines
Nikolaos Petromylonakis	Technical Manager	Entrust Maritime Co. Ltd.
	Technical Manager	Equinox Maritime Ltd.
Stefanos Georgiou	Technical Manager	European Navigation Inc.
George H. Paschalis	Technical Director	Evalend Shipping Co. S.A.
Dimitrios Theodoropoulos	COO	Franco Compania Naviera S.A.
Christoforos E. Andreadis	Technical Manager	Golden Union Shipping Co. S.A.
Anastasios Kalogiannis		Iolcos Hellenic Maritime Enterprises Co. Ltd.
Dion Theodorou	Technical Manager	Konkar Shipping Agencies S.A.
Takis Koutris	Managing Director	Kristen Marine S.A.
John A. Yiannakenas		Kritsas Shipping S.A.
Nick Argyros	Technical Director	Laskaridis Shipping Co. Ltd.
John N. Ioannidis	Technical Manager	Maryville Maritime Inc.
Theodoros Pavlidis	Technical Director	Metrostar Management Corp.
Nikolaos Balalis	Technical Director	Navios Shipmanagement Inc.
Amir Geva	Manager	Ofer (Ships Holding) LTD.
Paraskevas Koutsoukos	Managing Director & Technical Manager	Paradise Navigation S.A.
Elias A. Galanopoulos	Managing Director	Regal Mare Inc
Michael Anagnostou	Managing Director & Technical Manager	Roswell Navigation Corp.
Achilleas Avlonitis	Technical Manager	S. Frangoulis (Ship Management) Ltd
Dimitris C. Makris	Technical Manager	Springfield Shipping Co. Panama S.A.
Frantzeskcs D. Kontos	Technical Director	Sun Enterprises Ltd.
Vasileios Lampropoulos	Technical Department Manager	Thenamaris Ships Management Inc.
Manolis G. Koutlakis	Technical Manager	Transmed Shipping Ltd.
C. Dean Tseretopoulos	Naval Architect-Marine Engineer	Triple Tee International Ltd.
Savvas D. Papadatos	Mechanical Engineer	Tsakos Shipping and Trading S.A.
	Special Projects & Claims Manager	
Constantinos M. Metaxas	Technical Manager	Union Commercial Incorporated
Takis Koutouras	Technical Manager	Z & G HALCOUSSIS Co. Ltd.

■ HONG KONG TECHNICAL COMMITTEE

Chairman	Peter Cheng	Managing Director	Peter Cheng Naval Architect & Marine Consultant Ltd.
Members	Marcel Liedts	Group Managing Director	Anglo-Eastern Group
	Y. Q. Huang	Deputy General Manager	Associated Maritime Company (Hong Kong) Limited
	B. N. Prasad	General Manager	Bernhard Schulte Shipmanagement (Hong Kong) Limited Partnership
	Vishal Khurana	Director & Chief Executive	Chellaram Shipping (Hong Kong) Ltd.
	Liu Yi Fan	Deputy General Manager	China Shipping (H.K.) Marine Co., Ltd.
	Ning Pao Kun	Deputy Managing Director	COSCO (H.K.) Shipping Co., Ltd.
	Kishore S. Rajvanshy	Managing Director	Fleet Management Limited
	Lau Pong Sze	Managing Director	Gold Bridge Shipping Ltd.
	Y. H. Shum	Director	Goldbeam International Limited
	Li Kwok Hung	Managing Director	IMC Shipping Services Co., Pte. Ltd.
	Vipin Sachdeva	Vice President	KC Maritime Ltd.
	S. S. Tse	Director & Deputy General Manager	Lihai International Shipping Ltd.
	Bibhash Chaudhuri	Senior Fleet Manager	New Asian Shipping Company, Limited
	Haruki Aono	Executive Director	Northstar Ship Management Ltd.
	James S. C. Tai	General Manager	Orient Overseas Container Line Ltd.
	C. Kocherla	Director, Fleet	Pacific Basin Shipping (HK) Ltd.

Kenneth Koo
W. L. Hung

Group Vice Chairman & CEO
General Manager

Tai Chong Cheang Steamship Co. (H.K.) Ltd.
Wah Kwong Ship Management (Hong Kong) Limited

■ KOREA TECHNICAL COMMITTEE

Chairman	Sung-Won Kang	Professor	Pusan National University
Members	Min-Seok Jang	Director	Dae Sun Shipbuilding & Engineering Co., Ltd.
	Duck-Yull Lee	Vice President	Daewoo Shipbuilding & Marine Engineering Co., Ltd.
	No-Joon Park	Division General Director	Hanjin Heavy Industries & Construction Co., Ltd.
	Kwang Sang Yoo	Vice President, Fleet Management Director	Hanjin Ship Management Co., Ltd.
	Jong-seung Lee	Vice President	Hyundai Heavy Industries Co., Ltd.
	Lee Taeg Gyu	Senior Vice President	Hyundai Merchant Marine Co., Ltd.
	Hyun-Sang Shim	Senior Vice President	Hyundai Samho Heavy Industries Co., Ltd.
	Yeong-Se, Jeong	Vice President	Korea Line Corporation
	Jae-Sung Choi	Professor	Korea Maritime University
	Jong-Tae Lee	Managing Director	KSS Line Ltd. Busan Office
	Hyung-Yong Lee	Vice President	Samsung Heavy Industries Co., Ltd. Geoje Shipyard
	Seog Hwan Kang	Vice President	SK Shipping Co., Ltd.
		Head of Marine Affairs Planning Division	
	Young-Woon, Chung	Executive Managing Director	SPP Plant & Shipbuilding Co., Ltd.
	Nam-Young Kim	Vice President	STX Pos Ship Management
	Hyo-Kwan Leem	Senior Vice President	STX Shipbuilding Co., Ltd.
	Tae-Ho Park	Senior Managing Director	Sungdong Shipbuilding & Marine Engineering Co., Ltd.

■ MIDDLE EAST TECHNICAL COMMITTEE

Chairman	Jitendra Misra	Managing Director	Emarat Maritime
Members	Karem Hammad	Tanker Fleet Division Manager	ADNATCO-NGSCO
	Benny K. Alex	General Manager	Emarat Maritime
	G. K. Venkatasubramanian	Technical Manager	GulfNav Ship Management FZE
	Bader Al Otaibi	Manager	Kuwait Oil Tanker Co. S. A. K.
	Hiroyoshi Nishida	General Manager (Marine & Technical)	Oman Ship Management Company
	A. Ramamurty	General Manager	Pioneer Ship Management Services LLC
	A. Mansourzadeh	Technical Director	Simatech Shipping L. L. C.
	Shamim A. Syed	Technical & Support Manager	Vela International Marine Ltd.
	N. V. K. Nambiar	Technical Manager	Warm Seas

■ SINGAPORE TECHNICAL COMMITTEE

Chairman	Tey Yoh Huat	Vice President	APL
Members	Toshikazu Saito	Director, General Manager	"K" Line Ship Management (Singapore) Pte. Ltd.
	Robert Sumantri	Managing Director	Altus Shipping and Logistics Pte. Ltd.
	Surajit Chanda	Fleet Manager Technical	BW Shipping Managers Pte. Ltd.
	Liu De Tian	Managing Director	COSCO (Singapore) Pte. Ltd.
	Toh Ho Tay	Director, Rig & Shipbuilding	Drydocks World - SE Asia
	B. S. Teeka	Managing Director	Executive Ship Management Pte. Ltd.
	Ir Wong Sin Futt	Assistant Director	IMC Shipping Services Co., Pte. Ltd.
	Seow Tan Hong	Senior General Manager	Jurong Shipyard Pte. Ltd.
	Nelson Yeo	Managing Director	Keppel Shipyard Limited (A member of the Keppel Group)
	Avinash Kadam	Director	Maersk Tankers
	Mark Lim Yew Guan	Deputy Director (Shipping)	Maritime & Port Authority of Singapore
	Hiroaki Kubo	Managing Director	MOL Tankship Management (Asia) Pte. Ltd.
	Arun K. Ahluwalia	Fleet Director	MSI Ship Management Pte. Ltd.
	Hemant Pathania	Managing Director & COO	NYK Shipmanagement Pte. Ltd.
	Teh Eng Hua	Vice President	Ocean Tankers (Pte) Ltd.
	Lim Tau Kok	Director	PACC Ship Managers Pte. Ltd.
	Panneer Selvam	General Manager	Pacific International Lines Pte. Ltd.
	Francis Chin	COO	Stellar Shipmanagement Services Pte. Ltd.
	Tadic Tonci	Technical Director	Tanker Pacific Management (Singapore) Pte. Ltd.
	Naresh Chand	General Manager Planning	United Ocean Ship Management Pte. Ltd.
Calum Hume	Deputy Managing Director & Technical Director	V. Ships Asia Pte. Ltd.	
Mok Kim Terng	Director, Operations	Wärtsilä Ship Design Singapore Pte. Ltd.	



■ TAIWAN TECHNICAL COMMITTEE

Chairman	Chiang Shou-hsing	Senior Vice President	Evergreen Marine Corp. (Taiwan) Ltd.
Members	K. C. Lin	Senior Manager	Cheng Lie Navigation Co., Ltd.
	Steve S. J. Ren	Vice President	China Steel Express Corporation
	J. Z. Fang	Chief Engineer	CPC Corporation, Taiwan
	Chih-Shen Chen	Director	Deryoung Maritime Co., S.A.
	Michael L. Y. Pan	Executive Vice President	Eastern Media International Corporation
	Luo Chin-ek	Senior Vice President, Maintenance Dept.	Evergreen Marine Corp. (Taiwan) Ltd.
	S. H. Wang	Vice President	First Steamship Co., Ltd.
	Anthony Lin	Adviser	Formosa Plastics Marine Corporation
	Guo I-Lung	Director, President	Glory Navigation Co., Ltd.
	Thomas S. H. Yeh	DS Vice President SMS Department	Harmony Transportation Co., Ltd.
	W. K. Wu	Manager	Hsin Chien Marine Co., Ltd.
	C. K. Lin	Vice President	Mingtai Navigation Co., Ltd.
	You-Yen Ho	Vice President	Shih Wei Navigation Co., Ltd.
	Kenny J. H. Yang	General Manager	Sincere Industrial Corporation
	Young Perng-Terng	Chief Engineer	Ta Tong Marine Co., Ltd.
	Andy D. Ouyang	Chief of Marine Technical Section	Ta-Ho Maritime Corporation
	Chen Teng	Senior Vice President	Taiwan Navigation Co., Ltd.
	Robert Y. P. Kao	Assistant Vice President	U-Ming Marine Transport Corporation
	Peter W. D. Ho	Vice President	Unison Marine Corp.
	Sanders Jong	Vice President	Wan Hai Lines Ltd.
	H. M. Wang	Chief Technical Officer	Wisdom Marine Lines S. A.

■ TURKISH TECHNICAL COMMITTEE

Chairman	M. Erbil Özkaya	General Coordinator	YA-SA Shipping Industry and Trading S.A.
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	Özgür Aksoy	General Manager & Board Member	Akmar Holding S.A.
	Saim Gökçen	Technical Manager	Aksay Denizcilik ve Ticaret A.Ş.
	Selçuk Karakimseli	Board of Member	Atlas Ship Management Ltd.
	Kenan S. Sumra	Marine Department Manager	Aygaz A.Ş.
	Mustafa Bahar	Technical Manager	Cebi Denizcilik A.Ş.
	Ergun Köker	Technical Manager & DPA	Cornships Management & Agency Inc.
	S. Dirim Şener	Department Manager	Delta Marine Engineering & Computer Trading Co.
	Şemsettin Özyapar	Technical Manager	Denak Ship Management & Agency
	Baha Erbil	General Manager	Densan Deniz Nakliyat ve Sanayi A.Ş.
	Taşkin Çilli	CEO, Member of Board	Desan Deniz İnşaat San. A.Ş.
	Coşkun Ağca	Fleet Manager	Ditaş Deniz İşletmeciliği ve Tankerciliği A.Ş.
	Metin Solak	Technical Manager	Dünya Denizcilik ve Tic. A.Ş.
	Kemal Ayten	General Manager	E. S. C. Ereğli Denizcilik A.Ş.
	Bülent Subaşı	Operation Manager	IDÇ Denizcilik San. Tic. A.Ş.
	A. Yaşar Canca	Technical Manager	Ince Shipping Group
	Raif Söylerkaya	Ocean Going Master	Kaptanoglu Holding
	Cengiz Eren	Head of Technical Department	Karahasan Group of Shipping Companies
	Mehmet Güllakdeniz	Safety Coordinator / DPA Master Mariner	Kiran Group of Shipping Companies
	Melek Yavan	Member of Board	Körfez Shipping and Trading Inc.
	Galip Kendigelen	General Manager	Mardas & Mardeniz & Kardeniz Group of Companies
	Gökseven Eroğul	Deputy General Manager	Nemtaş Shipping
	Hüseyin Şener	Fleet Manager	Odin Ship Management
	M. Cumhur Kuter	General Manager	Sedef Shipbuilding Inc.
	Müjdat Uludağ	General Manager	Sefine Shipyard Inc.
	Mehmet Başoğlu	General Manager	Semih Sohtorik Management & Agency Inc.
	Hayati Cingöz	BSC Engineer & Technical Manager	Ulusoy Sea Lines Management S.A.
	Mehmet Kayhan	General Manager	YA-SA Shipmanagement & Trading S.A.
	Hakan Gürel	General Manager	YA-SA Tanker & Transportation S.A.

NK in Control

Officers

Directors	N. Ueda	Chairman and President	Nippon Kaiji Kyokai
	T. Kaji	Executive Vice President	Nippon Kaiji Kyokai
	Dr. H. Kitada	Executive Vice President	Nippon Kaiji Kyokai
	F. Imakita	Managing Director	Nippon Kaiji Kyokai
	T. Matsui	Managing Director	Nippon Kaiji Kyokai
	S. Kakubari	Managing Director	Nippon Kaiji Kyokai
	Dr. T. Yoneya	Managing Director	Nippon Kaiji Kyokai
	A. Ashida	President	Mitsui O.S.K. Lines, Ltd.
	Dr. H. Itagaki	Professor Emeritus	Yokohama National University
	Dr. H. Otsubo	Professor Emeritus	The University of Tokyo
	Y. Katoh	President	Mitsui Engineering & Shipbuilding Co., Ltd.
	K. Kama	President & CEO	IHI Corporation
	S. Kobayashi	Representative Director, Executive Vice-President Corporate Officer	Nippon Yusen Kabushiki Kaisha
	K. Sugimoto	President	Iino Kaiun Kaisha, Ltd.
	S. Sumi	President	Tokio Marine & Nichido Fire Insurance Co., Ltd.
	K. Tsukuda	Chairman	Mitsubishi Heavy Industries, Ltd.
	T. Motoyama	Chairman	The Shipbuilders' Association of Japan
	S. Hasegawa	President	Kawasaki Heavy Industries, Ltd.
	Dr. S. Hayama	Professor Emeritus	The University of Tokyo
	M. Furukawa	President	Hitachi Zosen Corporation
H. Maekawa	President	Kawasaki Kisen Kaisha, Ltd.	
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Dr. T. Nomoto	Professor Emeritus	The University of Tokyo	
Dr. K. Yoshida	Professor Emeritus	The University of Tokyo	
Auditors	T. Aihara	Chairman	Japan Civil Aviation Promotion Foundation
	N. Ishii	Former Managing Executive Director	Nippon Yusen Kabushiki Kaisha
	K. Kondo	Vice President Executive Officer	Mitsui Sumitomo Insurance Co., Ltd.
	I. Shintani	Board Counsellor	Kawasaki Kisen Kaisha, Ltd.
	Councilors	Z. Akasaka	Chairman
H. Bada		President & CEO	JFE Steel Corporation
Dr. Y. Fujita		Professor Emeritus	The University of Tokyo
K. Fukui		President	Kyokuyo Co., Ltd.
K. Furukawa		President	Hachiuma Steamship Co., Ltd.
Y. Hasegawa		President	Taiyo Nippon Kisen Company
T. Higaki		Chairman	Imabari Shipbuilding Co., Ltd.
M. Hyodo		President	Nippon Koa Insurance Co., Ltd.
Dr. Y. Inoue		Professor for Specific Project	Yokohama National University
Y. Inubushi		Senior Adviser	Kobe Steel, Ltd.
S. Inui		President	Inui Steamship Co., Ltd.
H. Ishikawa		President	Japan Railway Construction, Transport & Technology Agency
H. Kadota		President	Shin Kurushima Dockyard Co., Ltd.
T. Kakei		President	Shinwa Kaiun Kaisha, Ltd.
N. Kakizoe		President & CEO	Nippon Suisan Kaisha, Ltd.
H. Kashimoto		President	Sumitomo Heavy Industries Marine & Engineering Co., Ltd.
J. Kato		President	Kyoei Tanker Co., Ltd.
T. Kawamoto		Tsuneishi Shipbuilding Company President, Executive Officer Representative Director	Tsuneishi Holdings Corporation
S. Kinoshita		President	NYK-Hinode Line, Ltd.
Dr. H. Kobayashi		Professor	Yokohama National University
S. Koide	Representative Director, President Executive Officer	Daiichi Chuo Kisen Kaisha	



S. Kurahara	President	IHI Marine United Inc.
N. Mataka	President	Idemitsu Tanker Co., Ltd.
T. Matsui	President	The Sanko Seamship Co., Ltd.
Y. Matsuyama	Representative Director, President	Nippon Oil Tanker Corporation
S. Minami	Company CEO	Oshima Shipbuilding Co., Ltd.
S. Mishima	President & Executive Director	Universal Shipbuilding Corporation
H. Morishima	President	Sasebo Heavy Industries Co., Ltd.
S. Muneoka	President	Nippon Steel Corporation
T. Nagumo	Director, Senior Corporate Adviser	Sanoyas Hishino Meisho Corporation
T. Nakabe	President	Onomichi Dockyard Co., Ltd.
T. Namura	President	Namura Shipbuilding Co., Ltd.
T. Naraoka	President & CEO	Tokyo Senpaku Kaisha, Ltd.
K. Shimakawa	President	Nippon Steel Shipping Co., Ltd.
S. Shirakura	President	Fuji Electric Systems Co., Ltd.
S. Sudo	Director, Chairman	Nissay Dowa General Insurance Co., Ltd.
Dr. Y. Sumi	Professor, Faculty of Engineering	Yokohama National University
T. Taniguchi	President & Director	Kawasaki Shipbuilding Corporation
Dr. H. Tanikawa	Professor Emeritus	Seikei University
H. Tomono	Representative Director & President	Sumitomo Metal Industries, Ltd.
N. Tsuchiya	President & CEO	Yuyo Steamship Co., Ltd.
S. Tsuji	President	Taiheiyo Kisen Kaisha, Ltd.
K. Uchida	President	Meiji Shipping Co., Ltd.
K. Yamaguchi	President	Nissho Shipping Co., Ltd.

■ Classification Committee

Chairman	N. Ueda	Chairman & President	Nippon Kaiji Kyokai
Vice Chairman	T. Kaji	Executive Vice President	Nippon Kaiji Kyokai
Members	Dr. H. Kitada	Executive Vice President	Nippon Kaiji Kyokai
	F. Imakita	Managing Director	Nippon Kaiji Kyokai
	T. Matsui	Managing Director	Nippon Kaiji Kyokai
	S. Kakubari	Managing Director	Nippon Kaiji Kyokai
	Dr. T. Yoneya	Managing Director	Nippon Kaiji Kyokai
	T. Aihara	Chairman	Japan Civil Aviation Promotion Foundation
	N. Ishii	Former Managing Executive Director	Nippon Yusen Kabushiki Kaisha
	Dr. H. Itagaki	Professor Emeritus	Yokohama National University
	Y. Otagaki	Managing Director	IHI Marine United Inc.
	Dr. H. Otsubo	Professor Emeritus	The University of Tokyo
	K. Kiriake	Managing Director	The Shipbuilders' Association of Japan
	I. Shintani	Board Counsellor	Kawasaki Kisen Kaisha, Ltd.
	K. Takenaga	Member of the Board, Executive Officer	Kawasaki Kisen Kaisha, Ltd.
	Y. Tanaka	Corporate Officer & General Manager Technical Group	Nippon Yusen Kabushiki Kaisha
	N. Tsukamoto	General Manager, Marine Underwriting Dept.	Tokio Marine & Nichido Fire Insurance Co., Ltd.
	K. Nakajima	General Manager Marine Claims Department	Mitsui Sumitomo Insurance Co., Ltd.
	S. Nakajima	Managing Director	Iino Marine Service Co., Ltd.
	K. Nishimura	General Manager, Basic Design Department, Ship & Ocean Project Headquarters	Mitsui Engineering & Shipbuilding Co., Ltd.
	Dr. T. Nomoto	Professor Emeritus	The University of Tokyo
	Dr. S. Hayama	Professor Emeritus	The University of Tokyo
	O. Handa	Managing Director	The Japanese Shipowners' Association

H. Mizuno	Naval Architect, General Manager, Ship & Ocean Engineering Dept., Shipbuilding & Ocean Development Headquarters	Mitsubishi Heavy Industries, Ltd.
A. Murakami	Director, General Manager of Engineering Division	Kawasaki Shipbuilding Corporation
H. Yamada	General Manager, Planning & Initial Design Dept. Ship & Offshore Structure Division	Universal Shipbuilding Corporation
K. Yokota	Managing Executive Officer	Mitsui O.S.K. Lines, Ltd.
Dr. K. Yoshida	Professor Emeritus	The University of Tokyo

■ Technical Committee

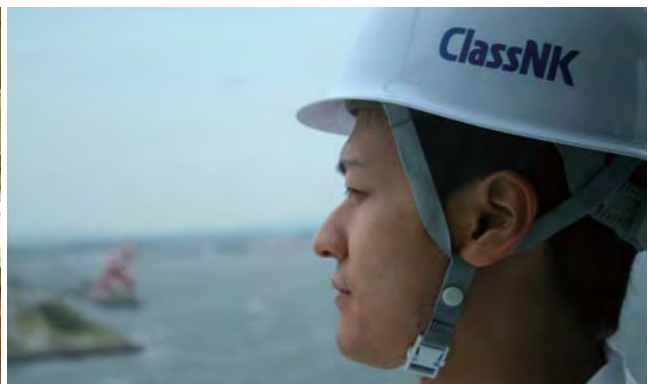
Chairman	Dr. H. Itagaki	Professor Emeritus	Yokohama National University
Members	S. Iijima	Director, Executive Vice President	Mitsubishi Heavy Industries, Ltd.
	K. Ishikawa	Director and General Manager Ship & Offshore Structure Division	Universal Shipbuilding Corporation
	Dr. Y. Inoue	Professor for Specific Project	Yokohama National University
	Y. Otagaki	Managing Director	IHI Marine United Inc.
	Dr. H. Otsubo	Professor Emeritus	The University of Tokyo
	Y. Onuki	Member of Marine Safety & Environment Committee	The Japanese Shipowners' Association
	H. Okuda	Senior Managing Executive Officer	Sumitomo Metal Industries, Ltd.
	H. Kawasaki	General Manager, Technical Plant Sales Div. Plate Division	Nippon Steel Corporation
	M. Kishimoto	Director, Chief General Manager, Business & Technical Development Division	Sumitomo Heavy Industries Marine & Engineering Co., Ltd.
	Dr. H. Kobayashi	Professor	Yokohama National University
	Dr. Y. Sumi	Professor, Faculty of Engineering	Yokohama National University
	H. Takahashi	Member of Marine Safety & Environment Committee	The Japanese Shipowners' Association
	K. Takenaga	Member of Marine Safety & Environment Committee	The Japanese Shipowners' Association
	Y. Tanaka	Member of Marine Safety & Environment Committee	The Japanese Shipowners' Association
	A. Tsukamoto	Officer	Kobe Steel ,Ltd.
	T. Nakajima	General Manager	The Japan Steel Works, Ltd.
	N. Nagata	Managing Director, General Manager of Ship & Ocean Project Hq.	Mitsui Engineering & Shipbuilding Co., Ltd.
	H. Nishizaki	Vice President	JFE Steel Corporation
	Dr. T. Nomoto	Professor Emeritus	The University of Tokyo
	Dr. S. Hayama	Professor Emeritus	The University of Tokyo
Dr. M. Horigome	Professor Emeritus	Tokyo University of Marine Science and Technology	
A. Murakami	Director, General Manager of Engineering Division	Kawasaki Shipbuilding Corporation	
K. Yasuda	Executive Officer & General Manager, Ship Design Department	Sasebo Heavy Industries Co., Ltd.	
K. Yokota	Vice Chairman of Marine Safety & Environment Committee	The Japanese Shipowners' Association	
Dr. K. Yoshida	Professor Emeritus	The University of Tokyo	



Quality Committee

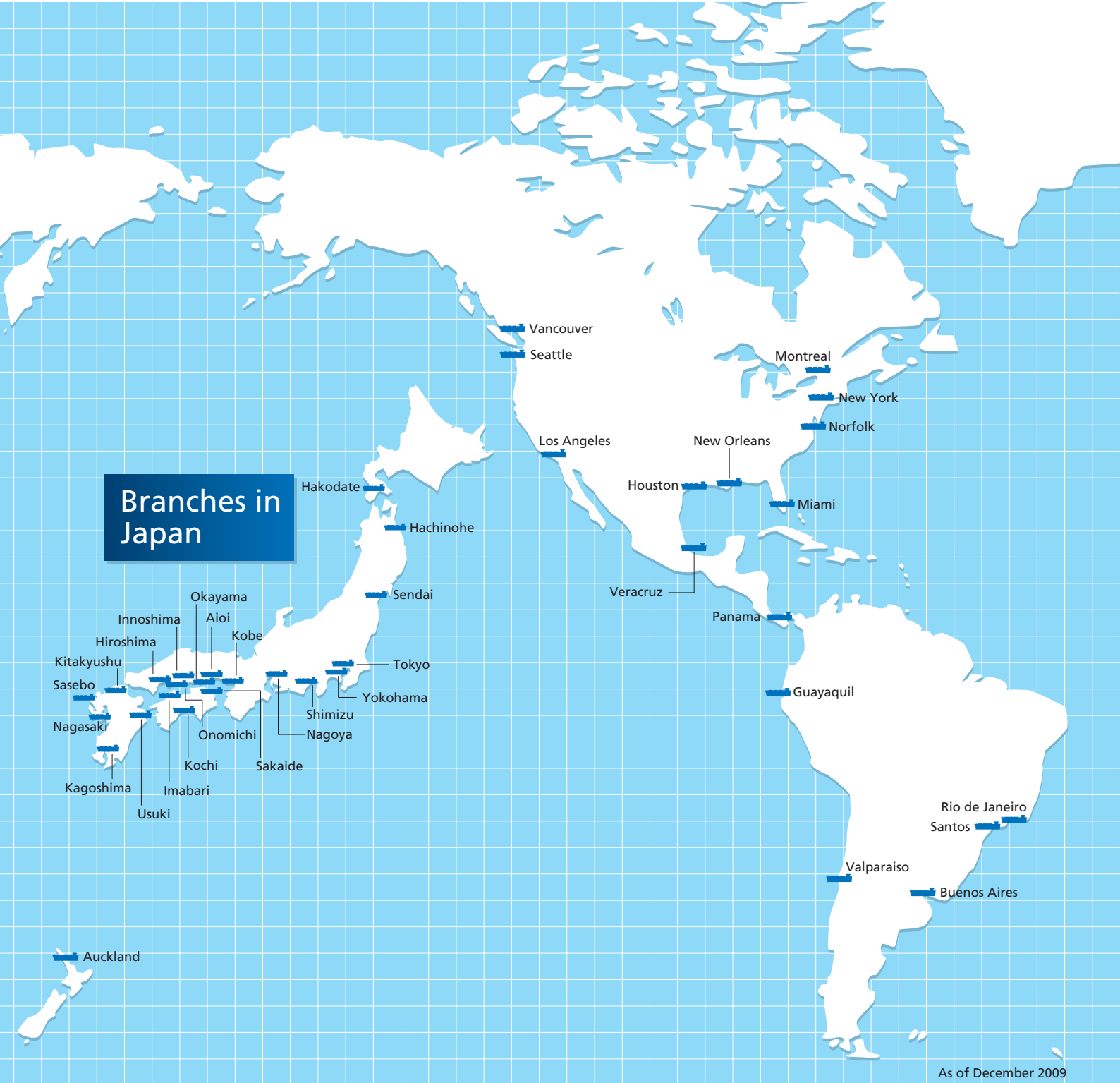
<p>Members</p> <p>Dr. F. Sasaki Y. Yamaguchi T. Yamazaki H. Tanabe T. Yagi K. Yoshida Dr. N. Ooka O. Handa T. Iwamura</p>	<p>Ex-professor General Manager Senior Researcher Lead Technical Expert Manager Manager Senior Technical Advisor Managing Director General Manager</p>	<p>University of Tokai The Shipbuilders' Association in Japan Japanese Marine Equipment Association Japan Ship-Machinery Quality Control Association The Japan Iron & Steel Federation The Japan Electrical Manufacturer's Association The Japanese Society for Non-Destructive Inspection The Japanese Shipowners' Association Nippon Kaiji Kyokai</p>
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As of December 2009



Service Network





As of December 2009



ClassNK

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