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‘Fune de Hakken’ program soars

71 fifth graders from Suwa Elementary School invited on field trip from Port of Nagasaki

Dozens of fifth graders were invited to learn seafarers’ duties on board *Glover Nomo Shosen* (right).

The All Japan Seamen’s Union (JSU) held an event on Sept. 6 at the Port of Nagasaki, inviting 71 fifth graders from Nagasaki City Suwa Elementary School. Entitled “Fune de Hakken” (Discoveries on board Vessels), the event allowed the students to make several on-board experiences.

The elementary-school children set sail from the Port of Nagasaki on board the Graba (Glover) owned by Nomo Shosen K.K., listening to an announcement introducing the port and nearby areas.

They went on a trip to view the Ohato Terminal, the Main Plant in Tategami of Mitsubishi Heavy Industries, Ltd. (MHI)’s Nagasaki Shipyard and Machinery Works, the Megami Ohashi Bridge and the MHI Nagasaki Shipyard and Machinery Works’ Koyagi Plant. Enjoying views that they cannot see in their regular lives, they learned about the Port of Nagasaki, which has developed through the shipbuilding business. While on board the vessel, they attended a question-and-answer session and experienced rope work, through which they learned seafarers’ onboard duties.

Youth invited on board ‘Ehime’, ‘Akatsuki’ at Ehime port

One-day field trip provided at mariner school

Elementary children (above) from Nanyo in Ehime Prefecture are given the opportunity to make summer vacation memories aboard *Ehime* (right) and *Akatsuki*, two ferryboats belonging to Uwajima Unyu Ferries.

The All Japan Seamen’s Union (JSU) invited elementary school-aged children to a one-day seafarers’ school on Aug. 27, 2019 at the Port of Yawatahama in Ehime Prefecture.

A total of 100 fourth- to sixth-grade elementary-school students from the prefecture’s Nanyo area went on board vessels of Uwajima Unyu Ferries. They left Yawatahama and made a round trip to and from the Port of Beppu in Oita Prefecture.

In the on-board experience program, the children joined a tour to observe pilothouses and engine rooms, while study sessions were given to help them learn about ships and marine creatures to help them come away with wonderful memories on their summer vacation.

Could N-powered ships help meet emissions target?

Nuclear power as a fuel for ships is a completely zero-emission solution – it does not emit any SOx, NOx, CO2 or particulates. The technology is also millions of times more power-dense than fossil fuels and alternative fuel options that are currently being considered like methanol, ammonia and hydrogen. In terms of meeting the IMO's 2050 greenhouse gas (GHG) reduction ambition, it's the only proven solution available today, capable of replacing fossil fuels in all marine applications.

The technology is far from new – the first nuclear power plant became operational in 1955 with the US Navy. Since then, there has been around 700 reactors operational at sea, and currently there are about 100. This equates to thousands of operating years' experience.

The technology is not just limited to navies – there have also been civil marine applications. Russia has been operating nuclear merchant ships for many years. At present this includes nuclear-powered icebreakers with some of these vessels becoming passenger ships in the summer, cruising to the artic circle. Therefore, it could be argued that on the fringes of the cruise industry there are already nuclear-powered ships operating.

Nuclear power could be a particularly attractive option for the ferry industry, not only due to zero emissions, but also as it removes the need to bunker fuel when embarking/disembarking passengers, which becomes more of a challenge with new fuels. Any future requirements to use shoreside power to limit emissions would be negated by nuclear power. It would even be possible to supply power from the vessel to shoreside as an additional source of revenue. Nuclear is currently excluded from the Energy Efficiency Design Index (EEDI) meaning that there are no constraints in place for ships operating using the technology.

Public perception and acceptance are significant barriers in accepting this technology but are the risks real or perceived? Improved technological development over the years has ensured that fail safe mechanisms are built into reactor designs to negate concerns of radiation leakage in the event of failure. Mutual acceptance across nations for regulatory implementation will have to be in place for adoption to increase.

Lloyd's Register (LR) has over 60 years' experience in providing quality assurance to global land-based nuclear power operators. More recently, LR have been supporting a project in China to develop new Floating Nuclear Power Plants. Our expertise is grounded through our Marine & Offshore services together with our other business streams, Offshore and Energy and Business Assurance & Inspection Services.

In 1966, LR issued 'Provisional Rules for the Classification of Nuclear Ships' but these were since withdrawn – however, in 2010, following interest in the technology from several clients, we developed a framework of principles to be considered when exploring the use of nuclear. Through this goal-based approach LR can help our clients assure the design, construction and operation of nuclear-powered ships. *(Source: Lloyd's Register)*

Sustainability goals bring challenges for shipping industry

The International Maritime Organization (IMO) has set ambitious targets for the shipping industry. In addition to the 2020 Global Sulphur Cap, shipowners and operators must consider the greenhouse gas (GHG) targets for 2030 and even more ambitious emissions goals for 2050.

The regulatory changes set for 2020—as well as those expected for 2030 and 2050—will be more disruptive than any past environmental regulations. To achieve cleaner and low carbon emissions, the shipping industry will need a better understanding of existing technologies and strategies while new technology (including fuels) will need to be developed.

The new ABS Low Carbon Shipping Outlook defines ship technologies, operational efficiencies and alternative fuels and energy sources needed to reach 2030 and 2050 targets. This outlook is a tool to help shipowners understand the task ahead and effectively assess their options for a transition to low carbon operations. Key takeaways include:

• 2030 targets can be met with available technology – slower speeds, improvements in operational efficiency, limited use of low-carbon fuels, and energy efficient designs.

• Fuels are in focus to achieve 2050 emissions targets. Our conceptual designs confirm that the fuel technology today does not meet the 2050 demands.

• There will be challenges involved with scaling alternative fuels. To fully understand what it will take to adopt alternative fuels globally, we can compare to LNG as fuel. It has taken ten years for LNG bunkering infrastructure to develop and supply less than 1% of the global fleet. Other alternative fuels will face similar infrastructure development, regulatory and supply chain challenges.

Path to Decarbonization for Marine Industry

Shipowners and operators have begun exploring more fuel-efficient vessels and low carbon fuel options, but today's technology alone will not be able to meet tomorrow's efficiency, air pollution and carbon emission requirements.

In the short term, options to meet IMO 2030 emissions goals include: speed reduction and speed optimization; improvements in design efficiency; and fuels with lower CO2 emissions, such as LNG and LPG.

Improvements to the energy efficiency of ship designs will not be enough for 2050 GHG reduction targets without alternative, low carbon fuels.

There are currently no truly "zero-carbon" fuels at a larger scale and "carbon-neutral" biofuels are tested in limited quantities. All alternative fuels known at this time have certain limitations. There is no obvious fuel choice for the global fleet. For the immediate future the fuel solution far a vast part of international shipping remains a choice between a variety of fuel oils or LNG.

Impact on Sustainability of the Industry

Markets are a powerful incentive for innovation, and regulation is needed to establish common goals. When it comes to reducing GHG emissions for shipping, not only will supporting regulation potentially have an impact on ship designs, fuel selections and vessel operations, it may also affect the choice of cargoes that will be transported, as well as the trade routes and ship sizes.

In that light, the industry will need regulation that provides a compliance process that is technically proven, safe and commercially sustainable, one that encourages early adopters of new technologies.

Without this, the regulatory risks will loom over shipowners as they prepare for the next 30 years.

Lowering the carbon footprint of an industry that moves almost 90% of global trade is a significant undertaking. Change on that scale will not come quickly, great efforts will be required to ensure that shipping's positive contributions to global trade and the economy remain visible for all to see. *(Source: ABS)*

Shipping's great fuel switch is starting to drive up freight costs

The cost of shipping commodities by sea surged to the highest in almost nine years as vessel owners start taking carriers off hire to prepare them for sweeping new fuel rules.

The Baltic Dry Index, a measure of freight for everything from coal to iron ore to grains, surged to 2,378 points on Friday, the highest since November 2010, according to figures from the London-based Baltic Exchange. Giant ships called Capesizes are earning almost $35,000 a day, the most in at least 5-1/2 years.

Baltic Dry Index of commodity shipping costs is surging

The maritime industry is preparing for one of the most significant changes in its recent history — a mandatory curtailment in sulfur oxide emissions that will be imposed in just over three months' time. In order to comply, thousands of ships are being taken out of the market to fit equipment called scrubbers that will allow them to keep burning today's cheaper fuel. The ships that don't have them are expected to have to pay more.

"The main reason is that a rising number of vessels are going off-hire to retrofit scrubbers ahead of the January 1 deadline." said Burak Cetinok, head of research at Arrow Shipbroking Group in London. "Basically, you've got strong export volumes on the one hand and restricted vessel supply on the other. This has been boosting the rates."

Rates are also surging because ships were taken out of the market for scrapping earlier this year when a dam collapse in Brazil prompted Vale SA to shutter some mining operations, choking off iron ore cargoes and sending rates plummeting, according to shipping industry association Bimco. That demand growth has now returned to a smaller fleet of available ships, boosting earnings.

"It was a horrific first quarter for the capesizes," said Peter Sand, chief shipping analyst at trade group BIMCO. "When capesize freight rates were really low in the first quarter, loss-making for everyone, ship owners decided to scrap excess tonnage in the global market and that — in combination with the return of iron ore out of Brazil and strength in iron ore out of Australia — has lifted the capesize market since July."

Rates are surging across all the ship sizes that the Baltic Exchange monitors. Panamax carriers, one size down from Capesizes, are making $18,000 a day, the most since 2010. Handysizes, at $9,700 are earning the most for the time of year since 2011.

Iron ore producers are making up for previously lost production while deliveries of new ships is slowing, said Jonathan Chappell, an analyst focusing on marine transportation equities at Evercore ISI, adding that dozens of ships have been removed from the fleet to fit scrubbers.

"So it's a simple case of incremental demand exceeding incremental supply right now," he said.

As well as the fuel switch, freight rates are being buoyed by relatively slow fleet growth and demand that's held up despite a trade war between the U.S. and China, according to Cetinok.

Total supply of commodity carriers will grow by almost 3% this year. At times in the past decade the fleet's capacity has expanded by well over 10%, data from Clarkson Plc, the world's largest shipbroker.

Still, the recent strength may not last, according to Bimco's Sand. Iron ore imports into China have come down by 5% in the first seven months of the year — something that's bad news for a market that relies on the Asian country to boost the flow of cargoes.

"I would not expect the nine-year high to last the full year, I would expect more volatility," he said. *(Source: Bloomberg)*

VOICES *from* SEAFARERS

Capt. Reynaldo A. Toledo and Crew of MV BRIGHT WIND

The information disseminated by JSU staff is well appreciated. We had come to the conclusion JSU is of the members' welfare. Thank you!!

Capt. Rolando N. Fial and Crew of MV AYE EVOLUTION

Finally, with your explanation, we were able to understand our Provident Fund, the importance of union dues and how to avail the different benefits provided by the Union. Thank you so much for the explanation you gave us and we hope you visit us again when we are in Japan.

Capt. M. Genesela and C/O R. Layno and Crew of MV CF DIAMOND

The officers and crew of MV CF DIAMOND were very happy of the JSU Filipino Staff presence in International Port of Yokohama. We appreciate your regular ship visits to all non-domiciled members here in port of Japan.

Capt. Victor V. Alo and Crew of MV SIMURGH

JSU is known for checking the members' well-being. We support the continuation of this activity as it is beneficial to the members. More power to all staff!

Capt. E.D. Ladao and Crew of MV GLOBAL AQUA

Thank you for visiting us in Yokohama to check the working and living conditions of the crew and updating us with the current information regarding seafaring.

Capt. Felix G. Villahermosa and Crew of MV SIERRA NEVADA HIGHWAY

On behalf of the crewmembers, I am grateful to the JSU staff for visiting us in Yokohama. Everybody is welcome and we are glad to accommodate you again in the future.

Superintendent and Crew of MV KING CORN

We are proud of the JSU campaign in improving the seafarers' working and living conditions. We suggest life changing technology should be introduced to inspire everybody on the trade. Good luck!!

Officers and Crew of MV MIDNIGHT DREAM

Best wishes to our fellow seafarers and shore based staff. We are hopeful of your safe voyage all the way through your goal and destination. Happy sailing to all!

1AE Jose S. Conanan and some Crew of MV IBI

It is a pleasure visited by JSU personnel. After hearing the union information, we've learned of our rights and benefits from the present CBA. Visiting us again would be much appreciated.

Capt. Eduardo D. Alderite and Crew of MV CORONA SPLENDOR

The officers and crew are thankful you visited our ship. The JSU Staff had given us broad perspective of how the union works and its goal in enhancing the welfares of the ship's crew and their loved ones. We are optimistic the union would bind a wholesome maritime community. God bless us all in aspiring for a sound shipping industry.

C/E Reynaldo S. Quibilan and some Crew of MV AZUL FORTUNA

JSU staff explanations of the members' retirement system is clear . We've learned the appropriate procedures in acquiring retirement fund when in due time. Thanks to the information and more power.

Capt. Aquino C. Choresca Jr. and Crew of MV GREAT PERSEUS

We value the JSU staff ship visitations. Every information about Provident Fund and membership fee was clearly explained by the staff. This give the union a good impression in taking care of the members' welfares. Thank you JSU!

IMO guide addresses scrubber malfunctions

A review of the 2015 Guidelines on Exhaust Gas Cleaning Systems (EGCS) is underway at the International Maritime Organization (IMO). The guidelines include, among other things, washwater discharge standards, but with all the controversy surrounding washwater discharges into the sea, there is still work to do.

Elements of the guidelines relating to malfunction of the EGCS system or a monitoring instrument were, however, approved by the IMO's Marine Environment Protection Committee (MEPC 74) in May. There was significant discussion around this subject prior to approval of official IMO guidance with the main sentiment being that ships with scrubbers must not be allowed to use high sulfur fuel for an extended period if the scrubber isn't functioning properly.

The guidelines recognize that transitory periods or isolated spikes in measured emissions may occur due to sudden changes in the exhaust gas flow rate and that such spikes do not necessarily mean a breach of the requirements.

However, if the ship is unable to fix an EGCS system malfunction, regarded as an accidental breakdown, within an hour, it should switch to compliant fuel. If the ship doesn't have sufficient compliant fuel onboard to cover the system downtime and has to use high sulfur fuel, it will need to communicate a proposed course of action, such as bunkering compliant fuel and/or repair works, for the agreement of the relevant authorities.

The advice is contained in an MEPC circular (MEPC.1/Circ.883): "Guidance on indication of ongoing compliance in the case of the failure of a single monitoring instrument, and recommended actions to take if the EGCS fails to meet the provision of the Guidelines".

In light of the concerns raised regarding discharges from scrubber systems, with a number of ports having unilaterally banned the use of open loop scrubbers, MEPC 74 agreed to commit to an investigation of the environmental impacts of EGCS liquid effluents by adding a new item on the agenda called "Evaluation and harmonization of rules and guidance on the discharge of liquid effluents from EGCS into waters, including conditions and areas" for the next meeting of the Sub-Committee on Pollution Prevention and Response (PPR).

In this context, it was agreed that proper scientific assessment is desirable so that any decisions made are based on evidence. IMO Member States and other interested parties have been asked to provide funding so that GESAMP, a group of independent scientific experts that provides advice to the UN system on scientific aspects of marine environmental protection, can establish a task team to assess the available evidence relating to the environmental impact of discharges of exhaust gas cleaning system effluent. *(Source: IBIA)*

Disruptions in the global shipping industry explained

Oil shipping rates are soaring following a series of sanctions on a Chinese transportation giant and limitations placed on movement of Venezuelan crude oil tankers.

What has happened to shipping rates?

The cost of chartering a supertanker to send crude oil from one country to another is rising sharply. A South Korean importer paid more than US$12 million in shipping costs for one crude shipment from the U.S. Gulf Coast. This was followed recently by tentative charter of another crude vessel by Occidental Petroleum Corp. for $13.25 million to ship in November.

What is affecting the cost of shipping?

The United States in late September imposed sanctions on two units of China's COSCO for their alleged involvement in bringing crude oil from Iran. U.S. Gulf Coast exporters, in turn, have held back from chartering COSCO-linked vessels. COSCO operates more than 50 supertankers, the largest vessels for carrying crude oil or fuel products.

How is Venezuela involved in this?

Last week, Exxon Mobil Corp banned the use of vessels linked to oil flows from Venezuela in the last year, affecting some 250 ships. Exxon is the largest U.S. oil company and a major shipper, and its move caused rates to rise further, market sources have said. The move comes several months after the United States imposed sanctions on Venezuela in an attempt to cut off the nation's oil revenue in a bid to oust President Nicolas Maduro, who is accused of human rights violations and rigging the 2018 presidential election. Maduro calls opposition leader Juan Guaido a U.S. puppet.

Do the attacks on Saudi Aramco's facilities have anything to do with this?

A small amount. After those attacks last month, shippers worldwide scrambled to secure cargoes for big buyers in Asia, and many of them turned to the United States. That boosted rates, though the current surge is tied more to sanctions on COSCO and Exxon's moves.

What else is contributing to rising rates?

New maritime rules capping the amount of sulfur used in fuels for shipping have added to rising rates, because they raise the cost for shipowners who had in the past relied on "bunker fuel" – and as of Jan. 1 will have to switch to cleaner-burning marine fuel or diesel fuel. *(Source: Reuters with reporting by David Gaffen in New York, editing by Matthew Lewis)*

Shipping firms seek clarity on new IMO rules to reduce SO emissions

Uncertainty continues to prevail across the shipping industry over the impending IMO regulations, to reduce the level of sulfur oxide emissions from ship's exhaust, from January 1, 2020.

The amendments to the MARPOL regulations stipulates that sulfur content in the exhaust from ships should be brought down from 3.5 percent m/m (Mass on mass) to 0.5 percent worldwide.

Major ports in the country are now getting inquiries from shipping companies on accepting scrubbers on ships in the respective ports.

"Installing scrubbers is an option to reduce the content in the gases before being released into the air. The scrubbers would wash the exhaust gas from ships to bring the sulphur content down before releasing it to the atmosphere. The water used for washing eventually has to go into the sea," sources in the industry said.

However, ports such as Singapore are refusing to accept the use of scrubbers on ships in their ports due to water pollution, said Tom Joseph, president, Nautical Institute India (South West). There are also suggestions to evolve a national policy on that will be acceptable to India. Since the issue pertains to the implementation of MARPOL regulations, DG Shipping as the regulator of shipping in India and representing India in IMO conventions, would be the authority best suited to formulate the policy.

Shipping industry is also worried over the shift to a new form of fuel with its high cost involved

Experts in the sector pointed out that the new limits can also be achieved by changing to cleaner fuel such as Marine Diesel Oil which will not require any modifications on the ship's engines.

It is estimated that the world's shipping burn about four million barrels a day of fuel oil, which is a very low grade of oil.

"The shipping industry is also worried over the shift to a new form of fuel considering the high cost involved, which would be higher by at least 25 percent to 40 percent. The emerging situation warrants developing a new blend of oil for ships and probably gas oil with very low sulfur content and it can be blended with heavy fuel to lower sulfur content," the experts said.

According to Rajesh Unni, Founder and CEO of the Chennai-based Synergy Group, the proposed regulation would be a major boost to the environmental performance of ocean freight and a fantastic leap for the industry, as the sector push for sustainability and emission free operations. There will be challenges and as an industry, let's always be resilient to such changes.

Asked whether the changes in fuel norms provide opportunities for Indian shipyards to install scrubbers in ships, Unni said, "The opportunity for Indian yards to work on scrubber installations is almost sailed. Shipyards in China, Korea and Turkey have taken advantage and obviously are better prepared than the Indian yards."

"However, there will be opportunities like the IMO goal of 50 percent reduction in CO2 emissions by 2050 and Indian yards can find ways to seize such opportunities," he added. *(Source: The Hindu Business Line)*

ClassNK releases guidelines for remote surveys

Leading Classification Society ClassNK has released "Guidelines for Remote Surveys" in preparation for carrying out remote surveys (*1) using ICT (Information and Communication Technology) (*2). The guidelines outline requirements to apply to remote surveys for some types of occasional surveys, and from now on ClassNK will implement remote surveys that satisfy the requirements.

ClassNK has been working on the advancement of surveys using digital technology in research and development in line with their R&D roadmap developed in 2017. The Society aims to implement more sophisticated and rational surveys using various digital technologies such as IoT technology, ICT, big data, AI, condition monitoring/evaluation, and robotics. Specifically, they aim to develop remote surveys using ICT, ship survey systems for both hull and machinery based on condition monitoring/evaluation technology, and individual digital ship records using digital twins.

For remote surveys using ICT, ClassNK has investigated and examined the types of surveys that can be applied, the types and amounts of information required for remote surveys, and the requirements for the use of ICT, ensuring reliability equivalent to conventional witness surveys with transparency in the application of remote surveys. The guidelines are outcomes of these results and will be reviewed as necessary in accordance with the progress of related technology development.

ClassNK will continue to optimize their surveys using digital technology and will strive for continuous improvement in survey quality and rationalization.

The Guidelines for Remote Surveys are available at www.classnk.com for those who have registered for the ClassNK "My Page" service. *(Source: ClassNK)*

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