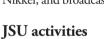
Special Program for Marine Day

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Our 'Umi': Seaside Story 2018

JSU President Morita goes on radio to talk on the importance, attraction of seafaring

radio show featuring an interview with Mr. Yasumi Morita, president of the All Japan Seamen's Union, went on the air for Marine Day, a national holiday in Japan. Mr. Morita spoke to young people aspiring to work at sea in the future. He took on recent hot topics and introduced the activities the union is focusing on, hoping that Marine Day would be a good opportunity to freshly raise awareness of the seas surrounding Japan, an island nation, and to think again about the bounties we can enjoy from the sea that are inseparably linked with our lives. The president was interviewed on June 29 by Ms. Runa Tsuji, an announcer from Tokyo-based radio station Radio Nikkei, and broadcasted on July 16.



In a special program for Marine Day, "Watashitachi no Umi (Our Sea)—Seaside Story 2018", Mr. Morita answered questions asked by Ms. Tsuji in an interview. Outlining the JSU, the president said that it was the first labor union organized since the end of World War II. He emphasized that it strives to address issues facing seafarers regardless of the enterprises they work for, making efforts to stabilize employment and improving working conditions, among others.

Mr. Morita also spoke of some impressive events the JSU has encountered in its history. During the Pacific War, he said, even private vessels were requisitioned, and crewmembers were forced to engage in the transport of soldiers and commodities. The president then



Radio Nikkei's Runa Tsuji interviews JSU President Yasumi Morita.

touched on a bitter experience. As a result of getting involved in war tribulations, he continued, more than 60,000 of his past colleagues lost their lives. To tell the miseries of war to next generations, the JSU released a two-volume book on July 20, 2017, a revision of a collection of notes taken by seafarers who were on duty during the Pacific War that was published originally in 1986. Mr. Morita told Ms. Tsuji the JSU has distributed copies among junior and senior high schools and libraries across the nation.

As for relevant specific activities, the president said the JSU pays floral tributes every year for vessels lost while in service during wars at a memorial ceremony in front of the sculpture of a seafarer making his ultimate sacrifice in Kannonzaki Park in Yokosuka, Kanagawa Prefecture. At the resource center for lost ships and the war dead, located at the JSU Kansai Regional Office, he added, the JSU conducts a memorial service on Aug. 15, the anniversary of the end of World War II, every year to offer prayers to seafarers who died while on duty during the war.

Tackling challenges

Never getting involved in war: As a major challenge, the JSU upholds activities to keep seafarers from getting caught up in war by any means, Mr. Morita said.

About actions against piracy: In waters off the coast of Somalia and in the Gulf of Aden, the Japanese Maritime Self-Defense Force

(JMSDF) and the Japan Coast Guard (JCG) are working together against piracy. They have one vessel and two patrol airplanes on duty, for which the JSU is grateful, according to Mr. Morita. As things are far from being stable in Somalia, it is highly possible that the number of pirates will increase. Because the number of vessels on duty has decreased from two to one, he said the JSU is requesting that they raise it back to two.

About securing and developing seafarer successors: Securing and developing seafarer successors is an important policy challenge. To this end, Mr. Morita said the JSU promotes the appeal of the shipping and fishery businesses and the seamen's career. It plays a role as a labor union and works hand in hand with relevant industries in the J-Crew Project and demonstration cruise programs. The union also carries out other activities to promote the career of being a seafarer or marine worker.

About seafarer taxes: As spending long periods of time at sea, seafarers cannot enjoy as many administrative services as other people. To reduce resident tax for them, as such, the JSU is undertaking relevant measures to lobby local governments, Mr. Morita said. There are, however, only two municipalities having reduced resident tax for seafarers: Yokkaichi (since 2014) and Toba (since 2016). The JSU strives to have resident tax reduced for seafarers all over Japan as soon as possible. As for other challenges, he stressed the union is making allout efforts to overcome them.

Giving heart to Marine Day

Marine Day had been called Marine Memorial Day before it was first observed as a national holiday in 1996. The memorial day was set in 1941 to commemorate the homecoming of Emperor Meiji to the Port of Yokohama on July 20, 1876 in iron steamship the Meiji Maru from his trip around the Tohoku Region. As such, it was necessary for Marine Memorial Day to fall on July 20, leading to the designation of Marine Day in 1995.

Unfortunately, however, Marine Day was moved from July 20 to the third Monday of July under the Happy Monday System. Together with Kaiji Shinko Renmei, a group of Diet members who promote maritime affairs, therefore, the JSU is now working to immediately have Marine Day observed permanently on July 20. Marine Day is the day to appreciate the blessings of the sea. Japan is the only country in the world to celebrate such a national holiday. The union hopes the government of Japan will revise the National Holidays Law to make Marine Day July 20 permanently, Mr. Morita said.

The interview is available on the Website of the show, "Watashitachi no Umi-Seaside Story 2018," which is located at http://www.ra- dionikkei.jp/seaside>.



Students learn about the importance of careers in the marine industry, specifically being a seafarer, during a JSU-organized field trip

Vessel performance impacted by an 80/20 rule

he shipping industry risks investing billions of dollars on vessel optimization services that fail to deliver on overall operational efficiency and performance due to a lack of understanding and appreciation of weather which accounts for 80% of the impact on vessel performance warns voyage intelligence and insight specialist StratumFive.

As vessel performance optimization becomes increasingly more sophisticated, ship owners and operators have access to a far broader range of technologies, datasets and potential avenues for optimization than ever before. However, complex solutions which attempt to simultaneously optimize every aspect of a voyage are losing sight of the basic fact that fuel consumption is a function of the resistance that the vessel has to overcome – and that resistance is in turn a function of

several other factors, such as vessel block coefficient, loading and trim, water density, currents, waves, wind and biofouling.

Of these factors, the currents, waves and wind affect every voyage. The resistance when navigating in unfavorable conditions generally increases by 50% to 100% of the total ship resistance in calm weather. Indeed, MAN Energy Solutions' analysis of trading conditions for a typical 140,000 dwt bulk carrier shows that on some routes, the increased resistance, or sea margin, can reach extreme values up to 220%.

Stuart Nicholls, CEO, Stratum-Five, commented:

"The Pareto principle states that, for many events, roughly 80% of the effects come from 20% of the causes. We believe that the combined effects of weather account for around 80% of the effects on vessel performance, whereas other

factors make up the remaining 20%. While the 20% remains important and can create important marginal gains, the impact of weather significantly outweighs them, but is often sidelined or ignored.

"This means that businesses miss out on significant efficiency gains – not to mention avoiding adverse weather conditions, which helps to minimise cargo damage, ensure the safety of passengers and crew onboard, and deliver more precise arrival times while also reducing fuel consumption and associated costs and emissions. By factoring in the impact of weather on a voyage, vessel owners and operators can make crucial decisions about their route.

"Shipping is, ultimately, a question of time and distance, and we need to stay focused on the factors that have the most impact on these; weather is at the top of the list. No matter how well optimized

a vessel's engine or trim might be, if the vessel is experiencing adverse weather conditions, this ceases to be relevant."

Huw Davies, Principal of Meteorology, StratumFive, added:

"Weather affects the safety and performance of vessels, cargo and seafarers. Forecast accuracy has greatly improved and weather forecasts are now some 20% more accurate than they were only five years ago. Accurate, detailed weather forecasts support effective planning and operations and have a profound effect on a voyage's safety and efficiency. This not only saves time, money and fuel, but also minimises the environmental impact of our ships, and most importantly keeps the crew safe."

Founded in 2009, StratumFive is one of the fastest growing voyage intelligence companies in the shipping industry, servicing over 11,000 vessels within the global fleet. OTIS

(Online Tracking and Information Software), is StratumFive's voyage tracking and monitoring software, which provides highly accurate location data, with up to thousands of locations transmitted every day per vessel. This equips owners, operators and shore crew with the most accurate information available on where their ship is located, and what it is doing and minimises the risk to ships and crew from adverse weather conditions.

To enhance its platform for total voyage intelligence and insight, StratumFive is leveraging the use of existing and new datasets to use machine learning techniques to build predictive models based on analytics and data from past voyages. The more datasets that are added, the more detailed and accurate its predictions will become ensuring that the platform is flexible, searchable, accessible and easy to use. (Source: StratumFive)

Scrubber installation rate varies by ship type

A variety of strategies have emerged among shipowners as they contend with the prospect of marine sulfur emissions limits under IMO rules set for implementation in 2020.

Owners of tanker fleets, containership fleets and dry bulk vessels have all ordered scrubber installations as one mechanism for coping with the change, but are installing the scrubbers at widely varied paces on diverse timelines, although none of the fleets have hit a high proportion of scrubber installation despite the looming implementation deadline.

In early April, Koch chartered two newbuild VLCCs from Kyklades Maritime for two years. The newbuild VLCCs will be delivered from the shipyard in 2019. They were chartered at \$31,500/

day for the first two years with an option to extend the charter for another year at \$34,500/day. By comparison, around the same time Frontline time-chartered two VLCCs—FPM C Noble and FPMC C Melody with no scrubbers, build in 2012 and 2011 respectively at \$21,750/day each for two years. In a report from mid-June shipbroker SSY noted that there has been some activity for long term charters in the Suezmax tanker sector, with oil majors taking vessels for delivery towards the second half of 2018 at freight rates around the low-\$20,000s/ day for three years, while newbuild scrubber-fitted vessels delivering towards end 2019 were booked at reportedly mid-\$20,000s/day for three years with the option for the charterer to extend for two more years. By contrast, Scorpio Tankers, the world's largest clean tanker owner, noted that it plans to run its vessels on 0.5 pc sulfur bunkers instead of installing scrubbers.

Dry bulk carrier scrubber installations grew to 127 vessels. Some of the shipowners with the biggest dry bulk carrier scrubber installations are Foremost Group, Algoma Central Corporation and Star Bulk. Brazilian iron ore producer Vale will time-charter 48 newbuild dry bulk carriers – 47 with 325,000 dwt and one with 400,000 dwt to be delivered in 2019-2023.

Containerships with planned scrubber installation reached 96 in July, which accounts for less than three percent of the containership fleet. Of these 27 are already outfit-

ted with scrubbers. Containership owners Hapag-Lloyd and Maersk noted last year that they will use 0.5pc sulfur bunkers to comply with the 2020 regulation rather than installing scrubbers. In 2017, France-based CMA CGM signed a memorandum of understanding with the French oil and gas company Total, which will provide CMA CGM with 3.5 pc sulfur bunkers for ships outfitted with scrubbers as well as 0.5 pc sulfur fuel and LNG for bunkering. South Korean shipowner Hyundai Merchant Marine (HMM) has taken delivery of two 11,000 TEU, each containerships with scrubbers. Italian shipowner Grimaldi Group has scrubbers on five of its containerships that are chartered to Atlantic Container Line. (Source: Argus)

Major shipping losses in 2017 at 2nd lowest in decade

Large shipping losses have declined by 38 percent globally over the past decade, with the downward trend continuing last year, according to Allianz Global Corporate and Specialty's (AGCS) Safety and Shipping Review 2018.

A total of 94 losses were reported last year from around the shipping world, down 4% year-on-year. Last year's losses were the second lowest in 10 years after 2014, the report noted.

Bad weather contributed to the loss of more than 20 vessels, according to the annual review, which analyses reported shipping losses over 100 gt

"Globally, the decline in frequency and severity of total losses over the past year continues the positive trend of the past decade. Insurance claims have been relatively benign, reflecting improved ship design and

the positive effects of risk management policy and safety regulation over time," said Mr Baptiste Ossena, global product leader hull and marine liabilities for AGCS.

AGCS is the corporate insurance arm of German-based Allianz, one the world's largest financial services companies.

Yet, incidents in the South China, Indochina, Indonesia and Philippine maritime region rose by 25% in the past year, and it remains the No. 1 area worldwide for major shipping incidents for the past decade.

Last year, almost a third of losses globally occurred in this region, mainly in Vietnamese waters.

The major loss factors include weather—Typhoon Hato and Typhoon Damrey caused more than six losses

The East Mediterranean and

Black Sea region is the second major loss hot spot, followed by the British Isles.

There was also a 29% annual increase in reported shipping incidents in Arctic Circle waters, according to AGCS analysis.

Nature aside, man-made tensions around major shipping routes in Asia were also to blame.

The South China Sea is a key transit route for East-West trade from China, South Korea and Japan and accounts for one-third of global shipping trade.

It is also the center of territorial disputes between several countries within the region.

This has resulted in an increasing military presence in the South China Sea, with the United States and China conducting naval exercises. Last year saw two major collisions between US naval ships and com-

mercial vessels.

"The territorial claims and disputes may have larger implications long term and threaten the very freedom of the seas and navigation in Southeast Asia, with far-reaching implications for trade with Asia," said AGCS senior marine risk consultant Andrew Kinsley.

While piracy has hit record lows globally, it remains a threat in regional waters, accounting for three-quarters of all piracy incidents around the globe.

Southeast Asia had 76 piracy incidents last year, up 11% from 2016. Indonesia continues to be the global hot spot with 43 attacks.

Meanwhile, the number of attacks in the Philippines more than doubled to 22 from 10 in 2016, according to the International Maritime Bureau. (Source: The Straits Times)

KVH Videotel launches task-based competency

KVH Videotel announces a new feature of its innovative Videotel Performance Manager service that provides the ability to structure task-based competency assessments for seafarers on any given subject and monitor progress as they develop their skills. Evaluating and documenting the competency of seafarers and enabling them to perform at the peak of their abilities are of critical importance to ship operators.

Based around the established maritime concept of taskbooks, this new feature allows seafarers to prepare for, and be evaluated against, any competency that should be demonstrated during their time onboard ship. The results are made available to shore staff in interactive reports within Videotel Performance Manager. In conjunction with regulatory training, this information can help identify high-performing staff eligible for promotion or help ensure that all staff are performing to the same recognised standards.

KVH Videotel provides its own core set of task-based competencies applicable to various vessel types, with each competency mapped to KVH Videotel's own extensive training catalogue, and can help develop content for specific topics where required. Task-based Competency also allows customers to add their own existing taskbooks to the platform or create new content directly within the application. (Source: KVH Videotel)

VOICES from **SEAFARERS**



Capt. Jan Ever Fred P. Nicha and crew of MV SOUTHERN CROSS

I and my crew wholeheartedly appreciate your kind efforts in visiting our vessel in Kawasaki, Japan. Thank you very much for your time. More power and God bless us all.



Capt. Mark Gideon T. Pirante and crew of MV NYK DEMETER

Thank you for visiting us and bringing some gifts and explaining the present agreement especially regarding our wages and benefits we can avail from the union. We hope to see you again. Keep up the good work and God Bless us.



Capt. Jericho M. Duran and C/E Randy M. Cabanting of MV JP VERDURE

We understand fully with your explanation that the present wages have not been increased this year 2018. Anyway, with the present state of the shipping industry, present seafarers are in a better working and living condition compared to seafarers a decade ago. We at JP Verdure are happy to know that wage increase has been approved for the year 2019. We appreciate your efforts in visiting us and other ships regularly while in Japan ports. Thanks so much!!!



Some officers and crew of MV MINERAL UTAMARO

We are hoping that free Wi-Fi be provided onboard so that we will not be looking for businessmen just to buy sim cards. Also, we are hoping that competitive salary be provided and additional food allowance since the present rate cannot purchase sufficient provision in Australian ports. We hope you visit us everytime we are in Japan.



Capt. Peter P. Carlon and some crewmembers of MV BALTIC HIGHWAY

We try to work and live onboard as happy as we can. With the present communication advances, seafarers are not as homesick as ten years ago. Therefore, the batch 2018 Ship Policy Onboard is "Always Be Happy; Frowning Is Not Allowed". JSU staff are always welcome so please visit us again.



Capt. Romeo Q. Raganas Jr. and some crew of MV SAGITTARIUS LEADER

I have been in this company, Excel Marine Co., Ltd. and our manning agency Fair Shipping Corp. for six years now. We are grateful for the knowledge and skills that we gained working under this company. We are also satisfied with the present CBA and are thankful to the Union and the Company for the job well done.



Capt. Marlon D. Papio of MV MUROTO with some crew and company representatives

It is very inconvenient for us going ashore in some private ports, there are also no businessmen coming to this port. So we are so thankful to the JSU Staff for coming to our ship and sharing us some information regarding our CBA. We look forward to meeting you again...and thank you for the souvenirs.



Capt. Freddie M. Alfaras of MV OCEAN COBALT

I think that the present ITF approved agreements are very satisfactory especially for the Filipino seafarers because CBA wages are fully implemented and lots of benefits provided by JSU and our local union. Hospitals and Mariners' Homes in the Philippines are testaments that the Unions are giving importance to its Filipino members.



Capt. Arnold C. Perez and some Officers and Crew of MV YUNA ORCHID

We very much appreciate the JSU Staff visit and having friendly talk onboard. Thank you and we wish to see you and hear from you again in the near future.



Some officers and crew of MV ORIENTAL IRIS

The JSU is the only seafarers' union that have dedicated staff who visit and communicate with the members. It is convenient for us to consult or ask for assistance to the JSU Filipino staff since they can talk to us personally. Being ex-seafarers themselves, they can understand our shipboard concerns if any and can give advice immediately. Thank you JSU for having Filipino staff visiting the ships.



Capt. Sedric M. Pasana (4th from right) and some crew of MV SKY JADE

We deeply appreciate your visit to our ship while at Kawasaki Port. We are hoping that you will continue your excellent support to all seafarers and providing necessary benefits to the members of the Union. We look forward to our next meeting when we arrive again in Japan.



Capt. Ramon Escaño Dela Cruz of MV SHIN NICHIHO

I am very thankful, in behalf of my crew, that the JSU Filipino Staff visited us in the Port of Kawasaki, Japan and inquired our living condition onboard. We appreciate having discussion with you and providing answers regarding our queries on JSU Union Dues and Provident Fund. I hope you continue visiting us and other ships so that we will all be updated with the Union policies and shipping matters.

UK P&I Club warns on hepatitis risk

tion results obtained from the .UK P&I Club PEME clinic network show that 10.1% of crew unfitness is related to hepatitis, while 8.5% of the total crew found unfit due to Hepa-

Hepatitis is an inflammatory condition of the liver. The condition can progress to fibrosis (scarring), or liver cancer. Other infections, toxic substances, and autoimmune diseases can also cause hepatitis.

According to the World Health Organization (WHO), hepatitis is responsible for 1.34 million deaths in 2015. Moreover, 325 million people worldwide carried hepatitis B or C virus infections. Although vaccines exist for hepatitis A and hepatitis B, the development of a hepatitis C vaccine has presented challenges.

The symptoms of Hepatitis in-

- Flu-like symptoms;
- Dark urine or pale stool;
- Abdominal pain;
- Loss of appetite or unexplained weight loss;
- Yellow skin and eyes, which may be signs of jaundice.

Chronic hepatitis develops slowly, so these signs and symptoms may be too subtle to notice.

Furthermore, there are five types of hepatitis viruses, identified by the letters A, B,C,D, and E. While all cause liver disease, they have may differences:

1. Hepatitis A virus (HAV)

Present in faeces and most often transmitted through consumption of contaminated water or food. Certain sex practices can also spread HAV. Infections are in many cases mild, with most people fully recovering. However, HAV infections can also be serious and life threatening. Safe and effective vaccines are available to prevent HAV.

2. Hepatitis B virus (HBV)

Transmitted through exposure to infected blood, semen and other body fluids. HBV can be transmitted from infected mothers to infants at the time of birth or from family member to infant in early childhood. It can also be transmitted through transfusions or contaminated injections. Safe and effective vaccines are available to prevent HBV.

3. Hepatitis C virus (HCV)

Mostly transmitted through exposure to infective blood. This may occur through transfusions

of HCV-contaminated blood and blood products, contaminated injections during medical procedures, and through injection drug use. There is no vaccine for HCV.

4. Hepatitis D virus (HDV)

Infections happen only in those who are infected with HBV. The infection of HDV and HBV can result in a more serious disease and a worse result. Hepatitis B vaccines provide protection from HDV infection.

5. Hepatitis E virus (HEV)

Mostly transmitted through consumption of contaminated water or food. HEV is a common cause of hepatitis outbreaks in developing countries. Safe and effective vaccines to prevent HEV infection have been developed but are not widely available. (Source: SAFETY4SEA)

War on piracy just got fresh help from space

A surveillance system that can track ships and boats all over the world in real time and can be accessed from an iPhone has gone online. Italian firm Leonardo launched its SEonSE (Smart Eyes on the Seas) platform recently at the Farnborough International Airshow in the U.K.

The defense company claims the new platform makes it possible to view the exact position of a vessel at any moment.

Piracy on the high seas costs shippers and insurers hundreds of millions of dollars each year and is particularly prevalent around Southeast Asia and West Africa.

The new platform has been touted as a big step as it can spot if a ship has stopped or deviated from its mapped course.

"Within seconds, people will be able to note unusual activity from a ship," said Luigi Pasquali, Leonardo's coordinator of space activities.

Aside from security threats, Pasquali said the technology would aid in the fight against illegal fishing, help marine law enforcement and provide better market analysis for firms that regularly use shipping lanes.

"A huge amount of data is automatically processed in real-time for the protection of people and the maritime environment," Pasquali added in a statement.

The raw data is collated from several satellites, some of which transmit a radar system providing the exact position of vessels. Others provide imagery, meaning the system will be able to track vessels that choose not to comply with identification requirements at sea.

SEonSE also factors in the Automatic Identification System (AIS) of small transponders fitted to shipping vessels worldwide. These continuously broadcast each vessel's position and Leonardo said there are 7 million AIS signals sent every day.

Information from the world registry of ships, as well as weather and oceanographic information, are also crunched by Leonardo's big data platform. (Source: CNBC)

Sailors' Society shortlisted for charity of the year

An international maritime charity has been shortlisted for charity of the year.

Sailors' Society, which has its head office in Southampton, will compete against six other organizations at the Charity Times Awards in London on October 3.

The awards recognise leadership and professionalism in charitable organisations and celebrate best practice across the sector.

Stuart Rivers, Sailors' Society's CEO, said: "It's fantastic to be recognized for such a prestigious award, especially in the charity's

"The nomination is testament to the hard work of our staff around the world, which is made possible by our dedicated volunteers and supporters."

Sailors' Society was founded in London in 1818 to support destitute seafarers returning home from the Napoleonic Wars.

The charity supported seafarers through both world wars, global depression, natural and manmade disasters and huge changes in technology and the shipping

Stuart added: "In the past five years, Sailors' Society has transformed into a forward-thinking charity, which effectively cares for seafarers not just in port, but from cradle to grave.

"We can uniquely describe ourselves as a 200-year-old start-up: with a combination of experience and innovation, legacy and agility which is having a demonstrable impact on the lives of the oftenoverlooked men and women who bring us the goods we rely on ev-

The charity works internation-

ally to provide practical, emotional and spiritual welfare support to the world's 1.6m seafarers, regardless of background or faith. Sailors' Society chaplains and ship visitors have a presence in 91 global ports, with wider projects and services covering 30 countries.

Earlier this year it celebrated its bicentenary with an anniversary service at Southwark Cathedral, where His Royal Highness Prince Michael of Kent spoke about the royal family's longstanding links with the charity. (Source: Sailors'

ITF: Australian ban'the kind of enforcement seafarers deserve'

ITF statement on the decision by the Australian Maritime Safety Authority (AMSA) to ban the Hong Kong-flagged bulk carrier MV Shandong Hai Wang for one year from Australian waters.

ITF seafarers' section chair and joint chair of the ITF fair practices committee, Dave Heindel, said: "We wholeheartedly welcome this action by the AMSA. This is the kind of enforcement that seafarers deserve from all authorities in all countries at all times. Only when unscrupulous ship owners know that there is nowhere to hide will we start to see an end to the gross exploitation of seafarers."

ITF dockers' section chair and joint chair of the ITF fair practices committee, Paddy Crumlin, said: "Well done to the ITF inspectors who played a key role in alerting the AMSA to this shocking case. And well done to the AMSA for taking such swift and

decisive action. We urge other port state authorities to follow this example and enforce the ILO maritime labour convention the same way. The ITF will continue to praise authorities who do a good job in protecting seafarers and shame those who do not." (Source: ITF)

Shipping industry puts environment preparedness before blockchain

law firm Reed Smith, assessing which technology will be the most significant driver of change in shipping over the next five years, respondents placed environmental issues and emissions above blockchain.

Environment and emissions

Analysis of big data and technology to address environmental issues and emissions were equally significant, at 40 percent each, while blockchain was considered the most significant driver of change by only 20 percent of respondents. Broken down by sector, 67

to address environmental issues will be the most significant driver, whereas 57 percent of professional services said analytics of big data. However, blockchain was considered the most significant driver among 50 percent of charterers and financiers. Researchers also asked industry participants to rate their "preparedness" as well as the 'urgency' of emissions regulations, big data and blockchain for their company. Sixty-three percent of the industry said complying with emissions regulations was a high priority for their business, this rose to 88 percent among operators and

In a survey conducted by global percent of owners said technology 90 percent among owners. Among company and therefore only 8 the respondents, 50 percent said they were "very prepared" and already taking action, while a further 31 percent said they were still considering their options.

Big data

Predictive analytics of big data, was considered of medium priority for 47 percent of respondents with 25 percent already taking action within their company, while 41 percent of respondents were still considering their options. Only 14 percent of the respondents deemed blockchain a high priority concern for their

per cent are 'very prepared', with the remainder yet to make a decision or still considering their options. Nick Shaw, global head of shipping at Reed Smith, said "companies are prioritizing their responses to the upcoming 2020 Sulfur Cap deadline over other developments such as blockchain and big data, and while not surprising, those within the industry will need to keep a closer eye on developments around blockchain, particularly from new market entrants, if they want to keep their competitive edge." (Source: GlobalLegalPost)

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