



# ClassNIK

## MAGAZINE

*December 2016 - 78<sup>th</sup> Edition*

- ◆ *Ballast water challenge finally surfaces*
- ◆ *Building on American relationships*
- ◆ *Achieving operational excellence*
- ◆ *Support for success*

# Working together

Welcome to the 78<sup>th</sup> edition of the ClassNK Magazine



The maritime industry is constantly in a state of change, and often it is the introduction of new regulations that is the stimulus. While compliance can seem like a daunting task, owners and operators need only look to the industry for support.

Like the rest of the industry, ClassNK is also preparing for the implementation of the upcoming Ballast Water Management Convention. While some issues surrounding the regulation remain uncertain, as shown in one of the articles included in this edition, ClassNK has developed the necessary tools and services to ensure that the industry will be ready when the time comes.

Building on our knowledge and expertise, over the past number of years ClassNK began working with consultants and technical experts to enhance our support services. It quickly became evident that they not only offered services that complemented our own, but also would be essential to owners and operators in the future.

The acquisitions of Safety Management Systems LLC (SMSLLC) and Helm Operations, enabled us to offer clients across North America support for a wide range of issues, namely the implementation of upcoming Subchapter M regulations. This edition includes articles covering the activities of these companies and what they are doing to help support the brown water industry.

ClassNK has a long established presence in North America, operating directly in the region since the establishment of our New York Office in 1962. Since then, we have greatly expanded our service network in the region, including the assignment of a representative for our Survey Department in New York who has been given the same decision making authority as the Head Office in order to offer clients

the same high-quality services in real-time. Here, ClassNK provides a range of surveys and certification for the sector, and is authorized to carry out statutory surveys on US-flagged vessels. However, ocean-going vessels are not the only focus of our North American service network. Our Los Angeles Office is instrumental in supporting our brown water services. An article featuring General Manager John J. Kim describes how ClassNK America is serving the brown water industry under the leadership of the Los Angeles Office.

Nothing is more important to us than the feedback from our clients, and that is why we are honored to have an interview with Mr. Gary S. Vogel, CEO of Eagle Bulk Shipping Inc. The interview gives insight into the organization's roadmap for success.

I hope you enjoy this edition of the ClassNK Magazine.

A handwritten signature in black ink, reading "Koichi Fujiwara". The signature is fluid and cursive, written over a white background.

**Koichi Fujiwara**  
*Chairman and President, ClassNK*

# ClassNK



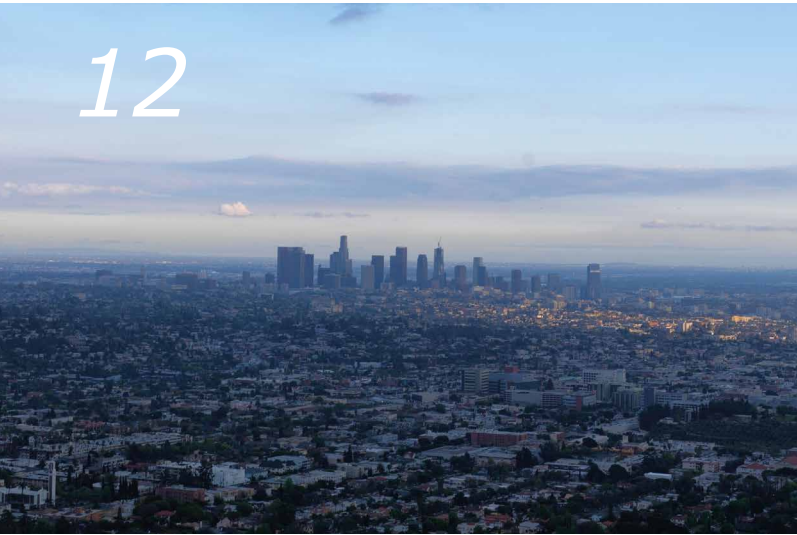
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**ClassNK**

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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## Findings for ultra-large container ships

27 July 2016 - ClassNK concluded that the minimum required brittle crack arrest toughness for extremely thick brittle crack arrest steel plates of 100mm used in ultra-large container ships is 8,000 N/mm<sup>3/2</sup>. The technical assessment is a world-first and is based on verification tests carried out as part of a joint R&D project in collaboration with Japan Welding Engineering Society (JWES). Based on the results of these verification tests, and as part of its response to the ever-increasing size of container vessels, ClassNK will, in principle, require brittle crack arrest steel plates with a thickness of more than 80mm and not exceeding 100mm to have a brittle crack arrest toughness value (Kca) of 8,000 N/mm<sup>3/2</sup> or more at -10°C, for the severest conditions. Furthermore, to enable the smooth use of extremely thick steel plates in the industry, it will endeavor to properly reflect the new finding onto the IACS Unified Requirements.

## New PrimeShip-HULL (HCSR) software

3 August 2016 - ClassNK released the latest version of its design support software PrimeShip-HULL (HCSR) Ver.3.5.0., developed in response to the IACS Common Structural Rules for Bulk Carriers and Oil Tankers (CSR BC & OT). In addition to improved overall performance and usability, the design evaluation function for the prescriptive calculation software now has a wider scope and additional functions, such as an evaluation function for bottom slamming, have been added to the direct calculation software. The prescriptive calculation software has reduced the time needed for calculations and improved user interface performance. Moreover, its initial design function, which is a function for quick sectional evaluation, is now capable of being used for structural arrangements in the fore and aft part of the ship, including the engine room, in addition to the cargo hold region of the ship. An evaluation function for bottom slamming has been added to the direct strength assessment software.

## ClassNK CMAXS LC-A installation

8 August 2016 - ClassNK Consulting Service announced that JX Ocean Co., Ltd. has selected ClassNK CMAXS LC-A, the machinery condition monitoring and automatic diagnostic system, for use on *Eneos Spirit* a 310,000 dwt tanker. ClassNK CMAXS LC-A is a solution that integrates innovative sensor anomaly detection algorithms to analyse correlations between multiple sensor data in the engine room and detect any early signs of malfunction or potential damage to machinery. Also, the solution has a feature that automatically shows the optimum setting of the main engine, and troubleshooting instructions based on the results obtained by the analysis. ClassNK CMAXS LC-A acts as a total support system, which allows users to centrally manage the monitoring and diagnostics functions of different types of shipboard equipment. This total support system aspect makes delivering a high level of support for a wide range of machinery not only possible, but a straightforward experience for the user. The vessel began using ClassNK CMAXS LC-A from June 2016 after a trial installation in 2014 under the joint research project together with ClassNK and joint collaborator Diesel United Ltd. The troubleshooting function and total support system aspect were highly rated during the trial.

## Floating offshore wind round table event

16 September 2016 - ClassNK hosted a round table discussion about floating wind technologies on the sidelines of Wind Energy Hamburg (WEH) on 26 September. ClassNK has played a key role in ensuring the ongoing success of all offshore floating wind demonstration projects in Japan through its certification and classification services carried out in line with related technical standards and its own independently developed Guidelines for Offshore Floating Wind Turbine Structures. ClassNK released the Guidelines in 2012 to provide the industry with specific requirements to support the installation of wind turbines technically adapted to operate in more challenging meteorological conditions. While offshore wind has the potential to generate substantial quantities of energy more cheaply than other renewable energies, the industry still faces challenges including cost optimization and the streamlining of offshore maintenance and repair operations. The ClassNK Floating Offshore Wind Round Table in Hamburg therefore provided a valuable opportunity for the global leaders of the floating wind industry to share their knowledge and insight on best practices and emerging challenges that will need to be overcome in the years ahead.

## ClassNK wins Big Data Award at the Lloyd's List Asia Awards

21 October 2016 - ClassNK picked up the Lloyd's List Intelligence Big Data Award for its condition based monitoring suite ClassNK CMAXS at the 19th Lloyd's List Asia Awards in Singapore. The awards recognize successes in the Asian maritime industry, setting a benchmark for excellence while rewarding breakthrough ideas and concepts. The Lloyd's List Intelligence Big Data Award recognizes the significant potential that 'big data' has to transform shipping, from timely insights drawn from monitoring and forecasting of events to improved management of performance and risk. Developed in partnership with key players from across the maritime industry, ClassNK CMAXS is the next generation in condition-based monitoring. ClassNK CMAXS is comprised of five systems, including CMAXS LC-A which detects potential machinery damage early, minimizing downtime and reducing major repairs, and CMAXS e-GICSX, which provides early detection of abnormalities by analyzing big data collected from main engine sensors and navigation data, such as weather and sea conditions. By utilizing big data readily available from onboard machinery and sensor data, ClassNK CMAXS delivers measurable savings for shipping

companies. ClassNK CMAXS systems are already commercially installed on the vessels of some of the world's leading shipping companies.



*John Purkis, Divisional Sales Director, Maritime Intelligence, Toshio Kurashiki, Regional Manager of South Asia and Oceania, ClassNK*

## Guidelines on Laser-Arc Hybrid Welding

27 September 2016 - ClassNK has released Guidelines on Laser-Arc Hybrid Welding (Ver. 3) aiming to support the widespread application of laser-arc hybrid welding in shipyards. Laser-arc hybrid welding is a high quality and highly-efficient welding process which combines both laser and arc welding methods, capable of achieving the same depth of penetration as the standard arc welding process whilst also inhibiting thermal deformation due to its low required heat input. This guideline (Ver. 3) newly adopts accurate toughness evaluation methods and acceptance criteria in response to fracture pass deviations\* (FPD) which may occur during standard Charpy impact tests on the weld joints of laser-arc hybrid welding. The Guidelines on Laser-Arc Hybrid Welding (Ver. 3) are available for download on the ClassNK website for ClassNK "My Page" users. Registration for ClassNK's "My Page" service is easy and free. Simply go to ClassNK's website at [www.classnk.com](http://www.classnk.com) and click on "My Page Login".

*\* A phenomenon which occurs when the fracture pass deviates from the hard and narrow weld metal part to the base metal during Charpy impact testing. When a FPD occurs, there is an increase in apparent absorbed energy making it difficult to accurately evaluate the toughness of the weld itself.*

## ClassNK E-certificates trials

7 October 2016 - ClassNK began operational trials for "ClassNK e-Certificate", the world's first comprehensive system to provide ships' class certificates and statutory certificates issued on behalf of flag states in electronic format. As part of its aim to improve the operations of shipping companies, ClassNK developed "ClassNK e-Certificate", referring to the progress and concept implemented by the Liberian flag which has already been issuing electronic certificates worldwide. "ClassNK e-Certificate" is a system which provides class certificates and various statutory certificates in electronic format developed in line with the updated Guidelines for the Use of Electronic Certificates (FAL.5/Circ.39/Rev.2) which was issued by the IMO in April. As well as enabling the transmission and receiving of electronic data offshore, ClassNK e-Certificate allows users to verify the authenticity of certificates online to ensure data has not been manipulated or falsified. This will mark the first time a classification society has developed a system for the comprehensive provision of electronic class and statutory certificates. Currently ClassNK is testing system functions such as the offshore transmission and receiving of data and website access for the verification of electronic certificates.

# Achieving operational excellence

Interview with Mr. Gary S. Vogel, CEO, Eagle Bulk Shipping Inc.

***You were appointed as CEO and fellow director of Eagle Bulk, one of the largest owner-operators of geared tonnage, in July 2015. How does the company position itself on the market after your appointment?***

There have been two overarching themes underway at Eagle since I arrived. The first is the transformation of the business model - going from being a “tonnage provider” to an “owner-operator,” where Eagle is directly engaged, and contracting business with shippers and receivers of cargoes, as well as traders and charterers. I believe an active approach to asset management can provide meaningful margin over-and-above index returns. The second theme is having a relentless focus on operational excellence across the business: from recruiting and retaining the best people, to chartering processes, technical management, to commercial operations and company culture as well.

***Eagle went through a change in management over the past year, with a***

***new CCO and CFO also being recently appointed. What are the new team’s priorities for the company and what is the strategy for the future of Eagle?***

All of the changes at Eagle, including a new senior management team, are in support of our owner-operator model, which has unique requirements as compared with being just a tonnage provider. In addition to bringing in a new Chief Commercial Officer and new Chief Financial Officer, we also recruited a new Head of Technical Management and a new Director of Operations. We introduced a Performance Management and Optimization role so that we can develop the company in order to compete at the highest level. Ultimately, we need to be able to deliver on our value proposition, which means having the organization, as well as the fleet, to be able to do what we commit to; each and every time.

***In August 2016, the company established a new office in Hamburg. What is the reason behind the new opening and where do you see your***

***commercial operations expanding moving forward?***

While we only opened the office in August, the plans for a European commercial office have been an important strategic priority since I first joined the company. A commercial office in Europe is an absolute necessity to support our business development and deepen our relationships with business partners and customers. Our two other offices located in Stamford, Connecticut (our headquarters) and Singapore, which Eagle already had when I arrived, ensure we are able to engage the markets in Asia, Europe, and the Americas more effectively.

***Taking into account your 25 years of experience in the geared dry bulk sector, can you say how you think the bulk market has changed over the last 10 years, with particular emphasis on recent years?***

Any discussion of the last 10 years has to include a recognition that – while we all know shipping is cyclical – the persistent market challenges have been profound. This cycle will pass, but in the meantime, managing

“ It comes down to having the right people and developing the right systems to be able to compete

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Mr. Gary S. Vogel

through it has been a challenge across the board. Aside from this cyclical challenge, the market continues to evolve on many fronts. One of the most significant changes is the heightened focus on counterparty risk, which is not surprising given the environment we find ourselves in, and the number of high-profile defaults which have occurred. We believe Eagle's strong balance sheet and developing global commercial platform are competitive advantages and will help the company outperform. Another development is the continued increase in regulations and matters of compliance. This ever growing regime requires more sophisticated systems and processes to deal with and will put more pressure on smaller owners that will not have the scale to deal with such items cost effectively, if at all. Finally, the business continues to get faster and more demanding in terms of competitiveness, so again, it comes down to having the right people and developing the right systems to be able to compete.

**And, what is your opinion on the short to mid-term future of the dry bulk business?**

Clearly, as noted, dry bulk has been through a very challenging period, and continues to suffer from overcapacity and choppy demand. Having said this, I am encouraged that at the high level, things are happening on the supply side, in terms of scrapping, cancellations and most importantly, a broad lack of new ordering. While there will unfortunately and undoubtedly be some ordering in the sector, there are a number of factors such as a lack of financing and appetite from existing players which I believe will limit the scale. On the demand side of the equation, it is important to note that, although demand growth has been muted in 2016, as compared with recent years, we still continue to enjoy positive growth. Historically, dry bulk trade has been fairly correlated to and greater than Global GDP growth, whereas today it lags considerably. Given medium-term Global GDP growth forecasts of almost 4% any normalization of dry bulk trade



demand towards the historic GDP ratio will be a positive driver for rates.

**Given your previous experience with Clipper Group, can you say what new challenges you see in heading Eagle Bulk compared to your former roles?**

Being publicly-traded is certainly different from a management standpoint – with diverse benefits and, yes, challenges - and I spend my time on different things including: earnings calls, investor relationships, and related initiatives. But, at the end of the day, whether public or private, the main focus is developing a shipping company with the right People, Processes, and Systems to provide a high level product and create value.

**The development of the Ship Data Center demonstrates ClassNK's commitment to accelerate the use of big data in shipping. Given your extensive experience in this industry, how do you think big data can help your business overcome current and emerging challenges?**

Big data is both one of the most significant challenges as well as significant opportunities ahead of us as an industry. I truly believe that the companies able to determine which streams of the big data can drive better decision making and then process that data will be well rewarded. At Eagle, we are spending considerable time and resources on this in order to be on the forefront. We believe it is about turning big data into smart data.

**Eagle's fleet currently totals 40 vessels, all of which are focused on the mid-size geared asset class. From an owner-operator perspective, what are the benefits of Supramax vessels in the dry bulk sector?**

I have been involved in the Supramax (previously the Handymax class) since the early 1990s, so in many respects coming to Eagle which focused on Supramaxes was a natural for me. I have always liked the fact that the mid-size fleets allow for creativity given the significant numbers of minor bulk cargoes and resultant trading routes. At the same time, the ability to trade in major bulks allows the vessels to benefit to a large extent from the volatility of the larger Panamax vessels and longer haul trades.

**Are you planning to expand your fleet with more acquisitions?**

We recently raised USD 88 million targeted for the acquisition of dry bulk assets and general corporate purposes... so the simple answer is yes! We are not limiting ourselves in terms of scope, but we believe there is real value to both increasing our size and focus to the Ultramax class of vessels, as well as modern Supramaxes. Ultimately, scale itself will not drive profitability and success. However, if we are able to demonstrate an ability to create value around our assets, then there is clearly an added benefit to larger scale; both commercially and in terms of capital markets.

# Ballast water challenge finally surfaces

**Ballast Water Management System (BWMS) to be installed by first renewal survey after 09/2017**

The spread of invasive species has been recognized as one of the greatest threats to the ecological and the economic well-being of the planet. Numerous species have caused enormous damage to biodiversity and can also have direct and indirect consequences for health. The damage to the environment is often irreversible, and the Ballast Water Management treaty aims to stop the further spread of invasive species.

More than 10 years after it was agreed at IMO council, the International Convention for the Control and Management of Ship's Ballast Water and Sediments (BWM Convention) finally met its ratification criteria on 8 September 2016. Ratification by Finland pushed the share of the world's fleet by gross tonnage past the 35% required for entry into force, triggering the regulation of 5 billion tonnes of ballast water transported annually.

Soon after the Finnish signature, accession by Panama brought in a further 18.02% of world merchant shipping tonnage, pushing the

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*3-5 billion  
tons of ballast  
water is carried  
globally each year*

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*Source: IMO*

matter of enforcement beyond any lingering doubt. On the occasion of the Panamanian accession, IMO Secretary General Kitack Lim suggested enforcement would "provide a global level playing field for international shipping, setting clear and robust standards for the management of ballast water on ships". Under the BWM Convention, ships will be required to manage their ballast water to remove, render harmless, or avoid the uptake or discharge of aquatic organisms and pathogens within their ballast water and sediments. By the time of their first IOPP renewal survey

after the Convention's entry into force in September 2017, some 40,000 ships will need to install an approved BWMS.

Over the last decade, it is fair to say that shipping has not been entirely convinced that the standards developed under the convention have been either clear or robust. Entry into force nonetheless brings clarity of a kind – in terms of the deadlines envisaged. However, shipping is by no means clear of regulatory complications. Questions remain on how the Convention can be implemented at all. Although 65 systems have already been type approved under the IMO's G8 guidelines on performance, these same guidelines were reviewed and faced revision at the IMO's Marine Environment Protection Committee 24-28 October.

Shipping's industry groups have called for additional measures, and a more rigorous type approval procedure beyond the testing regime framed during regulatory drafting in 2004. Sampling and testing by





Port States or National Administrations should be cost neutral for shipowners, they have argued, unless the ship is found not to be in compliance with the BWM Convention or other similar regulations. “More stringent testing is needed to determine whether or not a ship is in compliance. This is because the confidence level of any indicative analysis is low compared with the detailed analysis described in the IMO guidelines,” according to BIMCO.

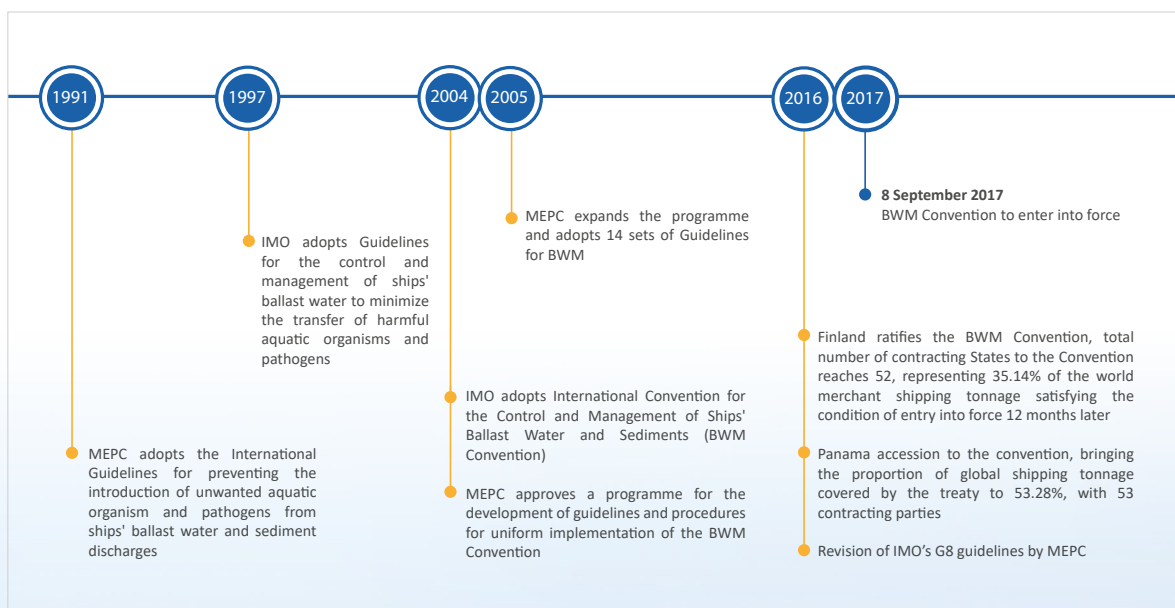
Ratification of the Convention does not mean that these concerns have suddenly become of historical concern alone. The U.S. Coast Guard has developed a separate and stricter type approvals process than that envisaged by IMO.

The numerical values of the discharge standards in the U.S. remain identical to those of the BWM Convention, for example, but the qualitative criteria on elimination is different. IMO sets limits for organisms that are viable whereas the U.S. sets limits for organisms that are living. This inconsistency remains to be addressed by the U.S. authorities.

Bringing the IMO Ballast Water Convention into force before U.S. type approved treatment systems are available puts shipowners in a difficult position, according to BIMCO. They would be required to first fit an IMO type approved system, “only to soon after potentially be required to fit a U.S. type approved system, when it becomes available”.

More bluntly, Lars Robert Pederesen, Deputy Secretary General at BIMCO, says: “BIMCO is also concerned that systems approved to the present IMO standards are not robust enough to ensure that systems onboard real ships perform to the regulatory requirements to treat ballast water.”

The Marine Technical Managers Association (MARTECMA) has certainly pulled no punches. Dimitrios Heliotis, Chairman of the MARTECMA Council says: “We support a comprehensive postponement of the implementation schedule for all existing ships by at least five (5) years after September 2017 as the only sustainable way forward to achieve cost effective and safe solutions with full commitment



Source: IMO

to the protection of the environment.”

Without entering into the merits of the case, the arguments in favour of delay have not changed substantively; the same arguments are being put forward after ratification by states representing sufficient tonnage as were being advanced before.

Short of a derailment of the enforcement timeline, the entry into force now envisaged by IMO suggests owners would be best advised to take what investment decisions that they can now, and leave remaining matters for later.

If the current timetable holds, the most pressing concern would appear to be the limited retrofitting facilities available. Many of the systems in the market feature common components, which could also lead to bottlenecks.

To help prepare the industry for the anticipated entry into force of the Convention, in November 2014 ClassNK announced the release of ClassNK-PEERLESS, a software package aimed squarely at BWMS decisions as they relate to existing ships. Working with Japanese 3D software provider Armonicos, the development for this application was coordinated by ClassNK, drawing on a research project involving The University of Tokyo, Monohakobi Technology Institute, NYK, MOL, “K” Line, Sasebo Heavy Industries, Sanwa Dock, and SEA Systems.

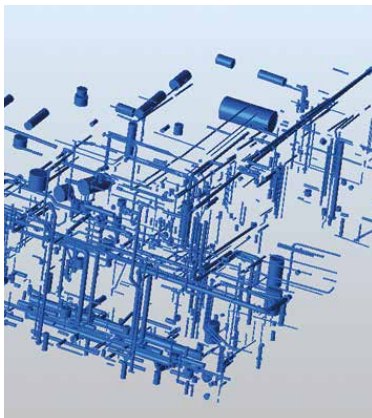
The principal installation issues faced in retrofitting new ballast water systems are that existing ships have not been built to accommodate space-hungry BWMS, especially in their engine rooms. The systems required feature large diameter piping and are complex,

while space for settling tanks presents another particular challenge.

All this adds up to a situation that would usually require repeatedly sending in engineers to take and check measurements manually. Such an approach would mean the creation of 2D drawings to be cross-referenced with the vessel’s general arrangement plan, which takes time and costs money.

“Conventionally, the process is time-consuming and costly, and ship owners and operators need a better solution to help them plan whether retrofitting is the best option for their fleets, and which types of equipment will fit on-board,” says Hirofumi Takano, President of ClassNK Consulting Service Co., Ltd.

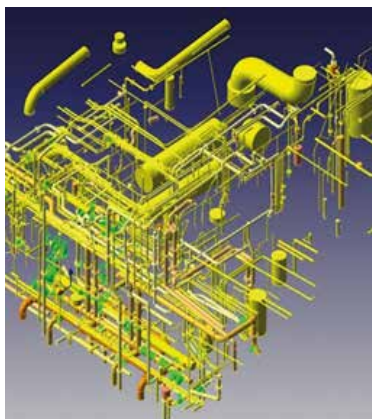
ClassNK-PEERLESS offers shipowners the opportunity to assess how

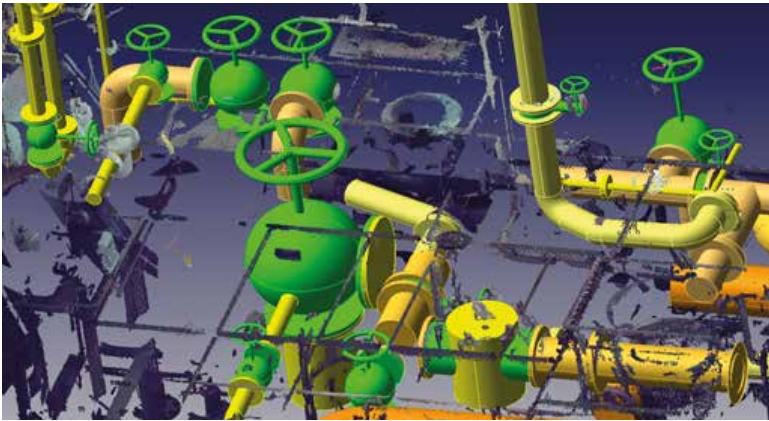


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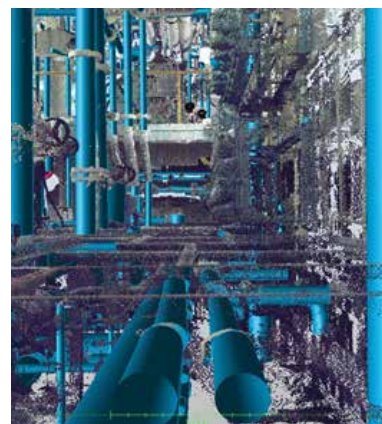
*Scanning, as opposed to physical inspection inside ship spaces, is straightforward and safe*

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*Ships owners can take  
action now and assess if  
fitting BWMS on their existing  
ships is worthwhile*  
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to fit BWMS on their ships quickly, using 3D laser scanning to accurately measure available space automatically, without the time-consuming manual work.

“Scanning, as opposed to physical inspection inside ship spaces, is straightforward and safe,” says Takano. “It is also quick, involving just 10-20 two minute scans from different angles on each deck, and the whole process onboard takes less than a day.”

The software package converts the information gathered into cloud point data to create highly accurate 3D models of structure interiors within ClassNK-PEERLESS then exported to individual client 3D CAD applications, where machinery room arrangements can be conceived in a familiar format. A complete 3D model can be built in 1-2 days, compared to the 7-10

days it can take to build the same model by drawing on conventional inputs.

Shortening the modelling time in this way delivers a substantial cost reduction. Designers also only have to pay for what they use and, if the equipment to be installed is already decided on, onboard scanning is required only once.

“Despite the finalisation of the G8 guidelines and regardless of the USCG type-approval process developments, ships owners can take action now and assess if fitting BWMS on their existing ships is worthwhile,” adds Takano. “At a time when the shipping market remains flat, they can decide in advance whether investing new money in older ships makes sense, or whether they ought to accelerate their scrapping plans.”

ClassNK-PEERLESS will allow owners to plan and troubleshoot the installation process quickly and help them understand which technology will fit into the space and lay out constraints identified. It helps to make these decisions for different ship types, across ships of different age and according to different trading routes.

Once the Convention enters into force, all eligible ships of 400 gross tons and above will need an International Ballast Water Management Certificate. ClassNK will also be carrying out initial surveys for the BWM Convention, subject to the authorization from administrations, and will issue the Certificates to ships. In developing ClassNK-PEERLESS, ClassNK and ClassNK Consulting Service Co., Ltd. believe it is offering owners a ready means of being equally prepared for compliance.



# Building on American relationships

## Los Angeles Office General Manager John J. Kim explains ClassNK expansion in the U.S.

Like others in the classification business of equivalent experience, the working life of ClassNK Los Angeles Office General Manager John J. Kim has coincided with profound change in maritime regulations brought about by the creation of Port State Control (PSC).

Having joined the classification society in 1991 as a Non-Exclusive Surveyor working out of ClassNK's Anchorage office, Kim took an opportunity to become an Exclusive Surveyor in the Society's New York Office in 1993. It was during his time in New York that the emergence of PSC as a force saw relationships with local regulators begin to shift. "This fundamentally changed many relationships and I was assigned to represent ClassNK with the U.S. Coast Guard (USCG) to coordinate and enhance PSC activities in the U.S.," Kim explains. "Efforts in this area have resulted in the development and maintenance of an ex-

tremely strong and mutually beneficial relationship with the U.S. Coast Guard as the PSC activities continue in the U.S. today."

Classification societies have been impacted by the emergence of PSC with the full implications of the new relationships unfolding in the current decade.

By 2009, Kim had been appointed General Manager at ClassNK's Seattle Office. The Pacific North West managerial role led on to a subsequent transfer to Los Angeles as General Manager, necessarily focusing on activities around the largest U.S. port facilities at Port of Los Angeles-Long Beach (LA/LB), but also taking responsibility for San Francisco.

Combined, container volumes passing through LA/LB are more than double those handled by any other U.S. port, while the West Coast

gateways are key to the 'Golden Shipping Route' identified by container ship operators due to its high potential for profit margins under normal economic conditions. "With over 4,500 vessels calling at the LA/LB facilities annually, PSC-related surveys and audits demand efficiency and timeliness, and delivering this on a day to day level can be a challenge in a Blue Water business that can be unpredictable," Kim says.

"Due to the nature of the cargoes, types of jobs and its location on the Pacific coast, this office has and will continuously face numerous challenges through the 21<sup>st</sup> century; we will need to continue showing agility to overcome them."

Even so, the relationship with the U.S. Coast Guard continued to evolve as Kim took up his new role, bringing the opportunity for ClassNK to broaden its offering



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*We planned long in advance for Sub-M, and it is therefore satisfying to have become the first TPO to be recognised under the program*  
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to US-flagged vessels. The Society sought and received authorization from the U.S. Coast Guard for its surveyors to carry out the Load Line (LL) and Tonnage (TM69) survey for US-flagged ships in 2011. ClassNK classed its first-ever US-flagged ship in 2011 with the re-classing of the 2008-built oil product tanker SLNC PAX, owned by Schuyler Line Navigation Company (SLNC).

In December 2012, the authorization was extended enabling ClassNK to render the full range of services for survey and certification for the SOLAS, MARPOL and AFS conventions, as well as to perform ISM Audits on behalf of the United States flag administration.

The U.S. Coast Guard subsequently granted authorization for ClassNK to participate in its Alternate Compliance Program (ACP), offering

US-flagged shipowners and operators more flexibility when it comes to surveys and inspections of their vessels. The ACP was developed as an alternative method for US-flagged vessels to fulfil the regulatory requirements for construction and operation. Under the program, ClassNK can carry out a wide range of surveys and inspections on US-flagged vessels on behalf of the USCG.

Participation reflects ClassNK having satisfactorily performed a delegated function for two years from its first registration of a US-flagged vessel and demonstrating its commitment to continuous quality and vigorous verification of each vessel's compliance with applicable standards.

All of this took place at a time when the safety and maintenance culture of North America's vital 'brown wa-

ter' (inland waterway) operations was also becoming subject to significant regulatory change, through the development and publication of 'Subchapter M'. Subchapter M was called for by the U.S. Congress to regulate the U.S. Towing Industry following a number of high profile accidents and oil spills along U.S. waterways.

In 2011, the notice of proposed rules for the "Inspection of Towing Vessels – 46 CFR Subchapter M" was published by the U.S. Coast Guard in the Federal Register as required by the 2004 Coast Guard and Marine Transportation Act. The proposed rules were intended to create a comprehensive safety system for inland waterway operations in the US, to include company compliance, vessel compliance, vessel standards, and oversight in a new Code of Federal Regulations (CFR) subchapter dedicated to towing vessels.

The implementation of viable safety management systems or inspection regimes would ultimately affect more than 5,400 towing vessels in operation.

Complementary to its Blue Water relationship with the U.S. Coast Guard, ClassNK identified the new rulemaking initiative as a substan-

tial opportunity to make its world class technical resources available to support the U.S. Towing industry. Guidance on Sub-M indicated that U.S. Flag Authorized Classifications would qualify as Third Party Organizations (TPO) to conduct audits and surveys of towing vessels.

“ClassNK initiated a study on the U.S. Brown Water industry, investigating its practices and regulation,” says Kim. “We saw that this was an opening to expand our business in North America, but also that it represented an opportunity to transfer our expertise into an important inland shipping market.”

The first step was to acquire the SMSLLC. The Maine-based Safety Management System consulting firm has been serving US-based blue and brown water clients for almost quarter century.

“For ClassNK, the SMSLLC acquisition demonstrated a firm commitment from ClassNK-America in support of the U.S. Brown Water industry, and the ability to offer a clear understanding of the impact of new Sub-M and how to comply with the proposed new regulations,” Kim says.

As a result of the joint efforts of ClassNK & SMSLLC, in July of 2016 ClassNK became the world’s first Third Party Organization (TPO) under Sub-M to sign the agreement with American Waterways Organization to carry out the ‘Responsible Carrier Program (RCP)’ audits. These are the agreements through which TPOs support the transition of the U.S. inland sector to Sub-M Compliance during the initial phase period of Sub-M implementation by July 2018.

“We planned long in advance for Sub-M, and it is therefore satisfying to have become the first TPO to be recognised under the program,” says Kim. “The consequences of Sub-M for the entire U.S. Brown Water Industry present considerable and recurring opportunities for Class on compliance. The first phase



Mr. John J. Kim

of Company Initial Verification Audits of each Towing Safety Management System will be required by the last quarter of 2017.

“Our expectation is that vessel audits and surveys will follow at a rate of 25% of each company’s towing vessels from 2018 through 2022.”

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*The SMSLLC acquisition demonstrated a firm commitment from ClassNK-America in support of the U.S. Brown Water industry*

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# Support for success

## William Mahoney discusses SMSLLC's operations in the U.S. towing vessel market

The waiting period ended on 20 July 2016 as the pending U.S. Coast Guard (USCG) towing vessel inspection regulation finally went into effect after over a decade in the making. The "Inspection of Towing Vessels" now appears as the Subchapter M (Sub-M) in the U.S. Code of Federal Regulations (CFR), *Title 46 Shipping* within a voluminous thirteen related parts. This 46 CFR, Sub-M regulation impacts towing vessels and its machinery and electrical installations, vessel design and construction, vessel operations and safety management, audit and survey, and other concerns of high importance to towing vessel operators. This Sub-M regulation applies to nearly 5,500 vessels within the U.S. Domestic Waterways performing towing operations on coastal, off shore, harbor, and river operating environments.

Safety Management Systems, LLC (SMSLLC) has been tasked by ClassNK to develop its consulting services extensively to support the

U.S. towing vessel operators not only with the promotion of ClassNK towing vessel certification services but also with the objective assessment of the Third Party Organization (TPO) functions in complying with the Sub-M during this vital and crucial period for the U.S. domestic waterways towing industry.

SMSLLC is a recognized leading management consulting group in the U.S. marine industry that has been in business since 1996 and has served various high-profile clients including the New York City Department of Transportation's Staten Island Ferry, the National Oceanic and Atmospheric Administration (NOAA), and numerous international and U.S. domestic fleet operators. Since ClassNK acquired SMSLLC in 2013 as part of its development strategy for the U.S. domestic waterways towing industry, the group has assisted recognizable towing vessel operators including the American River Towing Company (ARTCO), Kirby Corporation,

Genesis Marine, and most recently, Bouchard Transportation Company.

"We've purposely held back on assertively promoting our services until the USCG delivered a final Sub-M rule," stated William Mahoney, Managing Director of SMSLLC. "We're in a position now where operators are currently waiting for the implementation guidance from the USCG prior to making any substantial commitments regarding compliance certification plans. We're fortunate to be involved on several recognizable projects with sizeable towing vessel operators that are not dependent on Sub-M and that more broadly tap into our services in assessing maritime risk and developing suitable controls as part of an operator's mitigation strategy."

As part of its approach to cultivate opportunities within the towing industry, SMSLLC has become increasingly committed to and involved with the American Waterways Operators (AWO) - the

national advocate for the U.S. tugboat, towboat and barge industry. Mr. Mahoney observed that “AWO is THE representative industry group in the U.S. and provides exceptional access for our group to vessel operators.”

“AWO members are responsible and responsive and are well aligned with our values as a company. There is no doubt in our minds that being actively engaged within AWO is vital to the success of SMSLLC and ClassNK within this market. Through AWO, we continue to learn about the industry

and its concerns and to cultivate valuable relationships and opportunities.” continued Mr. Mahoney.

SMSLLC has also partnered with global insurance provider STARR Marine as part of its strategy to increase its footprint within the market. STARR Marine is a leading insurer of U.S. towing vessels and its insured are among the largest operators in the industry. SMSLLC has launched SMS SURVEY™ with STARR Marine as a tool to assist vessel operators and underwriters in targeting management system improvements. The approach is the

first of its kind within marine insurance that will lead to more accurate underwriting determinations and related benefits for towing vessel operators.

“With the current state of delays to USCG implementation guidance and the U.S. presidential election, we anticipate that demand for Sub-M related consulting services won’t heat up until 2017,” noted Mr. Mahoney. “That said; our approach is to continue working with a number of sizeable operators to improve their risk mitigation efforts while maintaining our focus on relationships through AWO puts us in a sensible position. We will definitely be prepared to meet the industry demand with our tested methodologies to assist U.S. towing vessel operators in achieving the compliance with the Sub-M in a manner that suits their organization and its logistical commitment”.

SMSLLC is part of the Sub-M Group of companies owned by ClassNK and including marine software provider, Helm-Operations.

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*We will definitely be prepared to meet the industry demand with our tested methodologies*

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# Easing compliance with Helm CONNECT

## Helm CONNECT Compliance taking the U.S. market by storm

Helm Operations, developers of Helm CONNECT software, recently announced the launch of its newest product, Helm CONNECT Compliance, which helps commercial maritime companies navigate the complex waters of compliance with the greatest of ease.

Initially built for the towing vessel sector in the U.S. to manage the new Coast Guard Regulations, Subchapter M, Helm CONNECT has already been licensed for use by some of the largest towing vessel operators in the U.S. and many smaller operators who are seeing the benefit of using intuitive software that's as easy to use and manage as a smartphone.

Helm CONNECT Compliance has also attracted commercial mari-

time companies from the fishing and passenger transportation sectors as well.

Helm CONNECT is deployed through Amazon Web Services (in the cloud), but is always available for use on any vessel because of a small installable local file on the onboard computer that assures continuous use of the software no matter what your connection quality to the Internet.

Helm CONNECT Compliance is made up of Forms, Audits, Documents and Corrective Actions.

Through Forms users can easily track drills, safety meetings, incidents and other activities. With Forms, custom forms can be quickly built to match almost any paper form to meet spe-

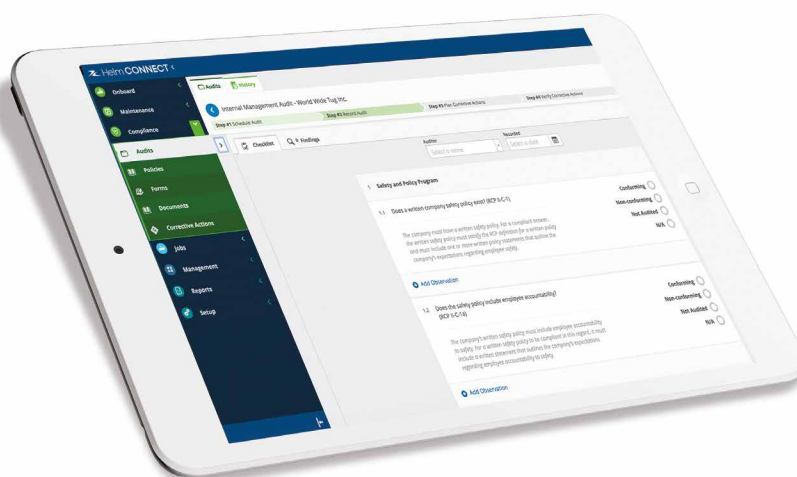
cific needs with customizable drop downs, buttons, and features.

With Audits users can conduct internal audits, create observations and pass/fail on audit questions to generate non-conformities. Through Audits internal audit templates can be built using a range of field types, including fields that automatically generate audit findings. Users can also schedule audits and receive email notifications to stay on top of different steps throughout the audit process.

Documents gives crews access to the most current version of key documents, including safety policies, procedure manuals, and bulletins. Through Documents users can easily organize and search their document library to access and manage document records efficiently.

Through Corrective Actions users can view, search and filter corrective actions incoming from internal and external audits, and from crew onboard. Corrective actions can be created directly from Forms and Audits that have been completed in Helm CONNECT.

From July 2018 to July 2022, all towing vessels required to have a Certificate of Inspection issued from the U.S. Coast Guard must be in compliance with Subchapter M, so Helm is optimistic about the success of Helm CONNECT Compliance – and based on early adoption of the software, it's right on the mark.



*Helm CONNECT iPad Compliance: Helm CONNECT has been designed to work fluidly on mobile tablets as well as laptop computers*

# A city by the sea

Japan has long been a seafaring country, and nowhere is this more evident than in the port of Yokohama. From its humble beginnings as a small fishing village, Yokohama is now arguably one of the country's most internationally renowned cities. Located just 40km from the heart of Tokyo, Yokohama has played a major role in foreign trade since it officially opened as a port in 1859. The city was home to merchants and diplomats from China and the West, who brought with them foreign fashions and cuisines.

The trade and exchange between locals and foreigners had a great impact not only on Yokohama, but on the country as a whole. In fact, it was Yokohama that gave Japan its first ice cream parlor, soap factory and beer brewery. The historical impact of this rich cultural cooperation can still be seen today. Yokohama's Chinatown, also known as Yokohama Chukagai, is over 100 years' old, and now a major tourist destination complete with traditional fare and festivals all year round. Another famous landmark is the Yokohama Red Brick Warehouse, an example of Japan's western-style architec-

ture and also the country's first modern port facility at the time of construction in 1911, which is now a cultural and commercial facility that houses a range of cafes, restaurants and shops.

It is easy to get a feel for the history of the city just by walking down its streets, but Yokohama is just as relevant to international trade as it was back then. Many Japanese and international shipping companies have offices in the area and the port itself is one of the busiest in Japan. Yokohama Port has ten major piers that service a wide range of vessels. APM Terminals Yokohama facility at Minami Honmoku was recognized in 2013 as the most productive container terminal in the world averaging 163 crane moves per hour, per ship between the vessel's arrival and departure at the berth.

Osanbashi Pier is a state-of-the-art international passenger cruise terminal that can accommodate up to four 30,000gt class ships or two 70,000gt class cruise ships. The subtle yet stunning modern design of the pier facility is a perfect complement to Yokohama's more tra-

ditional architecture. For those not wishing to go too far afield, smaller ferry operators run scheduled ferries across the bay. Ferry rides offer spectacular views of the city, and even a chance to see Mount Fuji if the weather is clear.

Located less than 30 minutes from Tokyo Station by train, Yokohama is certainly a must-see city for tourists and maritime professionals alike.



# ClassNK events in 2017:

- ◆ **CMA SHIPPING, STAMFORD, USA**  
20<sup>th</sup> - 22<sup>nd</sup> March
- ◆ **GASTECH, MAKUHARI, JAPAN**  
4<sup>th</sup> - 7<sup>th</sup> April
- ◆ **SEA ASIA, SINGAPORE**  
25<sup>th</sup> - 27<sup>th</sup> April
- ◆ **OFFSHORE TECHNOLOGY CONFERENCE, HOUSTON, USA**  
1<sup>st</sup> - 4<sup>th</sup> May
- ◆ **BARI-SHIP, IMABARI, JAPAN**  
25<sup>th</sup> - 27<sup>th</sup> May
- ◆ **NOR-SHIPING, OSLO, NORWAY**  
30<sup>th</sup> May - 2<sup>nd</sup> June

## CONTACT DETAILS FOR THIS ISSUE:

### *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

### *ClassNK Los Angeles*

111 West Ocean Blvd.  
Suite 1220  
Long Beach  
California 90802  
U.S.A.  
Tel: +1-562-432-4307  
Fax: +1-562-432-7723  
E-mail: la@classnk.or.jp

[www.classnk.com](http://www.classnk.com)



# Working toward a safer, greener future.

At a time when the preservation of our precious environment is crucial, switching to newer, safer, greener technology and techniques in the maritime and offshore industries is crucial, too. Harnessing knowledge and experience gained from over 110 years as an international classification society, **ClassNK** offers support through the pursuit of technical innovation and dedicates its efforts to safer seas and preserving the environment. Learn more about **ClassNK's** activities for the future at [www.classnk.com](http://www.classnk.com)



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