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.
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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- Service Network 43
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 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
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

<table>
<thead>
<tr>
<th>Flag</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Panama</td>
<td>58%</td>
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<tr>
<td>Japan</td>
<td>7%</td>
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<tr>
<td>Liberia</td>
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<tr>
<td>Singapore</td>
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</tr>
<tr>
<td>Hong Kong</td>
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</tr>
<tr>
<td>Marshall Islands</td>
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<tr>
<td>Bahamas</td>
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<tr>
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168.9 million gt

### Breakdown of NK Fleet by Ship Type

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<th>Ship Type</th>
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</thead>
<tbody>
<tr>
<td>Bulk Carrier</td>
<td>53%</td>
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<tr>
<td>Oil Tanker</td>
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<tr>
<td>Container Carrier</td>
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<tr>
<td>Vehicle Carrier</td>
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<tr>
<td>General Cargo</td>
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<tr>
<td>Chemical Tanker</td>
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<tr>
<td>LNG Carrier</td>
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<tr>
<td>LPG Carrier</td>
<td>2%</td>
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<tr>
<td>Refrigerated Cargo Carrier</td>
<td>1%</td>
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<tr>
<td>Others</td>
<td>1%</td>
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</table>

168.9 million gt

<table>
<thead>
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<tr>
<td>Refrigerated Cargo Carrier</td>
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</tr>
<tr>
<td>LNG Carrier</td>
<td>1%</td>
</tr>
<tr>
<td>Others</td>
<td>15%</td>
</tr>
</tbody>
</table>

7,188 ships
International Exhibitions
The Society participated in fourteen major international maritime exhibitions in 2009:

- 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)
- 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)
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.

- 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
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.

NK in Action

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 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 Toyo.hashi 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

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**NK in Action**

[Image of ships and text about NK in Action]
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 GISSELLE 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 Sinagata 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 227,898 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 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 305x693 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.

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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.

Survey Activities and Approvals 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.

<table>
<thead>
<tr>
<th>Survey Activities and Approvals</th>
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<tbody>
<tr>
<td><strong>Category</strong></td>
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<tr>
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</tr>
<tr>
<td>Materials</td>
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<td>Machinery</td>
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<td></td>
</tr>
<tr>
<td>Marine Equipment</td>
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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...
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 a way of determining 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 service has been made 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.
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.

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

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

SETAGAWA
a 299,998 dwt oil tanker built by IHI Marine United Inc., Kure Shipyard for Kawasaki Kisen Kaisha, 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 M)
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
10. Rules and Guidance for High Speed Craft
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)
- 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.
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 protecting 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.
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.).

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.).

<table>
<thead>
<tr>
<th>Topic</th>
<th>Overview</th>
</tr>
</thead>
</table>
| Research on structural integrity of ultra-large containerships | R&D is being carried out on the following three topics arising from the increasing size of containerships in recent years.  
- 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 containerships | 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 containerships. |
| Research on strength assessment for sloshing loads on cargo tanks of membrane LNG carriers | 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. |
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.

Research on residual structural strength after collision (First year of two-year project)

This project focuses on examining the basic concepts for residual strength requirements for collision and grounding accidents that comply with IMO goal-based standards.

Research on verification of certification scheme of new NOx emission regulations (First year of two-year project)

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.

Research on practical application of technologies for reducing GHG emissions from ships (First year of two-year project)

The following R&D studies are being conducted focusing on the reduction of greenhouse gas (GHG) emissions from ships:

- 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.

Development of requirements for tooth subsurface fatigue strength of bevel gears (First year of two-year project)

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.

Safety and reliability assessment of machinery and equipment newly installed onboard LNG carriers (First year of two-year project)

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.
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.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Overview</th>
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</thead>
<tbody>
<tr>
<td>Research on realization of blasting technology using mixed air-water jets</td>
<td>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.</td>
</tr>
<tr>
<td>Research on energy saving measures in the shipbuilding industry</td>
<td>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.</td>
</tr>
<tr>
<td>Studies related to loading conditions and resistance using CFD</td>
<td>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.</td>
</tr>
<tr>
<td>Development of software to prepare PSPC/CTF (Coating Technical File)</td>
<td>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.</td>
</tr>
<tr>
<td>Wind Challenger (next generation eco-friendly wind powered ship) plans</td>
<td>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.</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>PrimeShip</th>
<th>OPERATION</th>
<th>MACHINERY</th>
<th>MAINTENANCE</th>
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<tbody>
<tr>
<td>PrimeShip-IPCA</td>
<td>PrimeShip-ETAS</td>
<td>PrimeShip-SHAFT</td>
<td>PrimeShip-HULLCare</td>
</tr>
<tr>
<td>PrimeShip-NAPA Manager</td>
<td>PrimeShip-CHEMISYS</td>
<td>PrimeShip-CRANK</td>
<td>PrimeShip-CAP</td>
</tr>
<tr>
<td>PrimeShip-HULL(Rules)</td>
<td>PrimeShip-DG/BulkCargo</td>
<td>PrimeShip-TORRES</td>
<td>PrimeShip-OAS</td>
</tr>
<tr>
<td>PrimeShip-HULL(DSA)</td>
<td>PrimeShip-INVENTORY</td>
<td></td>
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</table>

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 crankshaft 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 used to electronically prepare and manage the inventory of toxic substances required by the Ship Recycling Convention.

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

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.

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

**ADVISORY COUNCIL**

**Members**
- Chang Yung-fa
- Frank W. K. Tsao
- Lua Cheng Eng
- Sumate Tanthuwanit

**Chairman**
- Group Chairman
- Group Chairman
- Chairman
- President

**British Committee**

**Chairman**
- J. G. Davis CBE

**Members**
- F. M. Marchant MBE
- Michael G. Parker
- Douglas W. Lang
- Peter McIntosh
- Chris Bailey
- Sunil Malhotra
- Jeremy G. Hodgson
- Epaninindas G. E. Embiricos
- Philip D Atkinson
- Alastair Fischbacher
- Jan van Dijk
- Michael K. Drayton

**Chairman**
- IMIF (International Maritime Industries Forum)
- Andrew Weir Shipping Ltd.
- Anglo-Eastern (UK) Ltd.
- Ark Syndicate Management Limited
- BP Shipping Limited
- British Marine Plc
- Deutsche Schiffsbank AG
- Embiricos Shippersbrokers Ltd.
- Graig Ship Management Limited
- International Marine Transportation Ltd.
- Rio Tinto Shipping Limited
- Shell Shipping Technology
- The Baltic Exchange

**China Committee**

**Chairman**
- Li Jianhong

**Members**
- Xu Ziqiu
- Lu Yi Bin
- Mao Shi Jia
- Li Zhong
- Han Chengmin
- Ge En Hua
- Yang Jian Ming
- Huang Qi Qiang
- Tian Zhong Shan

**Chairman**
- 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

**Greek Committee**

**Chairman**
- Charalambos N. Mylonas

**Members**
- Markos A. Nomikos
- Michael D. Chandris
- George J. Souravlas
- Anna G. Dracopoulos
- Prokopis N. Karnessis
- Krion Lendoudis
- Michael E. Veniamis
- Ghiakas J. Goumas
- Dimitris Z. Kritsas
- Panagiotis C. Laskaridis
- Diamantis P. Diamantides
- Theodore P. Angelopoulos
- Angeliki Frangou
- Thanos G. Crassaris
- George S. Livanos
- Constantinos J. Martinos

**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.
- Kritas 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.
### HONG KONG COMMITTEE

**Chairman:** David C. C. Koo  
**Honorary Chairman:** M. H. Liang  
**Members:**  
- Ning Pao Kun  
- Frank Y. K. Tsao  
- Steve G. Hsu  
- Kwaiz Szei Ho  
- Richard Hext  
- C. C. Liu  
- M. T. Yung  
- Peter Cheng, MBE  
- Raymond Pao  
- Kenneth K.W. Lo  
- Edward S. C. Cheng  
- Sabrina S. M. Chao  
- Jim Nelson  

**President:** Panagiotis N. Tsakos  
**Managing Director:** Michael M. Scufalos  
**Managing Director:** Tsakos Shipping & Trading S.A.  
**Managing Director:** Union Commercial Inc.  
**Chairman:** Valles Steamship Co., Ltd.  
**Managing Director:** COSCO (H.K.) SHIPPING CO., LIMITED  
**President:** Fairmont Shipping (HK) Ltd & Affiliates  
**Chairman:** Grand Seatrade Shipping Company Ltd.  
**Director & President:** Hong Kong Ming Wah Shipping Co., Ltd.  
**Chairman:** Hong Kong Shipowners Association  
**Chairman & President:** IMC Group of Companies  
**CEO:** Oak Maritime (H.K.) Inc., Ltd.  
**Chairman & President:** Ocean Longevity Shipping & Management Co., Ltd.  
**Chairman & President:** Pacific Basin Shipping (HK) Ltd.  
**Chairman:** Parakou Shipping Ltd.  
**President:** Patt Manfield & Co., Ltd.  

**General Manager Shipping Division:** Peter Cheng Naval Architect & Marine Consultant Ltd.  
**President:** Regent Shipping Ltd.  
**Managing Director:** Sinotrans Shipping Limited  
**Chairman:** Teh-Hu Cargocean Management Co., Ltd.  
**Managing Director:** Unique Shipping (H.K.) Ltd.  
**Chairman & President:** Wah Kwong Shipping Holdings Ltd.  
**Managing Director:** Wallem Shipmanagement Ltd.

### INDIAN COMMITTEE

**Chairman:** Arun Mehta  
**Vice Chairman:** R. L. Pai  
**Members:**  
- R. S. Nakra  
- Ashok V. Chowgule  
- A. R. Ramakrishnan  
- M. P. Dhanuka  
- Shri D. Mehrotra  
- Atul J. Agarwal  
- Ray Stewart  
- Anil Devli  
- K. M. Sheth  
- J. V. S. Rao  

**Chairman & Managing Director:** Varun Shipping Company Limited  
**Managing Director:** Reliance Industries Limited  
**Managing Director:** ABG Shipyard Ltd.  
**Executive Director:** Chowgule & Company Private Limited  
**Chairman:** Cochin Shipyard Ltd.  
**Managing Director:** Essar Shipping Ports & Logistics Limited  
**CEO:** GEE Limited  
**Joint Managing Director:** Government of India, Ministry of Shipping,  
**Managing Director:** Road Transport & Highways, Directorate General of Shipping  
**Managing Director:** Mercator Lines Limited  
**Executive Director:** PIPAVAV Shipyard Limited  
**President & CEO:** Progressive Shipping Consultancy Services (PVT) Ltd.  
**Managing Director:** Shreyas Shipping & Logistics Limited  
**Senior Vice President:** The Great Eastern Shipping Co., Ltd.  
**Managing Director:** The Shipping Corporation of India Ltd.

### INDONESIA COMMITTEE

**Chairman:** Widhardja Tanudjaja  
**Members:**  
- Choy Ngee Sheng  
- Johnson W. Sutjipto  
- Anrif Soenardjo, MH  
- Pradipta Nirtara  
- Stephen Layarda  
- Oentoro Surya  
- Andy A. Mallian  

**President Director:** PT. Berlian Laju Tanker Tbk.  
**Director:** GBLT Shipmanagement Pte. Ltd.  
**Chairman:** INSA (Indonesian National Shipowners’ Association)  
**Director of Marine Safety:** Ministry of Transportation, Republic of Indonesia  
**Secretary & President:** PERTAMINA SHIPPING  
**Chairman:** PT. Adnyana  
**Managing Director:** PT. Alpha Pacific Lines  
**Managing Director:** PT. Arpeni Pratama Ocean Line Tbk.  
**Fleet Director:** PT. Arpeni Pratama Ocean Line Tbk.
Kasim Arifin
Riry Syenied Jetta
Hendrato
H. Soenarto
Antonius W. Sumarlin
Joeswanto Karijodimedjo
Henry Djhari
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
Honorary Chairman

Members
Sang-Tae Nam
President & CEO
Daewoo Shipbuilding & Marine Engineering Co., Ltd.
Hyon-Soo Bong
Senior Executive Vice President
Hanjin Heavy Industries & Construction Co., Ltd.
Kil-Seon Choi
President & CEO
Hyundai Heavy Industries Co., Ltd.
Jae-Byoung Song
Chairman
Hyundai Samho Heavy Industries Co., Ltd.
Moo-Soo Hwang
Managing Director
Korea Line Corporation
Jin Bang Lee
CEO
Samsung Heavy Industries Co., Ltd.
Jing-Wan Kim
CEO
SK Shipping Co., Ltd.
Kyuhu Whang
Vice Chairman & CEO
STX Pan Ocean Shipping Co., Ltd.
J. C. Lee
Vice Chairman & CEO

Malaysian Committee
Chairman
To be determined

Vice Chairman
Nordin Mat Yusoff

Members
Azmil Bin Ahmad
Group Managing Director & CEO
ALAM MARITIM RESOURCES BERHAD
Lim Leng-Pin
Managing Director
Aurora Tankers Sdn. Bhd.
Billy Tan Gim Hoe
Chairman
Ecoship Sendiri. Berhad
Dato’ David Tan
Managing Director
Dato’ Othman Moh Yassin
Managing Director
Tan Sri Dato’ Seri Halim Bin Dennis Liong
Executive Chairman & Managing Director
Halim Mazmin Bhd.
Samsudin Mohd Yassin
CEO
Hub Shipping Sdn. Bhd.
Torbjorn J. Aaker
Regional Manager WSM Asia

Philippine Committee
Chairman
Arben E. Santos
President & CEO
Southwest Maritime Group of Companies

Members
Roy R. Alampay
Vice President for Operations & General Manager
Baliwag Navigation, Inc.
Rogelio A. Torres
President
Eastern Shipping Lines, Inc.
Ko-Lin Toh
Vice President
Keppel Philippines Marine, Inc.
Michael G. Bernardino
President
Loadstar International Shipping, Inc.
Doris Magsaysay Ho
President & CEO
Magsaysay Maritime Corporation
Edgardo G. Lacson
President
MIS Maritime Corporation
Shinji Watadani
President
Tsuneishi Heavy Industries (Cebu), Inc.

Singapore Committee
Chairman
S. S. Teo
President
Singapore Shipping Association

Members
Eng Aik Meng
Chief Executive
APL, NOL Group
Tong Chong Heong
CEO
Keppel FELS Limited
Lam Yi Young
Chief Executive Officer
Maritime & Port Authority of Singapore
Aloysius Seow
Managing Director
Ocean Tankers (Pte) Ltd.
Kuok Khoon Kuan
Senior Executive Director
Pacific Carriers Limited
Teo Cho Keng
President
Pacific International Lines (Pte) Ltd.
Wong Weng Sun
Managing Director
Sembcorp Marine Ltd.

Taiwan Committee
Chairman
Loh Yao-fon
Assistant to Group Chairman
Evergreen Group

Members
Huang Chin-san
Chief Executive Director
Chang Yung-Fa Foundation
Danny Wang
Managing Director
Cheng Lie Navigation Co., Ltd.
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donald K. L. Chao</td>
<td>President</td>
<td>China Steel Express Corporation</td>
</tr>
<tr>
<td>Jei-Yuan Chen</td>
<td>Executive Manager</td>
<td>CPC Corporation, Taiwan</td>
</tr>
<tr>
<td>Chih-Cheng Li</td>
<td>President</td>
<td>CSBC Corporation, Taiwan</td>
</tr>
<tr>
<td>Shang-Wen Liao</td>
<td>Chairman</td>
<td>Eastern Media International Corporation</td>
</tr>
<tr>
<td>David Hsu</td>
<td>Chairman</td>
<td>First Steamship Co., Ltd.</td>
</tr>
<tr>
<td>Bill M. H. Huang</td>
<td>Chairman</td>
<td>Glory Navigation Co., Ltd.</td>
</tr>
<tr>
<td>Harvey Chiu</td>
<td>Chairman</td>
<td>Hsin Chien Marine Co., Ltd.</td>
</tr>
<tr>
<td>Michael M. K. Hsiao</td>
<td>Chairman, CEO</td>
<td>Mingtai Shipping Corporation</td>
</tr>
<tr>
<td>J. D. Lan</td>
<td>Chairman</td>
<td>Shih Wei Navigation Co., Ltd.</td>
</tr>
<tr>
<td>Mathias K. Y. Chen</td>
<td>Chairman</td>
<td>Sincere Industrial Corporation</td>
</tr>
<tr>
<td>Fred C. P. Tsai</td>
<td>Chairman</td>
<td>Sincere Navigation Corporation</td>
</tr>
<tr>
<td>Hong-Nain Lin</td>
<td>President</td>
<td>Ta Tong Marine Co., Ltd.</td>
</tr>
<tr>
<td>Joseph Wu</td>
<td>President</td>
<td>Ta-Ho Maritime Corporation</td>
</tr>
<tr>
<td>I. Y. Chang</td>
<td>Chairman</td>
<td>Taiwan Navigation Co., Ltd.</td>
</tr>
<tr>
<td>Nobu Su</td>
<td>President</td>
<td>TMT Co., Ltd.</td>
</tr>
<tr>
<td>C. K. Ong</td>
<td>Chairman</td>
<td>U-Ming Marine Transport Corp.</td>
</tr>
<tr>
<td>Lin Ching Chih</td>
<td>Chairman</td>
<td>Unison Marine Corporation</td>
</tr>
<tr>
<td>Glenn K. L. Chan</td>
<td>President</td>
<td>United Ocean Shipping S.A.</td>
</tr>
<tr>
<td>Chao-Hon Chen</td>
<td>Honorary Chairman</td>
<td>Wan Hai Lines Ltd.</td>
</tr>
<tr>
<td>James Lan</td>
<td>Chairman</td>
<td>Wisdom Marine Lines S.A.</td>
</tr>
<tr>
<td>David C. H. Liu</td>
<td>Top-Corporate Consultant</td>
<td>Yang Ming Marine Transport Corp.</td>
</tr>
</tbody>
</table>

**THAI COMMITTEE**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sutep Tranantasin</td>
<td>Executive Vice President</td>
<td>Regional Container Lines Public Co., Ltd.</td>
</tr>
<tr>
<td>Warawan Nga nthavee</td>
<td>Managing Director</td>
<td>Asian Marine Services Public Co., Ltd.</td>
</tr>
<tr>
<td>Bhumindr Harinsuit</td>
<td>Managing Director</td>
<td>Bhureemas Navee Co., Ltd.</td>
</tr>
<tr>
<td>Wirat Chanasit</td>
<td>Managing Director</td>
<td>Italthai Marine Ltd.</td>
</tr>
<tr>
<td>Chanet Phenjati</td>
<td>President</td>
<td>Jutha Maritime Public Co., Ltd.</td>
</tr>
<tr>
<td>Pimook Prasoonprohm</td>
<td>Director of Ship Standard Bureau</td>
<td>Marine Department</td>
</tr>
<tr>
<td>Suraphon Meesathien</td>
<td>Vice President</td>
<td>Nathalin Group</td>
</tr>
<tr>
<td>Jaipal Mansukhani</td>
<td>Director</td>
<td>Precious Shipping Public Co., Ltd.</td>
</tr>
<tr>
<td>Wittawat Ssvati-Xuto</td>
<td>Vice President</td>
<td>PTT Public Co., Ltd.</td>
</tr>
<tr>
<td>Voravit Viskitjkarn</td>
<td>Managing Director</td>
<td>Sang Thai Shipping Co., Ltd.</td>
</tr>
<tr>
<td>Nitas Krongvanitchayakul</td>
<td>Managing Director</td>
<td>Thaioil Marine Company Limited</td>
</tr>
<tr>
<td>Yodchai Ratanachiwakorn</td>
<td>Operation Director</td>
<td>Thoresen &amp; Co., (Bangkok) Ltd.</td>
</tr>
<tr>
<td>Teruo Kondo</td>
<td>Chief Production Manager</td>
<td>Unithai Shipyard &amp; Engineering Ltd.</td>
</tr>
</tbody>
</table>

**TURKISH COMMITTEE**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yalcin Sabanci</td>
<td>Chairman</td>
<td>Yasa Holding S.A.</td>
</tr>
<tr>
<td>Necdet Aksoy</td>
<td>Chairman</td>
<td>Akmar Holding S.A.</td>
</tr>
<tr>
<td>Ali Ulmur</td>
<td>President</td>
<td>Aktif Shipping</td>
</tr>
<tr>
<td>Kenan S. Sumra</td>
<td>Ship Department Manager</td>
<td>Aygaz Anonim Sirketi</td>
</tr>
<tr>
<td>Engin Ozcelik</td>
<td>General Manager</td>
<td>CEBI Maritime &amp; Trading S.A.</td>
</tr>
<tr>
<td>Esref Cerrahoglu</td>
<td>Chairman</td>
<td>Cerrahgil A.S.</td>
</tr>
<tr>
<td>Akin Falay</td>
<td>Managing Director</td>
<td>Cornships Management &amp; Agency Inc.</td>
</tr>
<tr>
<td>H. Bulent Sener</td>
<td>Chairman</td>
<td>Delta Marine Engineering &amp; Computer Trading Co.</td>
</tr>
<tr>
<td>Serdar Akcaki</td>
<td>Managing Director</td>
<td>Denak Ship Management &amp; Agency</td>
</tr>
<tr>
<td>Bilge Bayburtlugil</td>
<td>General Manager</td>
<td>DITAS Tanker &amp; Marine Operations Corp.</td>
</tr>
<tr>
<td>Cihan Ergenc</td>
<td>Chairman</td>
<td>ER Denizcilik Sanayi Nak. Ve Tic. A.S.</td>
</tr>
<tr>
<td>Orhan Karademir</td>
<td>Technical Manager</td>
<td>Genel Denizcilik Nakiyati A.S.</td>
</tr>
<tr>
<td>Sedan Kaptanoglu</td>
<td>Owner</td>
<td>H.I. Kaptanoglu Shipping Group</td>
</tr>
<tr>
<td>Bedir Ince</td>
<td>Chairman</td>
<td>Ince Shipping &amp; Trading Co. Inc.</td>
</tr>
<tr>
<td>Murat Edip Karahan</td>
<td>Chairman</td>
<td>Karahasan Group of Shipping Companies</td>
</tr>
<tr>
<td>Tamer Kiran</td>
<td>Chairman</td>
<td>KIRAN Group of Shipping Companies</td>
</tr>
<tr>
<td>Faruk Miras</td>
<td>Managing Director</td>
<td>Korfez Shipping And Trading Inc.</td>
</tr>
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</table>

**TKH in Committee**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>ClassNK</th>
</tr>
</thead>
<tbody>
<tr>
<td>ClassNK Annual Report 2009</td>
<td>34</td>
<td>110th Anniversary</td>
</tr>
</tbody>
</table>
Bayram Yusuf Asian  President  Mardeniz & Kardeniz Mardas
Huseyn Yardiemi  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 Izmirli  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 General Manager  COSCO Bulk Carrier Co., Ltd.
              Cai Deqing  General Manager  COSCO Container Lines
              Hong Ying  Deputy General Manager  Dalian Ocean Shipping Company
              Zhao Jin Wen  Manager  Dalian Shipbuilding Industry Co., Ltd.
              Zhang Zhen De  Vice President  Dalian Shipbuilding Industry Co., Ltd.
              Yang Wei Zan  Deputy Technical Director, Senior Engineer  Glory Wealth Ship Management Co., Ltd.
              Wang Rong Liang  General Manager  Guangzhou Maritime Transport (Group) Co., Ltd.
              Li Yi Wen  Vice General Manager  Guangzhou Shipyard International Co., Ltd.
              Zhou Zhi Hao  Senior Engineer  Hudong-Zhonghua Shipbuilding (Group) Co., Ltd.
              Lou Dan Ping  Deputy Chief Technical Officer  IMC SEG (China) IMC Shipyard & Engineering Group (China) Ltd.
              Eng. Zhang Ming Hua  Technical Director  Jiangsu New Yangzi Shipbuilding Co., Ltd.
              Hu Keyi  General Manager  Jiangsu New Yangzi Shipbuilding Co., Ltd.
              Cao Zhi Teng  Deputy Managing Director  Lianying Bohai Shipyard
              Luo Jian  General Manager  Marine Design & Research Institute of China
              Zhu Yue Chen  Professor  Nantong COSCO KHI Ship Engineering Co., Ltd.
              Yu Baoyun  Vice President  New Century Shipbuilding Co., Ltd.
              Hideaki Naoi  Senior General Manager of Central Technical Division  Qingdao Ocean Shipping Company

**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  Centrofin Management Inc.
Michael D. Kapsorrachis  Director Marine Operations  Chandris (Hellas) Inc.
Dionisios Kourouklis  Technical Coordinator  Dynacom Tankers Management Ltd.
George Alexandridis  Technical Director  Elmira Shipping & Trading S.A.
George J. Souravis  Technical Manager  Empros Lines
Nikolaos Petromylonakis  Technical Manager  Entrust Maritime Co. Ltd.
Stefanos Georgiou  Technical Director  Equinox Maritime Ltd.
George H. Paschalis  Technical Manager  European Navigation Inc.
Dimitrios Theodoropoulo  COO  Evalend Shipping Co. S.A.
Christoforos E. Andreidis  Technical Manager  Franco Compagnia Naviera S.A.
Anastasios Kalogiannis  Technical Director  Golden Union Shipping Co. S.A.
Dion Theodorou  Technical Manager  Iolcos Hellenic Maritime Enterprises Co. Ltd.
Takis Koutris  Managing Director  Konkar Shipping Agencies S.A.
John A. Yiannakenas  Technical Director  Kristen Marine S.A.
Nick Argyros  Technical Director  Laskaridis Shipping Co. Ltd.
John N. Ioannidis  Technical Director  Maryville Maritime Inc.
Theodoros Pavlidis  Technical Director  Metrostar Management Corp.
Nikolaos Balalis  Technical Director  Navios Shipping Management Inc.
Amir Geva  Technical Director  Ofer (Ships Holding) LTD.
Paraskevas Koutsoukos  Technical Director  Paradise Navigation S.A.
Elia A. Galanopoulos  Managing Director  Regal Mare Inc.
Michael Anagnostou  Technical Director  Roswell Navigation Corp.
Achilleas Avlonitis  Technical Manager  S. Frangoulis (Ship Management) Ltd
Dimitris C. Makris  Technical Director  Springfield Shipping Co. Panama S.A.
Frantzeskcs D. Kontos  Technical Manager  Sun Enterprise Ltd.
Vasileios Lampropolous  Technical Manager  Thennamari Ships Management Inc.
Manolis G. Koutlikas  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.
Constantinos M. Metaxas  Technical Director  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 Liechts
Y. Q. Huang
B. N. Prasad
Vishal Khurana
Liu Yi Fan
Ning Pao Kun
Kishore S. Rajvanshy
Lau Pong Sze
Y. H. Shum
Li Kwok Hung
Vipin Sachdeva
S. S. Tse
Bibhash Chaudhuri
Haruki Aono
James S. C. Tai
C. Kocherla

Managing Director
Group Managing Director
Deputy General Manager
General Manager
Director & Chief Executive
Deputy General Manager
Deputy Managing Director
Managing Director
Managing Director
Director
Managing Director
Vice President
Senior Fleet Manager
Executive Director
General Manager
Director, Fleet
KOREA TECHNICAL COMMITTEE

Chairman
Sung-Won Kang
Professor

Members
Min-Seok Jang
Director

Duck-Yull Lee
Vice President

No-Joon Park
Division General Director

Kwang Sang Yoo
Vice President, Fleet Management Director

Jong-seung Lee
Vice President

Lee Taeg Gyu
Senior Vice President

Hyun-Sang Shim
Senior Vice President

Yeong-Se, Jeong
Vice President

Jae-Sung Choi
Managing Director

Jong-Tae Lee
Vice President

Hyung-Yong Lee
Vice President

Seog Hwan Kang
Head of Marine Affairs Planning Division

Young-Woon, Chung
Executive Managing Director

Nam-Young Kim
Vice President

Hyo-Kwan Leem
Senior Vice President

Tae-Ho Park
Senior Managing Director

MIDDLE EAST TECHNICAL COMMITTEE

Chairman
Jitendra Misra
Managing Director

Members
Karem Hammad
Tanker Fleet Division Manager

Benny K. Alex
General Manager

G. K. Venkatasubramanian
Technical Manager

Bader Al Otaibi
Manager

Hiroyoshi Nishida
General Manager (Marine & Technical)

A. Ramamurty
General Manager

A. Mansourzadeh
Technical Director

Shamim A. Syed
Technical & Support Manager

N. V. K. Nambrar
Technical Manager

SINGAPORE TECHNICAL COMMITTEE

Chairman
Tey Yoh Huat
Vice President

Members
Toshikazu Saito
Director, General Manager

Robert Sumantri
Managing Director

Surajit Chanda
Fleet Manager Technical

Liu De Tian
Managing Director

Toh Ho Tay
Director, Rig & Shipbuilding

B. S. Teeka
Managing Director

Ir Wong Sin Futt
Assistant Director

Seow Tan Hong
Senior General Manager

Nelson Yeo
Managing Director

Avinash Kadam
Director

Mark Lim Yew Guan
Deputy Director (Shipping)

Hiroaki Kubo
Managing Director

Arun K. Aahuwalia
Managing Director & COO

Hemant Pathania
Vice President

Teh Eng Hua
Director

Lim Tau Kok
General Manager

Panneer Selvam
COO

Francis Chin
Technical Director

Tadic Tonci
General Manager Planning

Naresh Chand
Deputy Managing Director & Technical Director

Calum Hume
Director, Operations

Mok Kim Terng

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

Pusan National University
Dae Sun Shipbuilding & Engineering Co., Ltd.
Daewoo Shipbuilding & Marine Engineering Co., Ltd.
Hanjin Heavy Industries & Construction Co., Ltd.
Hanjin Ship Management Co., Ltd.
Hyundai Heavy Industries Co., Ltd.
Hyundai Merchant Marine Co., Ltd.
Hyundai Samho Heavy Industries Co., Ltd.
Korea Line Corporation
Korea Maritime University
KSS Line Ltd. Busan Office
Samsung Heavy Industries Co., Ltd. Geoje Shipyard
SK Shipping Co., Ltd.

SPP Plant & Shipbuilding Co., Ltd.
STX Pos Ship Management
STX Shipbuilding Co., Ltd.
Sungdong Shipbuilding & Marine Engineering Co., Ltd.

Emarat Maritime
ADNATCO-NGSCO
Emarat Maritime
GulfNav Ship Management FZE
Kuwait Oil Tanker Co. S. A. K.
Oman Ship Management Company
Pioneer Ship Management Services LLC
Simatech Shipping L. L. C.
Vela International Marine Ltd.
Warm Seas

APL
"K" Line Ship Management (Singapore) Pte. Ltd.
Altus Shipping and Logistics Pte. Ltd.
BW Shipping Managers Pte. Ltd.
COSCO (Singapore) Pte. Ltd.
Drydocks World - SE Asia
Executive Ship Management Pte Ltd.
IMC Shipping Services Co., Pte. Ltd.
Jurong Shipyard Pte. Ltd.
Keppel Shipyard Limited (A member of the Keppel Group)
Maersk Tankers
Maritime & Port Authority of Singapore
MOL Tankship Management (Asia) Pte. Ltd.
MSI Ship Management Pte. Ltd.
NYK Shipmanagement Pte. Ltd.
Ocean Tankers (Pte) Ltd.
PACC Ship Managers Pte. Ltd.
Pacific International Lines Pte. Ltd.
Stellar Shipmanagement Services Pte. Ltd.
Tanker Pacific Management (Singapore) Pte. Ltd.
United Ocean Ship Management Pte. Ltd.
V. Ships Asia Pte. Ltd.

Wärtsilä Ship Design Singapore Pte. Ltd.
## TAIWAN TECHNICAL COMMITTEE

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Company/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>Chiang Shou-hsing</td>
<td>Senior Vice President, Evergreen Marine Corp. (Taiwan) Ltd.</td>
</tr>
<tr>
<td>Members</td>
<td>K. C. Lin</td>
<td>Senior Manager</td>
</tr>
<tr>
<td></td>
<td>Steve S. J. Ren</td>
<td>Vice President</td>
</tr>
<tr>
<td></td>
<td>J. Z. Fang</td>
<td>Chief Engineer</td>
</tr>
<tr>
<td></td>
<td>Chih-Shen Chen</td>
<td>Director</td>
</tr>
<tr>
<td></td>
<td>Michael L. Y. Pan</td>
<td>Executive Vice President, Deryoung Maritime Co., S.A.</td>
</tr>
<tr>
<td></td>
<td>Luo Chin-ek</td>
<td>Senior Vice President, Maintenance Dept.</td>
</tr>
<tr>
<td></td>
<td>S. H. Wang</td>
<td>Vice President</td>
</tr>
<tr>
<td></td>
<td>Anthony Lin</td>
<td>Adviser</td>
</tr>
<tr>
<td></td>
<td>Guo I-Lung</td>
<td>Director, President</td>
</tr>
<tr>
<td></td>
<td>Thomas S. H. Yeh</td>
<td>DS Vice President, Harmony Transportation Co., Ltd.</td>
</tr>
<tr>
<td></td>
<td>W. K. Wu</td>
<td>Vice President</td>
</tr>
<tr>
<td></td>
<td>C. K. Lin</td>
<td>General Manager</td>
</tr>
<tr>
<td></td>
<td>You-Yen Ho</td>
<td>Chief Engineer</td>
</tr>
<tr>
<td></td>
<td>Kenny J. H. Yang</td>
<td>Chief of Marine Technical Section</td>
</tr>
<tr>
<td></td>
<td>Young Peng-Teng</td>
<td>Senior Vice President</td>
</tr>
<tr>
<td></td>
<td>Andy D. Ouyang</td>
<td>Assistant Vice President</td>
</tr>
<tr>
<td></td>
<td>Chen Teng</td>
<td>Vice President</td>
</tr>
<tr>
<td></td>
<td>Robert Y. P. Kao</td>
<td>Vice President</td>
</tr>
<tr>
<td></td>
<td>Peter W. D. Ho</td>
<td>Chief Technical Officer</td>
</tr>
<tr>
<td></td>
<td>Sanders Jong</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H. M. Wang</td>
<td></td>
</tr>
</tbody>
</table>

## TURKISH TECHNICAL COMMITTEE

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Company/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>M. Erbil Özkaya</td>
<td>General Coordinator, YA-SA Shipping Industry and Trading S.A.</td>
</tr>
<tr>
<td></td>
<td>Ş. Şenol Üngör</td>
<td>Technical Manager, Active Shipping &amp; Management Pte. Ltd.</td>
</tr>
<tr>
<td></td>
<td>Özgür Aksoy</td>
<td>General Manager, Akmar Holding S.A.</td>
</tr>
<tr>
<td></td>
<td>S. Dirim Şener</td>
<td>Technical Manager, Atlas Ship Management Ltd.</td>
</tr>
<tr>
<td></td>
<td>Şemsettin Ozyapar</td>
<td>General Manager, Aygaz A.Ş.</td>
</tr>
<tr>
<td></td>
<td>Baha Erbil</td>
<td>Technical Manager, Cebi Denizcilik A.Ş.</td>
</tr>
<tr>
<td></td>
<td>Taşkin Çilli</td>
<td>Department Manager, Deniz Nakiylat ve Sanayi A.Ş.</td>
</tr>
<tr>
<td></td>
<td>Coşkun Ağca</td>
<td>General Manager, Densan Deniz Nakiylat ve Sanayi A.Ş.</td>
</tr>
<tr>
<td></td>
<td>Metin Solak</td>
<td>Technical Manager, Dışa Deniz idealișleme ve Tankerciliği A.Ş.</td>
</tr>
<tr>
<td></td>
<td>Kemal Ayten</td>
<td>General Manager, Dünya Denizcilik ve Ticaret A.Ş.</td>
</tr>
<tr>
<td></td>
<td>Bülent Subaşı</td>
<td>Technical Manager, Deniz idealișleme ve Tankerciliği A.Ş.</td>
</tr>
<tr>
<td></td>
<td>A. Yaşar Canca</td>
<td>CEO, Member of Board, Ince Shipping Group</td>
</tr>
<tr>
<td></td>
<td>Raif Süleykaya</td>
<td>General Manager, Kaptanoglu Holding</td>
</tr>
<tr>
<td></td>
<td>Cengiz Eren</td>
<td>Head of Technical Department, Karahasan Group of Shipping Companies</td>
</tr>
<tr>
<td></td>
<td>Mehmet Gülakdeniz</td>
<td>Safety Coordinator, Safety Coordinator / DPA Master Mariner</td>
</tr>
<tr>
<td></td>
<td>Melek Yavan</td>
<td>Member of Board, Kırang Group of Shipping Companiests</td>
</tr>
<tr>
<td></td>
<td>Galip Kendigelen</td>
<td>General Manager, Körfez Shipping and Trading Inc.</td>
</tr>
<tr>
<td></td>
<td>Gökserin Erdoğan</td>
<td>Deputy General Manager, Mardas &amp; Mardeniz &amp; Kardeniz Group of Companies</td>
</tr>
<tr>
<td></td>
<td>Hüseyin Şener</td>
<td>Fleet Manager, Nemtak Shipping</td>
</tr>
<tr>
<td></td>
<td>M. Cumhur Kuter</td>
<td>General Manager, Odin Ship Management</td>
</tr>
<tr>
<td></td>
<td>Mükted Uludağ</td>
<td>General Manager, Sedef Shipyard Inc.</td>
</tr>
<tr>
<td></td>
<td>Mehmet Başoğlu</td>
<td>General Manager, Semih Sohtoriş Management &amp; Agency Inc.</td>
</tr>
<tr>
<td></td>
<td>Hayati Cingöz</td>
<td>BSC Engineer &amp; Technical Manager, Ulusosy Sea Lines Management S.A.</td>
</tr>
<tr>
<td></td>
<td>Mehmet Kayhan</td>
<td>General Manager, YA-SA Shipmanagement &amp; Trading S.A.</td>
</tr>
<tr>
<td></td>
<td>Hakan Gürel</td>
<td>General Manager, YA-SA Tanker &amp; Transportation S.A.</td>
</tr>
</tbody>
</table>
## Officers

### Directors

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Company/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>N. Ueda</td>
<td>Chairman and President</td>
<td>Nippon Kaiji Kyokai</td>
</tr>
<tr>
<td>T. Kaji</td>
<td>Executive Vice President</td>
<td>Nippon Kaiji Kyokai</td>
</tr>
<tr>
<td>Dr. H. Kitada</td>
<td>Executive Vice President</td>
<td>Nippon Kaiji Kyokai</td>
</tr>
<tr>
<td>F. Imakita</td>
<td>Managing Director</td>
<td>Nippon Kaiji Kyokai</td>
</tr>
<tr>
<td>T. Matsui</td>
<td>Managing Director</td>
<td>Nippon Kaiji Kyokai</td>
</tr>
<tr>
<td>S. Kakubari</td>
<td>Managing Director</td>
<td>Nippon Kaiji Kyokai</td>
</tr>
<tr>
<td>Dr. T. Yoneya</td>
<td>Managing Director</td>
<td>Nippon Kaiji Kyokai</td>
</tr>
<tr>
<td>A. Ashida</td>
<td>President</td>
<td>Mitsubishi O.S.K. Lines, Ltd.</td>
</tr>
<tr>
<td>Dr. H. Itagaki</td>
<td>Professor Emeritus</td>
<td>Yokohama National University</td>
</tr>
<tr>
<td>Dr. H. Otsubo</td>
<td>Professor Emeritus</td>
<td>The University of Tokyo</td>
</tr>
<tr>
<td>Y. Katoh</td>
<td>President</td>
<td>Mitsui Engineering &amp; Shipbuilding Co., Ltd.</td>
</tr>
<tr>
<td>K. Kama</td>
<td>President &amp; CEO</td>
<td>IHI Corporation</td>
</tr>
<tr>
<td>S. Kobayashi</td>
<td>Representative Director, Executive Vice-President Corporate Officer</td>
<td>Nippon Yusen Kabushiki Kaisha</td>
</tr>
<tr>
<td>K. Sugimoto</td>
<td>President</td>
<td>Iino Kaiun Kaisha, Ltd.</td>
</tr>
<tr>
<td>S. Sumi</td>
<td>President</td>
<td>Tokio Marine &amp; Nichido Fire Insurance Co., Ltd.</td>
</tr>
<tr>
<td>K. Tsukuda</td>
<td>Chairman</td>
<td>Mitsubishi Heavy Industries, Ltd.</td>
</tr>
<tr>
<td>T. Motoyama</td>
<td>President</td>
<td>The Shipbuilders’ Association of Japan</td>
</tr>
<tr>
<td>S. Hasegawa</td>
<td>President</td>
<td>Kawasaki Heavy Industries, Ltd.</td>
</tr>
<tr>
<td>Dr. S. Hayama</td>
<td>Professor Emeritus</td>
<td>The University of Tokyo</td>
</tr>
<tr>
<td>M. Furukawa</td>
<td>President</td>
<td>Hitachi Zosen Corporation</td>
</tr>
<tr>
<td>H. Maekawa</td>
<td>President</td>
<td>Kawasaki Kisen Kaisha, Ltd.</td>
</tr>
<tr>
<td>K. Miyahara</td>
<td>Chairman</td>
<td>The Japanese Shipowners’ Association</td>
</tr>
<tr>
<td>Dr. T. Nomoto</td>
<td>Professor Emeritus</td>
<td>The University of Tokyo</td>
</tr>
<tr>
<td>Dr. K. Yoshida</td>
<td>Professor Emeritus</td>
<td>The University of Tokyo</td>
</tr>
</tbody>
</table>

### Auditors

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Company/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. Aihara</td>
<td>Chairman</td>
<td>Japan Civil Aviation Promotion Foundation</td>
</tr>
<tr>
<td>N. Ishii</td>
<td>Former Managing Executive Director</td>
<td>Nippon Yusen Kabushiki Kaisha</td>
</tr>
<tr>
<td>K. Kondo</td>
<td>Vice President Executive Officer</td>
<td>Mitsui Sumitomo Insurance Co., Ltd.</td>
</tr>
<tr>
<td>I. Shintani</td>
<td>Board Counsellor</td>
<td>Kawasaki Kisen Kaisha, Ltd.</td>
</tr>
</tbody>
</table>

### Councilors

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Company/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z. Akasaka</td>
<td>Chairman</td>
<td>Japanese Marine Equipment Association</td>
</tr>
<tr>
<td>H. Bada</td>
<td>President &amp; CEO</td>
<td>JFE Steel Corporation</td>
</tr>
<tr>
<td>Dr. Y. Fujita</td>
<td>Professor Emeritus</td>
<td>The University of Tokyo</td>
</tr>
<tr>
<td>K. Fukui</td>
<td>President</td>
<td>Kyokuyo Co., Ltd.</td>
</tr>
<tr>
<td>K. Furukawa</td>
<td>President</td>
<td>Hachiuma Steamship Co., Ltd.</td>
</tr>
<tr>
<td>Y. Hasegawa</td>
<td>President</td>
<td>Taiyo Nippon Kisen Company</td>
</tr>
<tr>
<td>T. Higaki</td>
<td>Chairman</td>
<td>Imabari Shipbuilding Co., Ltd.</td>
</tr>
<tr>
<td>M. Hyodo</td>
<td>President</td>
<td>Nippon Koa Insurance Co., Ltd.</td>
</tr>
<tr>
<td>Dr. Y. Inoue</td>
<td>Professor for Specific Project</td>
<td>Yokohama National University</td>
</tr>
<tr>
<td>Y. Inubushi</td>
<td>Senior Adviser</td>
<td>Kobe Steel, Ltd.</td>
</tr>
<tr>
<td>S. Inui</td>
<td>President</td>
<td>Inui Steamship Co., Ltd.</td>
</tr>
<tr>
<td>H. Ishikawa</td>
<td>President</td>
<td>Japan Railway Construction, Transport &amp; Technology Agency</td>
</tr>
<tr>
<td>H. Kadota</td>
<td>President</td>
<td>Shin Kurushima Dockyard Co., Ltd.</td>
</tr>
<tr>
<td>T. Kakei</td>
<td>President</td>
<td>Shinwa Kaiun Kaisha, Ltd.</td>
</tr>
<tr>
<td>N. Kakizoe</td>
<td>President &amp; CEO</td>
<td>Nippon Suisan Kaisha, Ltd.</td>
</tr>
<tr>
<td>H. Kashimoto</td>
<td>President</td>
<td>Sumitomo Heavy Industries Marine &amp; Engineering Co., Ltd.</td>
</tr>
<tr>
<td>J. Kato</td>
<td>President</td>
<td>Kyoei Tanker Co., Ltd.</td>
</tr>
<tr>
<td>T. Kawamoto</td>
<td>Tsuneishi Shipbuilding Company President, Executive Officer Representative Director</td>
<td>Tsuneishi Holdings Corporation</td>
</tr>
<tr>
<td>S. Kinoshita</td>
<td>President</td>
<td>NYK-Hinode Line, Ltd.</td>
</tr>
<tr>
<td>Dr. H. Kobayashi</td>
<td>Professor</td>
<td>Yokohama National University</td>
</tr>
<tr>
<td>S. Koide</td>
<td>Representative Director, President Executive Officer</td>
<td>Daichi Chuo Kisen Kaisha</td>
</tr>
</tbody>
</table>
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
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As of December 2009
Branches in Japan

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