

ClassNIK

MAGAZINE

June 2016 - 76th Edition

- ◆ *Profile: Koichi Fujiwara*
- ◆ *In partnership with Transmed*
- ◆ *Feedback fuels success in Piraeus*
- ◆ *Advanced solutions to handle big data*



A large industrial ship, possibly an offshore supply vessel, is illuminated by warm yellow lights at dusk. The ship's superstructure is complex, with multiple decks, railings, and a prominent mast. In the foreground, a person wearing a white hard hat and a white long-sleeved shirt with the ClassNK logo on the back is seen from behind, looking towards the ship. The background shows a dark sky and a yellow crane structure on the right.

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As the world's leading classification society, ClassNK maintains a global service network of over 130 exclusive surveyor offices. ClassNK's surveyors work in shipyards and ports around the world, wherever they may be called upon to assess the condition of a ship, to ensure that all of our services are available to clients 24/7, worldwide. To learn more about how our commitment to service has earned the trust of clients worldwide, visit us at www.classnk.com

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Global Authority in Maritime Standards

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ClassNK

ClassNK Executive Operations Department,
4-7 Kioi-cho, Chiyoda-ku, Tokyo 102-8567, Japan
Tel: +81-3-5226-2047 Fax: +81-3-5226-2034
E-mail: eod@classnk.or.jp

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New horizons

Welcome to the 76th edition of the ClassNK Magazine

As the new Chairman and President of ClassNK, it is my pleasure to introduce our readers to some of what we are doing to support the maritime industry. I have long held the opinion that the role of ClassNK is to act as a bridge between all sectors of the industry, and use our expertise to help solve any challenges that may arise. The only way to truly accomplish this is through partnership and cooperation.

This edition of the ClassNK Magazine includes interviews with two of our most important partners in the Greek maritime industry: Mr. Charalambos Mylonas, Chairman of Transmed Shipping, who serves as Chairman of our Greek Committee; and Mr. Marios Stafilopatis, Owner of Byzantine Maritime, who serves as the Chairman of our Greek Technical Committee. For many years we have used feedback from committees and technical

committees across the world to enhance our services. The contributions of our Greek Chairmen to the maritime industry as a whole are immeasurable.

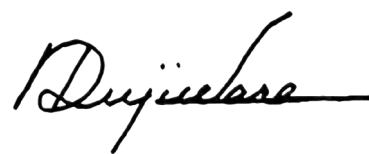
An interview with our Piraeus Office highlights how we are supporting the maritime community in Greece and the surrounding area. This interview gives insight into what ClassNK has achieved with Greek owners and operators since the establishment of the Piraeus Office over 40 years ago.

For ClassNK, our obligation to the industry is not just the classification and survey of vessels, but also the training and support of the human resources which are the backbone of our industry. An article on ECDIS explores the importance of adequate training for seafarers and how ClassNK can help ensure companies are providing high quality courses for their employees.

This edition also covers more technical aspects of our services with an article on ClassNK's CMAXS solutions. These technologies were developed in partnership with the industry to help optimize ship management and operations, as well as reduce lifecycle costs of on-board machinery.

For your enjoyment, we have included a candid look at Yanaka Ginza, a district at the heart of Tokyo that has kept its old town atmosphere through the decades.

I hope you find this edition of the ClassNK Magazine interesting and informative.



Koichi Fujiwara
Chairman and President, ClassNK

ClassNK



Profile:

Koichi Fujiwara

Born in Hokkaido in 1949, Koichi Fujiwara has acquired a wealth of experience during his career in the maritime industry. Upon graduating from the University of Tokyo with a Master's Degree in Naval Architecture in 1975, Mr. Fujiwara began his career at Japan's Ministry of Transportation (now the Ministry of Land, Infrastructure, Transport and Tourism). He spent three decades working in various governmental posts where he was mainly involved in maritime related affairs. Mr. Fujiwara was appointed Director-General of Japan's Maritime Bureau in 2006.

During his career he was responsible for overseeing Japan's maritime policy, encompassing a wide range of issues such as seafarer training and employment security, anti-piracy and vessel safety regulations, as well as the proper provision of certification and licenses. Of particular note was his key role in alleviating the overcapacity at Japanese shipyards to help revitalize the industry and later introducing Japan's first tonnage tax scheme.

This extensive experience made Mr. Fujiwara an invaluable asset to ClassNK when he joined the Society as an advisor in 2007. After serving as advisor for almost three years he was elected to the Board as Managing Director in 2010, and appointed Executive Vice President in 2011.



Koichi Fujiwara, Chairman and President, ClassNK

While serving on the Board, Mr. Fujiwara was the driving force behind the Society's integration of certification services. Under his initiative ClassNK became a one-stop shop for the certification of management systems as well as education and training. Mr. Fujiwara helped further expand the range of certification including ISM/ISPS audits, GHG verification, and MLC related matters such as

voluntary certifications for seafarer recruitment and placement services.

In March 2016, Koichi Fujiwara was appointed as the new Chairman and President, and Representative Director of ClassNK. With his vast experience and achievements, Mr. Fujiwara will play an important role in helping ensure the long-term security of the maritime industry.



ClassNKnews



New executive team

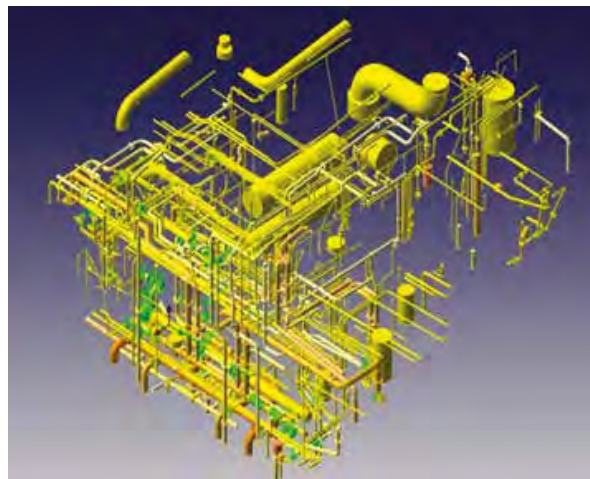
7 March 2016 - Koichi Fujiwara has been appointed as Chairman and President as well as a Representative Director of ClassNK, effective 7 March 2016. Yasushi Nakamura and Tetsuya Kinoshita continue as Senior Executive Vice Presidents, joined by Junichiro Iida as Executive Vice President. Tetsushi Agata has been appointed as an Executive Auditor of the Society. Speaking on the occasion, newly appointed Chairman and President, and former Executive Vice President, Koichi Fujiwara said: "Following the recent downturn of the shipping and shipbuilding markets, the business environment surrounding ClassNK has become even more challenging."

ClassNK gains USCG authorization under ACP

11 March 2016 - The United States Coast Guard (USCG) has authorized leading classification society ClassNK to participate in its Alternate Compliance Program (ACP) in addition to granting the Society authorization to carry out statutory surveys for US-flagged ships in 2011. The ACP was developed as an alternative method for US-flagged vessels to fulfil regulatory requirements for construction and operation. Under the program, ClassNK can now carry out a wide range of surveys and inspections on US-flagged vessels on behalf of the USCG. This is good news for owners of US-flagged vessels. In accordance with USCG requirements, US-flagged vessels are required to undergo onboard inspections by the USCG before a Certificate of Inspection (COI) can be issued. Under the ACP however, the USCG can issue a COI to an NK-classed, US-flagged vessel based upon reports from ClassNK without the need for duplicative inspections. This eases the financial and regulatory burden on shipowners whilst maintaining existing levels of safety.

Updated Guidelines for BWT Systems

24 February 2016 - ClassNK has released amendments to its Guidelines on the Installation of Ballast Water Treatment Systems. The latest Guidelines include alterations to the application date of the ballast water performance standard, additions and modifications of definitions, and a revision of standards for installation of ballast water treatment systems. In the latest edition ClassNK has amended the application date of the ballast water performance standard based on the revised implementation schedule adopted by IMO Assembly resolution A.1088(28). Requirements relating to standards for installation of ballast water treatment systems have also been expanded upon in response to the IACS Unified Requirement (UR) M74 Installation of Ballast Water Management Systems, which was adopted in September 2015. In particular, additional requirements for tankers carrying flammable liquids have been laid out in order to improve onboard safety, protect the marine environment and ensure the structural strength and integrity of the ship.





New ClassNK survey office in Bahrain

15 March 2016 - ClassNK announced that it has opened a new exclusive survey office in Bahrain with operations commencing 15 March 2016. Bahrain is an island nation in the Middle East Gulf and is home to one of the region's main ship repair yards. In addition, Khalifa bin Salman Port (KBSP), which opened in 2009, is becoming a major regional transshipment center. Through the opening of the Bahrain office, ClassNK will improve the efficiency of its ship surveys in the Middle East Gulf region. ClassNK will continue to expand its worldwide survey office network in order to meet its clients' requests and provide timely and high quality services.

Updated Guidelines for Gas Fueled Ships

26 April 2016 - ClassNK has released the fourth version of its Guidelines for Gas Fueled Ships. With the introduction of increasingly strict environmental regulations, the industry is now turning toward the use of cleaner fuels such as LNG and more recently other low flashpoint fuels such as methanol to curb NOx, SOx, and PM emissions. The new guidelines provide comprehensive, up-to-date information on key design features relating to bunkering, hull structure, fire safety, and explosion prevention measures for gas fueled vessels. Other new updates cover areas such as safety measures for vessels not originally built to use LNG as a fuel.

ShipDC launches with new leader at the helm

6 May 2016 - The wholly-owned subsidiary set up by ClassNK, Ship Data Center Co., Ltd., officially commenced operations of its big data center, ShipDC, from April 2016. ClassNK's Information Technology Department General Manager Takashi Nagatome has been appointed as Representative Director and President of the subsidiary. Ship Data Center Co., Ltd. was established on 7 December 2015 with the aim of providing a secure platform through which ship-related big data can be accumulated and provided to end users. Speaking on the launch of ShipDC, Mr. Nagatome said: "ShipDC has officially begun operations following successful data transfer trials from ship to shore. As of now, voyage data from multiple vessels from Japanese shipping companies is being continuously gathered. The data is being practically applied for hull structure stress monitoring during voyages and for voyage data monitoring by cargo owners."

First ClassNK CMAXS outside Japan

21 April 2016 - ClassNK Consulting Service's software solutions ClassNK CMAXS PMS and ClassNK CMAXS SPICS have been installed on two ships managed by Manila-based Rosy Star Ocean Vessels Management Co., Inc., marking the first adoption by clients outside of Japan. ClassNK CMAXS PMS is a complete and simple solution used to manage machinery maintenance on board ships, whilst ClassNK CMAXS SPICS supports spare parts inventory management and purchase order creation. Both feature user-friendly interfaces and are easy to install and operate. ClassNK CMAXS PMS and ClassNK CMAXS SPICS not only manage spare parts inventory and enable users to view daily maintenance work reports and records; they also facilitate better fleet management and information sharing between ship and shore by collecting the data from each vessel and sending it to the cloud database. They were developed in collaboration with IMC Co., Ltd and with support from the ClassNK Joint R&D for Industry Program (see pp. 15- 17).

Feedback fuels success in Piraeus

Customer and third party feedback are the measure of success

Interview with Mr. A.C. Dalakas, Regional Manager, Piraeus Office

What are the main services provided by the Piraeus Office? Who is responsible for these activities? Could you give some background about yourself?

The main services provided by NK Piraeus Office are as follows:

Classification Surveys, Safety Management System Audits for Companies and vessels, Ships Security Audits (ISPS), Maritime Labour Inspections (MLC), Ship's Security Plan Approval, MLC Reviews, ISO 9001, 14001 series audits and approval of companies providing various services to ships.

In our branch there is a team of 11 surveyors. There is one General Manager of Survey and also two managers. The surveyors/auditors in charge are responsible for the surveys/audits assigned each time. The Regional Manager has full responsibility for all activities and operations of the office.

I am a Naval Architect having qualified at the University of Sunderland and I am also an ISM/ISPS/MLC/ISO series Qualified Auditor having more than 40 years of experience in the shipping industry.

How many clients does the Piraeus Office work directly with? What is the geographical scope of activities?

We have approximately 250-300 clients in our territory.

The Piraeus Office covers all ports/locations in the Eastern Mediterranean and Northern Black Sea Area, i.e. Greece, Bulgaria, Romania, Ukraine, Cyprus, Israel, Zadar and ports in the southern part of Croatia, Bosnia and Herzegovina, Serbia, Montenegro, Albania and FYROM.

What are the current objectives for the Piraeus Office? How do you measure your success?

Quality surveys and constant support to the clients are the primary objectives.

Success is measured by direct feedback from customers and from the results of 3rd party inspections, such as PSC, Flag inspections, etc.

The Piraeus Office was established in 1975. As an international organization working with Greek owners for over 40 years, how do you view ClassNK's role in the Greek maritime industry?

After 40 years working closely with Greek clients, ClassNK has established close relations with all clients in Greece providing support any time of the day for the safety of ships. Therefore, we have cultivated a close network that is ready to receive prospective clients to join our Society.

Despite recent challenges, Greece has a long and enduring maritime history dating back thousands of years. What do you think is the key to this success?

Deep knowledge of the maritime industry which comes from the



many years of experience in relation with the Greek Maritime Industry.

What is most important to the Piraeus Office?

The most important thing for the Piraeus Office is to provide friendly first class services to all clients in order to achieve high levels of support and safety of the vessels.

“ *The most important thing for the Piraeus Office is to provide friendly first class services to all clients in order to achieve high levels of support and safety of the vessels* ”

Interview with Mr. Kozuma, Manager, Piraeus Office

Could you give some background about yourself?

I initially joined plan approval in ClassNK's Hull Department, Head Office in Tokyo and became a branch office surveyor in Japan to engage newbuildings at Japanese Shipyards mainly.

In addition, I also took part in three newbuilding projects in Singapore and Korea as a Hull Surveyor and Project Manager. I've had great opportunities to expand my knowledge and understanding of ship safety through plan approval and field surveys. After engaging in classification work, I was stationed at the Business Department, Head Office in Tokyo until the end of March, this year.

What does your new role entail?

Much of ClassNK's rapid growth in

Greece, one of the world's most important shipping countries, is due to the commitment of the Regional Manager of Eastern Mediterranean Sea and Northern Black Sea, Mr. Aristides C. Dalakas and General Manager of the Piraeus Office, Mr. Dimitri Tsiftis who have been responsible for expansion of our activities in Greece.

In order to maintain and improve the good reputation for our Greek customers, ClassNK's main activities in Greece focus on customer services, which we continue to carry out to the highest quality with a quick response.

My position is Manager of Piraeus office under control of Regional Manager and General Manager.

As Manager in the Piraeus Office, it is my responsibility to ensure we continue offering these customer services as well as business promotion with more direct and closer communication with our customers.

How will your new role benefit the Greek maritime industry?

In 2011, I was appointed Manager of Business Department, Head Office in Tokyo with responsibility for business promotion in East Asia which cover the big three shipbuilding countries, Japan, Korea and China.

My work in the Piraeus Office should build on the knowledge and practical experience I have gathered over a long period as a Manager of the Business Department and field surveyor in East Asia. It means that I can make contributions to widely support Greek customers who are building newbuilding vessels, buying second hand vessels, or operating vessels which are built in East Asia, from a comprehensive point of view.

I am always pleased to receive inquiries and/or requests from Greek customers.



True partnership with Transmed

Ties with ClassNK are still strengthening, says Mr. Charalambos Mylonas, Chairman, Transmed

Can you explain your role as the Chairman of the ClassNK Greek Committee and what are the main activities of the Committee? What issues are you currently discussing and what are your hopes for the outcome?

As Chairman of the ClassNK Greek Committee I organize (in co-operation with the ClassNK Regional Office) the agenda of the upcoming ClassNK Greek Committee Meetings. The aim is for the topics discussed in Committee Meetings to be of real interest to members and to be addressing key issues or difficulties faced by our industry. As such, I always discuss and exchange views with committee members prior to finalizing our agenda. We have in the past invited key experts from the banking sector to offer their ideas on shipping finance, from chartering houses to express their opinions as to the future trends of the business, etc.

Some of the recent problems raised and discussed between members relate to the ballast water treatment systems and how the IMO stand is opposed to the USCG's, the emissions reduction problems, the carbon footprint and the price of implementation across the whole energy sector.

Given that the topics discussed arise from the committee members themselves, the annual Commit-

tee Meetings of ClassNK as well as the ClassNK Technical Committee Meetings are always well attended and create the platform to discuss common issues, sometimes starting conversations that continue well after the meetings are over.

What are Transmed Shipping Ltd. core values and can you give any recent examples of steps you have taken to advance these values over the last two years?

We at Transmed take pride in our commitment to always adapt and excel within the ever-changing challenges of the global markets. Whether it is changes in regulations or changes in the macro-economic scene, we endeavor to always remain at the forefront. The mere renewal and upgrading of the fleet often heralded as being essential is by no means enough to ensure that the Company remains a forceful competitor in the market.

Excellence in the quality of the services provided needs the constant adaptation of procedures to meet the challenges of the times. The continuous training of our crews, the creation of a special department overseeing the relations of the Company with third parties, the regular visits of the ships by shore personnel and the high caliber of staff in the head and regional offices are examples of changes effected during the last 2 years.

Can you give examples where Transmed has taken steps to improve its safety and environmental practices, for example improved iron ore loading procedures, or investments in vessel efficiency? Has ClassNK been involved in these measures?

In Transmed we have a "zero tolerance" policy in respect of safety and environmental protection breaches, so practices and guidelines are continuously re-evaluated. In this context, we find the ClassNK bulletins to be of great assistance. For example, the bulletin on Group A cargoes provided helpful and practical suggestions for the meticulous checks carried out during loading of iron ore and checking of the cargo moisture content to prevent the possibility of liquefaction.

The ClassNK's regular notices for port state control matters worldwide are also helpful in raising awareness and help us to create checks and guidelines to prevent mishaps.

Transmed Shipping, closely screening the safety and environmental related developments in the industry, continuously adjusts its safety management system, aiming at the highest standards of safety on board and environmental protection. We have established and are always updating sound procedures to ensure safe operations on board our managed fleet, and

we have extended the authority of the QS (Quality and Safety) Department over and above all other departments. In addition, our environmental procedures as well as respective actions are based on the industry's best efficiency practices. An indicative example is our initiative to build vessels with electronically controlled engines, over the past years. In all our efforts towards the optimization of safety and environmental efficiency on board our fleet, ClassNK assistance has always been of utmost importance.

The majority of your ships are registered with ClassNK. When did your relationship with ClassNK start and can you explain the benefits of this long-lasting partnership?

Not only the majority but all of the Transmed ships are exclusively classed with ClassNK. The relationship started four decades ago when we used to buy second-hand tonnage from Japanese owners, but our co-operation was truly cemented in 2002 when we decided to build our capesize bulk carriers in China. For our company it was the first time we ordered newbuildings in China, for the shipyard it was its first time building ships for non-Chinese interests, and for ClassNK that was the period when it was looking to expand its presence in China. In the end I would say a miracle happened. Fifteen newbuilding vessels (10 capesizes and 5 Newcastlemaxes) were built to what I consider are of the best specifications in the shipbuilding industry. Had it not been for ClassNK's whole-hearted assistance we could not have achieved these excellent results. Both we and the yard are proud for having co-operated with ClassNK. The assistance and expertise offered by ClassNK in that instance was so valuable and we at Transmed consider ClassNK to be our true partners in the shipping business.

It must also be placed on record that our long-lasting relationship with ClassNK has been greatly advanced by the management of their Piraeus Office. This is the place where our people can freely apply for advice, for help and assistance in difficult situations. Day and night the Piraeus office is at the disposal of our officers, and it is the place where "service is delivered with a smile". I believe that this is the reason for their success, and we wish them greater future prosperity.

Which geographical markets are offering you greater investment opportunities and where are you looking to expand in the next 10 years?

The world economic crisis generally and the Chinese slowdown in GDP growth has restricted the areas with possible investment opportunities. The new areas of interest seem to be India, Indonesia, Iran, South East Asia generally and Vietnam. It is important however to note that every new area may have its particular "game rules" as well as its peculiarities. A scrutiny of all aspects will be necessary before a plunge is attempted.

In 1997 the company's management decided to dispose of all small ships to concentrate solely on panamax and capesize vessels. Can you explain what were the main

reasons behind this move and if/how ClassNK supported it?

The decision to concentrate solely on larger size bulkers was seen as a challenge to enter a more elite segment of the market that was dominated by fewer major players such as the industrialists of the world. We at Transmed take pride that since 1997 we have been able to develop long-lasting relationships with some of the world's biggest counterparties, a fact that underlines the excellence in the service we provide. Another factor for abandoning the old type of business (general cargo vessels, smaller ships etc.) was our view that containerization was eroding the cargo share of such ships whereas the energy and raw material segment was expected to expand significantly.

A recent report from analyst Drewry suggests that capesize tonnage is currently reasonably well employed, but that demand is a short-term phenomenon in an otherwise difficult market, driven by stockpiling of raw materials in China. Could you offer your current market outlook?

We are optimistic that the markets will come back again in the not-too-distant future. For the near term, it is true that there is no substantial

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Had it not been for ClassNK's whole-hearted assistance we could not have achieved these excellent results

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recovery in sight, but Greek shipping has a long legacy in “handling” such markets. We clearly share these ideas.

Transmed Shipping Ltd. set up a manning agency in Manila in 1976 where it has its own training school. Can you tell us more about the training courses you offer and how you value the importance of high quality crew onboard?

Even the most expensive, state-of-the-art car is useless in the hands of someone without a drivers’ license! We at Transmed take great pride in our high percentage of crew retention and constant training that takes place both on board and ashore. There are two types of training that the company actively promotes: One is subsidizing the further training required to obtain higher rank, or a specialization in the new engine types. Special training of office superintendents as well as engine-room officers in the electronically operated engines (such as the MAN-ME and WÄRTSILÄ RTFLEX) as well as boiler maintenance is ongoing continuously. The other is our in-house training which is company specific and encompasses topics of safety, maintenance, pollution, accident prevention etc. This ensures continuity in our core policies and corporate

culture as well as excellence in the service rendered to our charterers.

In the last ten years, Transmed has built 42 newbuilding ships. What would you say are the key differences in design and technology on these ships comparing the earliest and latest of these ships? And, how has ClassNK contributed?

Over the last decade we have seen dramatic changes in the designs of vessels concerning their efficiency.

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*ClassNK
has always
been next to us
with suggestions
and advice*
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Specifically, we have seen an increased awareness of environmental issues which has led to changes contributing to a significant decrease in consumptions and therefore also lower carbon emissions per ton/mile. This type of technol-

ogy has also created a competitive advantage in the market. For the optimization of the hull lines and the machinery upgrading as well as the ideas for efficiency devices ClassNK has always been next to us with suggestions and advice. We are grateful to ClassNK.

Namura Shipyard, where your latest newbuilding m/v Nicole was built, has recently introduced ClassNK-NAPA GREEN on one of its newbuildings. How do you think voyage data collection and performance monitoring can improve ship operations and develop enhanced ship design for newbuildings? And, are you using ClassNK-NAPA GREEN on any of your newbuilds?

Voyage data collection and performance monitoring is a key tool to effectively manage a lot of different issues ranging from emissions to the performance of the main engine and more effective routing. All of these parameters contribute to the better usage of the world fleet. Our QS Department in co-operation with our Technical Team as well as the Third Party Services Team are in constant co-operation on the theme. Although we have not yet proceeded to install ClassNK NAPA GREEN, our Technical Department is currently investigating the best possible implementation methods.





Cooperation with Byzantine Maritime Corporation

Interview: Mr. Marios Stafilopatis, Byzantine Maritime Corporation

With operations dating back to the late 60's, Byzantine Maritime Corporation has expanded its global business from a small handy sized operator to a mixed-size bulker operator with handies, handymaxes, panamaxs and capes until the expansion into the SUPRAMAX type vessels. Marios Stafilopatis, owner of Byzantine explains his role as Chairman of the ClassNK Greek Technical Committee.

Can you give your background and explain your role as the Chairman of the ClassNK Greek Technical Committee?

I am 67 years old with a degree in marine engineering and naval architecture. My brother Francis and I established our company in 1967. Over nearly five decades we have purchased over 100 ships. At the moment we are operating a fleet of 27 vessels. Our fleet consists of 11 sister supramax vessels built by IHI, 12 tankers ranging from MR's (medium range) to LR1 (long range) and LR2, as well as four newbuilding midsize LPG gas carriers built by HHI. Our global exposure is covered

from the offices we have in Athens, New York, Singapore, London and Manila. We are currently employing over 1,000 people.

In the Technical Committee I have been an active member as a chairman, heading two technical meetings annually with a participation of about 70 directors and members, all of whom have a deep knowledge of their field providing substantial information and knowledge to all participants.

What are the GTC's main activities and how does it operate in connection with other ClassNK Technical Committees?

With help from ClassNK Head Office we discuss and are informed of all the latest developments in shipping regulations and technical developments. It has been very successful among the technical class committees and the activities are very positive for all attending members.

BMC has a manning office in Manila, which also provides quality training to seafarers through the

WSP Maritime Training Center. How are you rolling out new training courses and what technology do you use there?

Our manning office in Manila was established in 2005. We have our own premises in the Prestige Towers in the area of Ortigas. After over a decade of experience with local staff and seafarers we have managed to run a very successful manning agency. In the last four years, with the financial help of the ITF, we have created one of the very best, high-end training centers not only for our own crew but also for others. Our training center provides all marine courses and in addition a long list of courses developed in-house by our own company to enhance the capabilities of our seafarers. One of the most important aspects of our training center is the simulators we have. Currently we are operating bridge, engine and cargo gear handling simulators. These have been proven to be very beneficial to our crews' education and further development.

Up until now, unfortunately, NK has not been involved in our efforts to

develop training courses, but if NK had an interest in supporting our training center with its highly experienced staff it would be much appreciated and it would surely upgrade our training even further and be very beneficial to all involved.

From a fleet and crew manager perspective, what are the best tools to raise the quality of life onboard and what is your opinion about crew welfare and the retention of officers/crew in the seafaring life?

As a fleet crew manager the quality of life on board is important because it has an impact on the performance of the crew. As a company we believe the right approach is to maintain a good balance between the high expectations we have of our crew and at the same time reward them with a comfortable life on board by providing them with daily news, a gymnasium and a ping pong area. Our next step is internet accessibility, in order that they can communicate with their families. We have a personal relationship with most of our crews and this gives them the security that the company is supporting them and rewarding their loyalty and hard work. The results of all our efforts as crew managers can be easily proven by the 95% retention of our seafarers.

How many and what type of vessels operated by your company are registered with ClassNK?

We have 11 supramax sister vessels from IHI registered with NK

How many newbuilds does your fleet include and what technologies have you applied to improve the fleet's performance and efficiency?

Our entire fleet has been built by us with very tight site management. During all of our newbuilding development the building performance is strictly monitored and improved by our technical and operations department. Currently we have four newbuilding projects under construction.

How do you see sources of financing changing in the context of scarcity in financing from traditional sources? What do you think of private equity as a source of funding newbuildings, and do you think the timing is right? Why/why not?

As a private company we do not support funding via private equity or by taking our company public. We believe in managing our own assets and finances. There has been for sure recently a scarcity in funding on a shipping level. However we are in a very privileged position due to our long lasting quality performance as managers and as clients of various banks, to have their sup-

port and willingness to offer further funding if needed.

What is your sentiment on the short to mid-term future of the dry bulk business?

The future of the dry market is quite uncertain. There has been a very large number of newbuildings flooding the dry bulk market that will take quite some time to be absorbed. This in addition to the global economic instability, and the slow performance of China and India has put a strong strain on trading patterns and cargo availability. What is more, very low fuel prices are driving a deflationary scenario.



Ermione, Lara, Marianna

Advanced solutions to handle big data

Easy-to-use tools upgrade ClassNK CMAXS to assist with onboard machinery maintenance



The drive towards data-gathering and digital lifecycle management is bringing shipping into line with other sectors in the transition to the Internet of Things (IoT). However, the growing amount of data and information being generated by fuel-efficient, electronically controlled marine engines and other equipment is also increasing the workload for many shipping companies, requiring ship operators and crews to give precious time to assessing the data monitored.

Remote machinery monitoring, condition-based maintenance, data analytics and preventive maintenance can significantly improve and optimize numerous functions in operations and ship management, ensuring safety and reducing lifecycle costs of onboard machinery.

In response to the growing need for systems that understand the condition of onboard machinery and manage maintenance to keep costs down, ClassNK developed

comprehensive software solutions to support safe ship operations and prevent machinery troubles.

Implemented in cooperation with DIESEL UNITED, LTD., IMC Co., Ltd., MES TECHNOSERVICE Co., Ltd., and Mitsui Engineering & Shipbuilding Co., Ltd., ClassNK CMAXS now consists of five systems which collect and analyze sensor data, with maintenance work results input manually: CMAXS PMS, CMAXS SPICS, CMAXS ABLOG, CMAXS LC-A and CMAXS e-GICSX.

Solutions for optimizing daily crew work

ClassNK CMAXS PMS (Planned Maintenance System) is a user-friendly interface for managing maintenance work input by crew members on board ship. The complete and simple system manages the maintenance work schedule and monitors work progress, as well as issuing and managing work reports on the completion of maintenance work.

To alleviate the burden of ship-to-shore communications, the system has been augmented by a simple and integral e-mail function that synchronizes data between ship and shore, with the main screen automatically highlighting the functions required at each step of operation. The system can be operated without the need for instruction manuals, with a simple explanation being enough to ensure handover to relief crew members.

By showing the work progress rate in real time, the system supports compliance with (Tanker Management and Self-Assessment) TMSA2 requirements, while the link between ClassNK CMAXS PMS and ClassNK CMAXS LC-A (Life Cycle Administrator) allows the two systems to interact. This makes it possible to view the manufacturer's instruction manual and recovery essentials in the ClassNK CMAXS PMS system, ensuring highly reliable maintenance work.

With the addition of ClassNK CMAXS SPICS (Spare Parts Inventory and Control System), the cloud-based spare parts management system offers a simple and efficient tool which can manage spare parts and automatically calculate a ship's needs, allowing a better understanding of the status of the ship's inventory and easily identifying shortages.

A recent adoption on two ships managed by Manila-based Rosy Star Ocean Vessels Management Co., Inc. marks the first time the ClassNK software has been deployed by clients outside of Japan, with both the



e-GICSX | TOP | Diagnosis | Q&A | Report | Document | Options | MES

MAIN MENU : IMO9999999

JOB NO.:	2345	SHIP NAME :	KAIJIMARU	SHIP NO.:	222
ENGINE TYPE:	123A456B	ENGINE NO.:	1234	T/C TYPE:	A123

UPDATE VIEW

SHIP STATUS MONITORING

Normal Warning Alarm

SHIP NAME	MAIN ENGINE MONITORING	AUX. MACHINERY MONITORING	PERFORMANCE DIAGNOSIS	COMBUSTION DIAGNOSIS	MAINTENANCE DIAGNOSIS
KAIJIMARU	2016/02/17 11:57	2015/12/07 02:51	2015/12/22 14:55	2015/12/07 02:51	

MAIN MENU

Diagnosis	Q&A	Report	Document
Performance Diagnosis	New Question	Report Download	Technical News
Combustion Diagnosis	Q&A History		Download
Oil Data Management			
Maintenance Diagnosis			

WHAT'S NEW

2015/12/04 TN077 Inspection of Compressor wheel surface hardness updated now.

ClassNK CMAXS e-GICSX

CMAXS SPICS and CMAXS PMS systems connected and ship information shared. In this way, it is possible to update the spare parts inventory directly from the work report in the CMAXS PMS.

By using CMAXS SPICS, the ship's crew can forward their needs to the managing company as spare parts requests so that the ship's manager can directly issue a quotation request to suppliers.

New solution for compiling log data

To relieve the ship's crew of form-filling and report-managing burdens, CMAXS ABLOG (Abstract

Log) was introduced as a new tool to manage deck and engine Abstract Log Data. By entering simple information (such as the ship's position, weather conditions, sailing distance, bunker quantity, port arrival/ departure, etc.), the system automatically performs the necessary calculations and creates different types of reports and graphs for performance analysis and performance reporting.

In response to the increasing needs of monitoring ship's fuel oil consumption and engine performance, ClassNK developed CMAXS ABLOG as a new tool to assist crew and ship masters in their daily responsibilities,

reduce the administrative burden and deliver better decision support.

Solutions for utilizing big data from engine rooms

Meanwhile, CMAXS LC-A is an abnormal-state diagnosis system to maintain machinery in optimal operational shape, using enhanced condition diagnosis technology and innovative sensor data analysis algorithm. By collecting data from several sensors rather than just one, correlations can be identified and abnormal relations can be detected. This is a key feature of CMAXS LC-A which distinguishes it from other CBM systems to date. CMAXS LC-A



can identify optimum fuel injection and cylinder oil feed rates onboard ship in response to the condition of the machinery, supporting optimal operations. The effects of such reductions in fuel and cylinder oil have been confirmed with the cooperation of shipping companies, and in one example of a container vessel a 13% reduction in cylinder oil feed rate resulted in more than \$USD40,000 in savings per year (2014 price level).

CMAXS LC-A is an example of new software developed by ClassNK to help users overcome inefficiencies in operations and maintenance management, therefore increasing the efficiency of the entire ship. The system has the potential to simplify surveys in the future by enabling ClassNK to monitor the condition of the machinery in the engine room remotely and dispatch surveyors only when necessary.

Providing early detection of abnormalities using a sophisticated algorithm, CMAXS e-GICSX completes the

CMAXS package and provides high accuracy condition analysis of not only data collected by the main engine sensors but also navigation data, such as weather and sea conditions.

By merging together two surveillance stages, onboard sensor abnormality (which identifies sensors that are in the early stage of malfunction) and performance analysis (which compares the brand-new condition and the actual condition of machinery to identify how much its performance has deteriorated), CMAXS e-GICSX can provide a detailed condition analysis detecting which parts or components have been affected.

ClassNK CMAXS e-GICSX was created to combine e-GICS (Electronic Global Internet Customer Support), a cutting-edge technology developed by Mitsui, with ClassNK advanced Big Data analysis experience to provide a support system for preventive maintenance on ships. This technology makes it possible to conduct early countermeasures to prevent critical, time-consuming

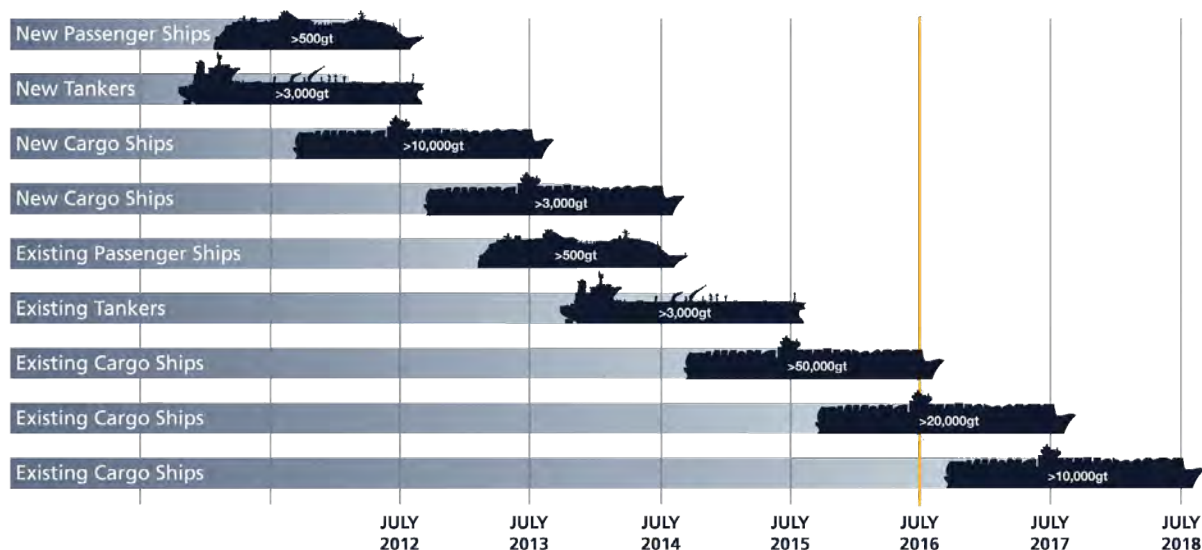
repairs and extend the frequency of overhaul intervals, in turn helping ensure the safe operation of the ship and reduced lifecycle costs.

The software is also able to share information such as main engine and voyage data between ship management companies and ship owners, as well as main engine manufacturers through the ClassNK Ship Data Center. Established at the end of 2015, the Data Center consists of a secured shipping operations database which will serve as an information hub to independently manage the utilization of large volumes of information and to help the maritime industry to reap the benefits of big data with minimum cost and burden.

Providing a common interface connecting ClassNK CMAXS LC-A and ClassNK CMAXS e-GICSX is the CMAXS Web Service - set up to offer shipping companies a platform to understand their fleet information quickly and easily, and to identify trends in machinery condition across the fleet.

Bulk's big players approach ECDIS deadline

1 July 2016 is a significant date for ClassNK



The International Maritime Organization's requirement for Electronic Chart Data Information Systems (ECDIS) that has been working its way through the industry since 2012 begins to reel in the world's existing bulk carrier fleet from 1 July 2016.

From that date, cargo ships other than tankers of 50,000 gt and upwards built before July 2013 will have to have ECDIS on board and training completed in time for their first subsequent annual survey. Ships of 20,000-50,000 gt will need to meet the same requirement from 1 July 2017, while ships of 10,000-20,000 gt will require ECDIS on board and crew trained to use it by their first survey after 1 July 2018.

Almost 17,000 bulk carriers of various descriptions were in service around the world on 1 January 2015 according to the reporting service Statistica. The number includes some ships outside of the new provisions, but it emphasizes the fact

that bulk carriers are the most numerous of ship types in the industry. It was for this practical reason that the ship type was given a window of up to six years to meet mandatory ECDIS rules.

Nonetheless, with the first deadline now imminent, owners of substantial bulk carrier gross tonnage are rightly looking to their partners in classification to assist their navigation towards compliance with the regulatory change. As the class society commanding a 35% share of the registered bulk carrier fleet worldwide - three times that of its nearest rival - ClassNK has long been preparing for the workload ahead.

New ClassNK Chairman and President Koichi Fujiwara directly oversaw ClassNK's expansion into maritime training certification from 2011, a move driven by the increasing level of technology used for navigation and ship operation, and the growing regulatory burden placed on seafarers.

"There has been an incredible increase in the demand throughout the industry for higher quality seafarer training programs," says Mr. Fujiwara. "ClassNK has been addressing these needs and contributing to a safer future for our industry by developing new standards for maritime training, and working with training centers to meet the new standards."

By the end of 2011, even before the first ECDIS provisions began to affect passenger ships, ClassNK had already issued its First familiarization Training Course Approval for ECDIS Certification to the Furuno INS Training Center Singapore.

ClassNK was also central to the Japanese maritime cluster's wider role as a driving force to address ECDIS regulations. The Philippines Japan Maritime Training Management Inc., for example, operates a ClassNK-certified state-of-the-art ECDIS training center funded by the

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*Training is a key element
 in the successful and safe
 transition from paper charts to
 ECDIS navigation*
 ”

MSC.232(82) Appendix 6. The type of ECDIS needs to be approved by the Administration or Organizations approved by the Administration. As of February 2016, ClassNK had accepted ECDIS supplied by nine manufacturers as being in compliance with IMO performance standards, as laid out in MSC.232(82).

International Mariners Management Association of Japan - 96 Japanese companies who collectively employ almost 50,000 seafarers on more than 2,300 vessels.

PJMTM’s facility in Manila, which came on stream in 2012, boasts 56 dedicated ECDIS simulators, providing comprehensive ECDIS familiarization training for Filipino seafarers serving on merchant vessels. The ECDIS training course certification provided by ClassNK covers type specific ECDIS training for systems from all four of the manufacturers used by the center, including FURUNO, Japan Radio Corporation (JRC), Tokyo Keiki, and Transas Group.

Even so, given its large constituency in the bulk carrier sector, ClassNK knows that there may be some in the bulk carrier market approaching the mandatory ECDIS deadlines with

the same uncertainty felt by owners of other ship types in the years since phase-in started.

For this reason, the class society believes a recap of the precise requirements within SOLAS Chapter V Regulation 19/2.1.4 is merited. In essence, the rules require ships engaged on international voyages to be fitted with an ECDIS using Electronic Navigation Charts (ENCs), while the seafarers using this technology must have undergone generic and familiarization training.

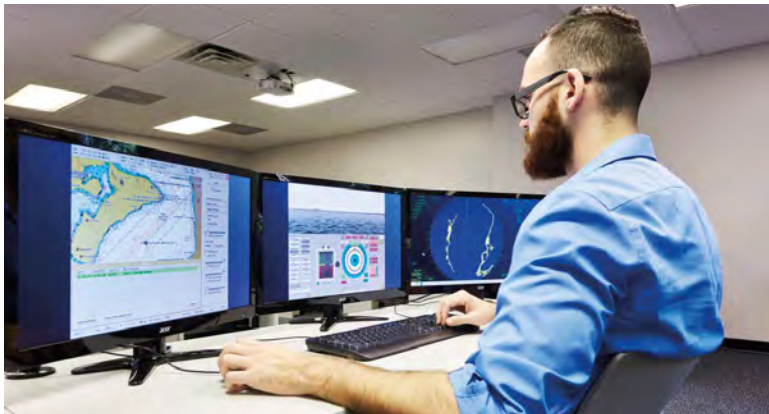
In more detail, the ECDIS installed must meet:

- (1) Performance standards for ECDIS under IMO Resolution MSC.232(82).
- (2) Requirements of back-up arrangement, either through nautical paper charts or an auxiliary ECDIS which complies with IMO resolution

The training aspect of the new rules is less straightforward because it breaks them down into two segments – generic and familiarization training. While new amendments to STCW convention require only Generic ECDIS Training based on IMO model course 1.27 - “Operational Use of Electronic Chart Display and Information Systems” for masters and deck officers on board ships with ECDIS systems - in accordance with the ISM code personnel also need to complete familiarization training.

IMO model course 1.27 is a 40-hour, five day course developed by the IMO, but bringing such a model into the real world requires ECDIS training programs to be developed and certified. In the case of ClassNK, this certification comes under Standards for Maritime Education & Training within its ClassNK Prime Management Services for Education and Training.





“Training is a key element in the successful and safe transition from paper charts to ECDIS navigation,” says Capt. Naoki Saito, Manager of the Certification Service Planning Department at ClassNK Head Office in Tokyo. “ClassNK produced its PrimeManagement total management certification service in 2011, with its Education and Training component based on the STCW and SOLAS Conventions, leading on to certification.

“To develop qualified seafarers, their instructors must be qualified as maritime instructors, the training facilities and equipment must meet the training requirements, and the training program must be approved by the required standard. If we want to maintain qualified seafarers, it is necessary to ensure that qualified training institutions satisfy those three objectives.”

Capt. Saito offers insight into the work ClassNK has done behind the scenes to ensure that training insti-

tutions measure up to their generic training responsibilities. Some initially believed that they could cover the ground within IMO model course 1.27 within 14 hours or 3 days as ECDIS generic training. “It’s not acceptable anymore,” he says. “Without approval, even generic training has no credibility, even though it may have been devised to comply with the model course 1.27.” It has also been important to limit the instructor/trainee ratio to 1/12, he says, with larger class numbers requiring an assistant instructor.

As noted, however, the generic ECDIS training required is a minimum, and ships officers should attend ‘familiarization’ training, based on the ISM code. While Flag States are required to approve the generic training as required by the STCW convention, they are not expected to approve the familiarization ECDIS training.

In this case, it has been Port State Control organizations that have been

driving the formalization of this familiarization training; but here too, PSC looks to Class to bring credibility to the different training available through different makers/institutions.

Clearly, manufacturers have a key role in supporting the relevant familiarization training, but ClassNK’s training objective in this case has been developing an approval process for training institutions which is meticulous, speedy, straightforward and easily audited.

According to the Maritime and Coastguard Agency in the UK and the Australian Maritime Safety Authority, for example, ‘trickle down’ ECDIS familiarization training, handed on from senior to more junior colleagues, is not acceptable. “This training should be delivered by the manufacturer,” says MCA. AMSA adds that, while CDs or DVDs from manufacturers may form part of the familiarization training, they cannot cover all of the ground. Both AMSA and the MCA have been explicit in demanding a “structured and formalized process”, with both initially covering 10 criteria, and involving a qualified instructor, clearly defined and documented course content, a well-organized lesson plan, practical evaluation, and record keeping. For its part, the Bahamas Maritime Authority has defined the requirements of the instructors for the familiarization training.

It is with these clear and transparent guidelines in mind that ClassNK



established its own standard for ECDIS familiarization training.

“Our training is in line with the reliable standard to be acceptable for those flag states,” says Capt. Saito. “In addition, our standard provides the training duration, 2 days, 14 hours in classroom activity and we don’t accept trickle down training on-board”.

As of March 2016 ClassNK’s Register Book for Certification of MET (Maritime Education & Training Programs) that included ECDIS extended to institutions in Barbados, Denmark, Germany, Japan, Myanmar, the PRC, the Philippines, Singapore, South Korea, and Taiwan.

ClassNK also provides a ‘train the trainer’ course that fulfills IMO model course 6.09 “Training course for instructors”, in line with the mandatory provisions of the STCW Convention. In ECDIS training, this would mean that an instructor would undergo a three-day, certified ‘manufacturer’ training course, plus a three-day ClassNK training course for instructors. As far as the train the trainer module is concerned, ClassNK dispatches qualified instructors to carry out the course at the applicant’s location.

However, despite the long gestation of the ECDIS rules for the bulk carrier sector, Capt. Saito draws attention to the fact that new technical information is still emerging at time

of writing. At the end of April, for example, the Australian Maritime Safety Authority (AMSA) published new “Guidance on ECDIS for ships calling at Australian ports”, superseding a Marine Notice issued in 2012.

The latest Notice shows 12 items subject to Port State Control Inspections regarding ECDIS, among which were setting, operation and maintenance on-board, like “demonstrations of operational competency by the ship’s navigating officer (e.g. safety checking of a voyage plan)”.

While referring to the IMO’s Circular ‘ECDIS Guidance for Good Practice’, the new guidance also laid out AMSA’s expectations on how owners must ensure careful management and regular maintenance of both ECDIS hardware and software to avoid possible anomalies. Specifically, ECDIS needs to be updated to meet International Hydrographic Organization standards S-52 (chart content and display), S-63 (ENC data

protection), and S-64 (IHO test data set for ECDIS), newly published in August 2015. The current editions of these standards remain valid until 31 August 2017.

“We need to alert owners in the bulk carrier sector of developments as they arise as part of our classification responsibilities, at a time when ECDIS rules are about to affect them directly, but we can still assure them that procedures from our side are straightforward,” says Capt. Saito. “As many of our bulk carrier customers already know, the first step on the equipment side is a document review followed by an on-site audit and finally certification. During the on-site audit, our procedure takes care of the communications with the training administrator from the training institutions, instructors and students.

“As the classification society with the largest share of the bulk carrier market by some distance, we are happy to report that we have been preparing for this moment for years.”

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There has been an incredible increase in the demand throughout the industry for higher quality seafarer training programs

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Community spirit: A walk around Yanaka Ginza

Located less than five minutes' walk from Nippori Station on the Yamanote Line, Yanaka Ginza has been a fixture of ClassNK's hometown of Tokyo for over 70 years. While Tokyo certainly has earned its place as one of the largest and most advanced cities in the world, this old style shopping street serves as a reminder that it is the people that make the place. Less well-known than Ginza, its popular and glamorous upscale shopping district namesake, what Yanaka Ginza lacks in brand name luxury goods it more than makes up for in heart.

The first sight of Yanaka Ginza coming from the station is a panoramic view of the area from the top of the concrete steps leading down to the narrow shopping street. These steps, known as the Yuyake Dan-dan (Sunset Steps), are a popular attraction as a vantage point from which to take in the stunning evening vistas.

After a short walk down the gentle steps past the bistros and restaurants, visitors are greeted by the sights and sounds of a vibrant community that has been at work for over half a century. Throngs of



Map courtesy of www.craftmap.box-i.net



families, friends and couples of all ages fill the street – those averse to crowds may want to avoid the weekends.

Cats are the area's mascot and a look up at a shopfront roof may immediately reveal why. The chances are, you'll see one of Yanaka Ginza's many cats basking in the sun – but don't be fooled, not all of them are what they seem. Hidden around the area are seven statues so lifelike it is hard to tell them apart from their real feline counterparts at first glance. They have proved popular with visitors and residents alike, with dedicated stores selling cat souvenirs and cat-themed desserts. Sometimes, the cats themselves pitch in: according to one local vendor, her Sales Manager is in fact a cat named Shin.

The streets satisfy tastes for yakitori, tempura, other savory snacks or sweet desserts, while children's toys and everyday items are in abundance. Fishmongers display fresh and exotic seafood across from the grocers and their multi-colored produce, while the craftsmen sit at their benches making unique jewel-

ry or intricate wooden carvings. Customers sit tightly together on small plastic stools outside the liquor merchant enjoying a glass of beer and the delicious local fare. This traditional Japanese marketplace has also embraced international entrepreneurs, with a Turkish restaurant offering customers authentic cuisine and lessons in crafting beautiful glass lamps.

In fact, Yanaka Ginza has over 70 stores offering food and goods. Competition should be fierce, yet the prevailing impression is one of cooperation. "It's natural for us," says one of the shopkeepers. "We see ourselves less as a business and more as a community offering our services to our customers."

On the surface, Yanaka Ginza has few similarities with the maritime industry, but there is something about this sense of cooperation that has a familiar ring. After all, maritime brings shipowners, shipyards, manufacturers, classification and so many other sectors together from all around the world in mutual partnership and, like Yanaka Ginza, it's the people that make the place.

ClassNK events in 2016

- ◆ **POSIDONIA, ATHENS, GREECE, 6TH - 10TH JUNE**
Please visit ClassNK at booth 2.102
- ◆ **ONS, STAVANGER, NORWAY, 29TH AUGUST - 1ST SEPTEMBER**
Please visit ClassNK at booth 508
- ◆ **SMM, HAMBURG, GERMANY, 6TH - 9TH SEPTEMBER**
Please visit ClassNK at booth B2.EG.208
- ◆ **RIO OIL & GAS, BRAZIL, 24TH - 27TH OCTOBER**
Please visit ClassNK at booth Z9 IN PAVILION 4
- ◆ **SHIPTEC CHINA, DALIAN, CHINA, 25TH - 28TH OCTOBER**

FOR MORE INFORMATION ON CLASSNK PLEASE CONTACT:

ClassNK Executive Operations Department

4-7 Kioi-cho, Chiyoda-ku,
Tokyo 102-8567, Japan
Tel: +81-3-5226-2047
Fax: +81-3-5226-2034
Email: eod@classnk.or.jp

ClassNK Piraeus Office

Possidonos Av. & 1 – 3 Pindou Str.,
183 44 Moschato, Piraeus, Greece
Tel: +30-210-4832404
Fax: +30-210-4832405
Email: pr@classnk.or.jp

www.classnk.com





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